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MALIBU COAST ESTATES
VISUAL SIMULATIONS

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Malibu Coast Estate: Visual Simulations
Supplemental Report
September 30, 2013

INDEX

I. INTRODUCTION

- **A. Background**
- **B. Methodology**
- **C. Comments to the DEIR**

II. ENVIRONMENTAL SETTING

III. IMPACTS ANALYSIS

- **A. Proposed Project**
- **B. One-Story Alternative**
- **C. Reduced Project Alternative**
- **D. Summary and Conclusion**

IV. ADDITIONAL COMMENTS

- **A. Rancho Malibu Project**

V. CLOSURE

VI. BIOGRAPHY

APPENDIX

A – Photography Log
B – (i) Aerial Image with Plotted photograph Locations (ii) Existing Views with Story Poles, (iii) Visual Simulations of the Proposed Project from the Initial Locations and the Additional Locations (iv) Visual Simulations of the One-Story Alternative from the Initial Locations and the Additional Locations, and (v) Visual simulations of the

Reduced Project Alternative from the Initial Locations and the Additional Locations

C - Reduced Project Site Plans
D - Modified Landscape Plans with Reduced Project
E - Rancho Malibu Site Plan
F - Henry Lenny Letter Report dated May 13, 2013
G - Initial Report

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I. Introduction.

A. Background

Scott A. Johnson ("Consultant"), at the request of PHC Project Owner, LLC (the "Owner"), prepared a computer generated 3-D model and visual simulations for Owner's proposed Malibu Coast Estate development (the "Project") located at 241808, 24120, 24134, 24150 and 24174 Pacific Coast Highway (the "Project Site"). The proposed Project consists of five single-family residences of up to 28 feet in height (the "Proposed Project")

The Consultant took photographs from fourteen different locations in the vicinity of the Project Site from where the Project would be visible ("Initial Locations"). The Initial Locations were determined based on comments to the Initial Study and in consultation with the Planning Department of the City of Malibu (the "Planning Department"). The Initial Locations included viewpoints located on both public and private property. Using the photographs and the 3-D model, the Consultant prepared visual simulations of the Proposed Project from the Initial Locations (the "Initial Simulations"). The Initial Simulations were included in a report entitled "Malibu Coast Estate: Visual Simulations" prepared by the Consultant dated November 29, 2012 (the "Initial Report"). The methodology used for preparing the Initial Simulations is described in detail in the Initial Report (the "Methodology") and summarized herein. The Initial Report is attached as Appendix F hereto.

The Initial Report was submitted to the Planning Department and The Planning Center, the City's EIR consultant for the Project, for review. The Initial Simulations were included in the Project's Draft Environmental Impact Report dated April 2013 ("DEIR") and the Initial Report was included as Appendix E of the DEIR.

The DEIR analyzed several alternatives for the Proposed Project, including a site plan and project that consists of five residences that do not exceed 18 feet in height (the "One-Story Alternative"). The Consultant prepared visual simulations of the One-Story Alternative from the Initial Locations and such visual simulations are included in the Initial Report.

The DEIR concludes that the potential for the Proposed Project to alter scenic resources is less than significant and the potential for the Proposed Project to alter the visual appearance of the Project Site is also less than significant. While the DEIR acknowledges that "the Proposed Project would alter the skyline of the bluff and would create buildings prominent from this vantage in an area where no buildings currently exist" the DEIR nevertheless concludes that the Proposed Project "would not affect the primary visual resources of PCH, namely the views of the ocean to the south and mountains to the north."

Moreover, the DEIR concludes that Proposed Project would not:

(i) "obstruct or otherwise substantially impact scenic views or resources";

(ii) "degrade the visual appearance of the project site or its surroundings";

(iii) "substantially degrade [the] visual character of the site or introduce any aesthetic elements incompatible with the project area";

(iv) "create a new source of substantial light or glare";

(v) "in combination with other proposed projects throughout the area would not cause a considerable cumulative effect on aesthetic resources and light and glare pollution";

(vi) "block any significant scenic resources from public view sheds or from protected private view corridors".

B. Methodology

Photographs for the visual simulations of the Project Site for the Initial Report were taken on August 14, 2012 and for this Additional Locations on June 17, 2013. As can be seen in the visual simulations in the Initial Report, the weather was clear, the sky was blue and generally clear of cloud cover with excellent visibility. On June 17, 2013, the sky was overcast. However, during all the days during which photographs were taken the story poles that had been erected on the Project Site showing the location and dimensions of

the Proposed Project were clearly visible. The story poles are placed on the Project Site by Hawner Construction/Malibu Story Poles in order to depict the precise outlines of the specific residences designed by the Project architect, Landry Design Group, for which the Owner is seeking approval. Chris Nelson & Associates, Inc., Professional Land Surveyor, verified the accuracy of the location and height of the story poles and conformance of the story poles to the story poles exhibit prepared by the Project architect and approved by the City in its report to the City dated April 16, 2012. Except for Views 2 and 3, the photographs were taken from a standing position of the photographer to represent the view of a person standing in that location. Views 2 and 3 were taken from 2 feet above the top of an 8-foot ladder to approximate the view of a person from the second floor of a building.

For views 1-14, an Olympus E-P3 (Micro 4/3rds format) with a 20mm lens was used to create the photographs of the Project Site with the erected story poles. For views 15-26, a Nikon D600 (full-frame sensor format) with a 24-85mm lens set at 50mm was used to create the photographs of the Project site with the erected story poles. Care was taken to use equipment that would recreate a realistic 'normal' view of the Project Site and its surroundings. The human eye can perceive a field of view of almost 180 degrees, although most of the time individuals are generally not conscious of that full 180 degree range because some of the field of view is in the viewer's peripheral vision. Commercial camera systems cannot capture a 180-degree field of view without significant distortion in perspective. Panoramic techniques can also be used to recreate a wider field of view while minimizing such distortion.

For the purposes of this report (and the Initial Report) a 'normal' lens refers to a lens that most closely approximates the correct perspective and a field of view to a human observer under normal viewing conditions that looks 'natural' compared with lenses that are more telephoto or wide-angle in focal length. A 20mm lens with the Olympus E-P3 camera is recognized as the best lens for the micro 4/3rds format to capture a realistic, normal view as perceived by the human eye because it most closely approximates the perspective of the human eye.[1] As noted in the Wikipedia page referenced in

[1] Normal Lens. (n.d.). In *Wikipedia*. Retrieved December 3, 2012, from http://en.wikipedia.org/wiki/Normal_lens

footnote 1 for "Normal Lens, in the micro 4/3 format, which the Olympus E-P3 camera utilizes, a lens of 22mm is the ideal 'normal' focal length. To take the photographs for this report and the Initial Report, the 20mm Panasonic lens was used because it is considered the highest quality for clarity, color rendition, and lack of distortion for that platform and the 20 mm focal length is sufficiently close to the ideal 22 mm focal length to reproduce the correct perspective of a human observer under normal viewing conditions. A 50mm lens with the Nikon D600 is recognized as the best lens for the full-frame sensor format to capture a realistic, normal view as perceived by the human eye because it most closely approximates the perspective of the human eye.[2]

Photographs that attempt to recreate the human field of view (i.e., the full 180 degree field of view) but are necessarily flattened onto a page seem distorted and 'unnatural'. Visual simulations need to provide information to stakeholders, policy makers, and the public with information that is accurate and understandable so that they may make informed decisions and comments about the Project. By providing views that are understandable and show correct perspective and the interrelationship of the Project and the existing environment, viewers can make a reasoned assessment of the Project's potential visual impacts. Correct perspective and lack of distortion are more important than attempting to recreate the full human field of view.

Where appropriate, I have used panoramic images to provide wider fields of view, particularly when shown against the expansive ocean views. However, in the case of View 1, we have also provided standard, single frame fields of view in Views 2 and 3 as contrast and to allow greater focus on the Project.

Due to the physical features and location of the Project Site and the surrounding areas, as well as significant variations in elevations and distance between the Project Site and surrounding areas and proximity to designated scenic highways, panoramic imagery was used at several locations to provide a sense of context to any potential view impacts. The panoramic views reflect how the Project would look and be experienced by the human eye, although with a somewhat wider field of view.[3] Panoramic imagery was

[2] Normal Lens. (n.d.). In *Wikipedia*. Retrieved December 3, 2012, from http://en.wikipedia.org/wiki/Normal_lens

[3] The field of view for any given image is less important than what that view shows and that the perspective is correct. A discussion of degrees, whether somewhat wider or somewhat narrower field of view than what the human eye perceives has little effect on whether or not the Project has impacted the viewscape.

created by blending multiple images together to create a view that is wider than could be created in a single standard image or view. When used in the report and the Initial Report "standard" image or view refers to normal field of view captured by a 20mm lens with the Olympus E-P3 camera (46.78 degrees horizontal field of view) or the 50mm lens with the Nikon D600 camera. This process, as noted above, most closely approximates the correct perspective compared with an image taken from a camera utilizing a lens with wide-angle or telephoto focal length. By using the same camera and lens as was used to create the standard images, the panoramic imagery was able to maintain the 'natural' perspective. Panoramic imagery was chosen for viewpoints where broad expanses of ocean were visible and the Project stretched beyond the field of view captured in a standard image. Other than the necessary changes to create panoramic photographs from a series of standard photographs (i.e. overlapping images, and corrections for the distortion of projecting a cylindrical view onto a flat plane of paper), no photographs were cropped or adjusted in any way during post-production. Detailed photography notes can be found in Appendix A.

The locations where each photograph was taken was specified by the City of Malibu Planning Department (other than the locations on Pepperdine University which where selected by the University) and during the time of taking the photographs were established by a GPS data logger. The GPS data log was taken with two devices simultaneously and at least five satellites were in-view and locked to each device during the duration of the visits to the Project Site, and both logs were combined and averaged to reduce possible errors. Once the photographs and locations were reviewed, twenty-six were chosen to provide a broad representative sample of views from areas surrounding the Project Site. An aerial image with plotted photograph locations is provided in Appendix B.

C. Comments to the DEIR

On May 6, 2013, City of Malibu's Planning Commission held a hearing to provide the general public and the Planning Commissioners an opportunity to comment on the DEIR. In addition, the City received written comments to the DEIR during the public comment period. A number of comments

were received requesting that the City provide visual simulations from additional public viewpoints. In addition, a number of comments requested that the EIR analyze another alternative, which would include a mixture of reducing the height, density (square footage) and massing of some of the residences in the Proposed Project to address concerns about visual impacts.

On the basis of the comments submitted to the DEIR, including the comments made at the May 6, 2013 Planning Commission hearing, the City directed the Owner to have the Consultant prepare additional visual simulations of the Proposed Project and the One-Story Alternative from additional locations. Based on the comments to the DEIR, the Planning Department requested visual simulations to be provided from twelve (12) additional locations as shown on Appendix B attached hereto, seven (7) of which are from public viewpoints, and five locations are on the campus of Pepperdine University (the "Additional Locations"). The five locations on the Pepperdine University campus were selected by the University, which provided consultant with GPS coordinates for each of these locations. Although Pepperdine University is private property, the locations were selected based on a combination of their use (foot and vehicular traffic etc.) and their location for important University related or sponsored events. Photographs were taken from the Additional Location on June 17, 2013 in accordance with the Methodology outlined in the Initial Report.

The visual simulations from the following Additional Locations are contained in Appendix B:

View 15: Pepperdine University - Brock House Lawn. This is a panorama view from Brock House lawn looking southeast and southwest. A panorama view was chosen from this location because both the Project and expansive ocean views were available from this location and a panorama view approximates the view one would have standing on Brock Lawn looking toward the Project Site. Brock House is the private residence of the University's president and generally not available to the public. This location was chosen because many University events take place at this location. In addition to the wide view of the ocean, the view from this location also includes Bluffs Park, many buildings on the Pepperdine University Campus, residences in the Malibu Country Estates neighborhood, stretches of Malibu Canyon Road, Pacific Coast Highway and part of the Malibu Civic Center, Malibu Road and the Malibu Colony.

View 16: Pepperdine University - Thornton Administrative Center. **This is a panorama view looking southeast from the window in the reception area in the Thornton Administrative Center.** This view point is not available to the public. A panorama view was chosen from this location because both the Project and expansive ocean views were available from this location and a panorama view approximates the view one would have standing in the Thornton Administrative Center reception area looking toward the Project Site. In addition to the wide view of the ocean, the view from this location also includes a portion of a parking lot on the Pepperdine University Campus, a large undeveloped parcel of land (Rancho Malibu Hotel site), part of the Malibu Civic Center, residences along Malibu Road and the Malibu Colony, a portion of the Malibu Lagoon and Surfrider Beach.

View 17: Pepperdine University - Campus Walk. **This is a panorama view looking southeast from the Campus Walk.** A panorama view was chosen from this location because both the Project and expansive ocean views were available from this location and a panorama view approximates the view one would have standing on both the Campus Walk and the campus cafeteria looking toward the Project Site. This is an area of high foot and vehicular traffic. In addition to the wide view of the ocean, the view from this location also includes a part of a parking lot and landscaped areas on the Pepperdine University Campus, a large undeveloped parcel of land (Rancho Malibu Hotel site), portions of the Civic Center and Serra Retreat, residences along Malibu Road and the Malibu Colony, the Malibu Lagoon and the coastline.

View 18: Pepperdine University - Lake Sidewalk. **This is a panorama view looking south to southeast from the sidewalk above the lake in Alumni Park.** A panorama view was chosen from this location because both the Project and expansive lake, lawn and ocean views were available from this location and a panorama view approximates the view one would have standing on the sidewalk above the lake looking toward the Project Site. In addition to the wide view of the ocean, the view from this location also includes Bluffs Park, Alumni Park on the Pepperdine University Campus, and a portion of Bluffs Park owned by the Santa Monica Mountains Conservancy, the Rancho Malibu Hotel Site and the Malibu Lagoon.

View 19: Pepperdine University - Alumni Park. **This is a panorama view looking south and east from the western portion of Alumni Park.** A panorama view was chosen from this location because both the Project and expansive lawn and ocean views were available from this location and a panorama view approximates the view one would have standing in Alumni Park looking toward the Project Site. In addition to the wide view of the ocean, the view from this location also includes Bluffs Park, a stretch of Pacific Coast Highway and an undeveloped parcel of land west of Bluffs Park.

View 20: Surfrider Beach. **This is a standard view looking west from Surfrider Beach.** A standard view was chosen from this location because the Project was contained within this view, and nearby structures, and trees framed this view. This view also approximates the view standing on Surfrider Beach looking toward the Project Site. The ocean is not visible in this view. In addition to the Project, the view from this location also includes buildings on the Pepperdine University campus, residences in the Malibu Colony and the Santa Monica Mountains in the background.

View 21: Malibu Colony Beach. **This is a standard view looking west from Malibu Colony Beach.** A standard view was chosen from this location because the Project was contained in this view, and approximates the view one would have walking west along the Malibu Colony beach looking toward the Project Site. This view is similar to View 7, which also shows the ocean in the foreground, beachfront residences in the Malibu Colony and along Malibu Road and a small portion of the Santa Monica Mountains in the background.

View 22: Malibu Pier (southern end of Pier). This is a standard view looking west from the end of the Malibu Pier. A standard view was chosen from this location because the Project was contained within this view, and nearby hillside, and trees framed this view. This view also approximates the view standing on the southern end of Malibu Pier looking toward the Project Site. This view shows the ocean, the Adamson House and Surfrider Beach in the foreground.

View 23: Malibu Library. **This is a standard view looking west from the Civic Center Way from of the Malibu Library.** A standard view was chosen from this location because the Project was contained within this view along with the Pacific Coast Highway and nearby structures. This view also

approximates the view standing in Civic Center Way in front of the library looking west toward the Project Site. This view shows other development in the area, including Civic Center Way, part of the parking lot of the Civic Center, a large multifamily residential development known as Maison DeVille Condominiums and a stretch of the Pacific Coast Highway.

View 24: Malibu Bluffs Park. **This is a standard view looking north and east from the lawn in Bluffs Park.** A standard view was chosen from this location because the Project was contained in this view, and both nearby structures in Bluffs Park and expansive views of the Santa Monica Mountains framed the view. The prominent HRL Research complex is also visible from this location. This view also approximates the view standing on the soccer/multipurpose field of Bluff Park looking toward the Project Site.

View 25: Adamson House. **This is a standard view looking west from the lawn of the Adamson House.** A standard view was chosen from this location because the Project was contained in this view and the expansive view of the sky and nearby structures framed the view. This view also approximates the view from standing on the lawn in the rear yard of the Adamson House. This view also includes a portion of the commercial area along the Pacific Coast Highway, a large gas station sign, numerous buildings of the Pepperdine University Campus.

View 26: Pacific Coast Highway (west of entrance to Bluffs Park). A standard view was chosen from this location due to a request from one of the commenters to the DEIR. This view point is located west of the Project Site on the Pacific Coast Highway and it approximates the view from an automobile traveling east along the Pacific Coast Highway. The Project Site is not visible from this location.

In addition to responding to comments that the EIR analyze the potential visual impacts of the Proposed Project and the One-Story Alterative from the Additional Locations, in response to comments requesting an additional project alternative containing a mixture of reducing the height, square footage and massing of some of the homes, the City decided to analyze this additional alternative. The Planning Department determined that the reduced project alternative should (i) reduce the square footage of each residence to comply with the maximum permitted under the City's development regulations, (ii) reduce the height of the residence on Lot 2 not to exceed 18 feet, (iii) reduce the square footage of the second floor on two

of the residences, and (iv) modify the landscaping plan to respond to concerns that the landscaping would affect visual resources. Project Owner directed its architect, Landry Design Group to prepare a conceptual plan modifying the Proposed Project in response to the City's direction. This modified plan reduced the Proposed Project's floor area by approximately 11% and the height and massing of some of the residences, and is reflected on the Reduced Project Site Plan attached as Appendix C hereto and summarized as follows:

Lot 1: Reduced the square footage on the second floor from 3,344 square feet to 1,619 square feet and the total square footage of the residence from 11,081 square feet to 10,052 square feet.

Lot 2: Reduced the height of the entire residence not to exceed 18 feet and the square footage of the home from 11,068 square feet to 9,642 square feet.

Lot 3: Reduced the square footage of the residence from 11,009 square feet to 8,999 square feet.

Lot 4: Reduced the square footage on the second floor from 3,409 square feet to 3,152 square feet and the total square footage of the residence from 11,157 square feet to 9,536 square feet.

Lot 5: Relocated the siting of the pool cabana from the western side of the pool to the eastern side, moved the location of the residence further north and approximately 6 1/2 feet to the east and reduced the height of approximately 26 linear feet the roof on the southwestern portion of the house by 4' 4" by changing the roof from flat to pitched.

In addition, the Project's landscape architect, James Hyatt Studio/Valleycrest was asked to modify the landscape plan designed for the Proposed Project (the "Original Landscape Plan") in order to reduce the planting in certain locations in response to comments that the landscaping would impact visual resources. The Original Landscape Plan is shown as Figure 3-7 of the DEIR. The modified landscape plan is referred to herein as the "Modified Landscape Plan" and is attached as Appendix D hereto and the changes shown in the Modified Landscape Plan are summarized as follows:

COMMON AREA-

- Seven (7) Heteromeles arbutifolia trees were removed from both the north and south sides of the street between the gatehouse and the driveway of Lot 5 to create view corridors from Rancho Malibu.
- Three (3) trees were removed from both the north and south sides of the street to the west of the driveways to Lots 1 and 4 to open a larger view corridor from Rancho Malibu.

LOT 1-

- Replaced four (4) Sambucus Mexicana with 5 Arbutus marinas on north side of driveway.
- Added seven (7) Arbutus marinas along northern property line to be consistent with the change in location of the house and new footprint.
- Relocated three (3) Chitalpa tashkentensis to west the house to be consistent with the change in location of the house and new footprint.
- Removed palms in front of house.
- Removed two (2) Brahea armata Palms, one (1) Arbutus unedo, and two (2) Chamerops humilis Palms in the rear yard and along south side of the house to coordinate with changes in the location of the house and new footprint.

LOT 2-

- Four (4) Cupressus macrocarpa on east side of house replaced with Quercus agrifolia, and locations adjusted. One (1) Quercus agrifolia removed from north side of house and replaced with two (2) Cupressus macrocarpa.
- Removed eight (8) Cycas revoluta and adjusted locations of six (6) Arbutus unedo trees to coordinate with changes in the location of the house and new footprint.

LOT 3-

- Adjusted trees around updated entry water feature in site plan as a result of removal of the guest house.

LOT 4-

- Removed five (5) Olea europa trees along entry drive to widen the view corridor from Rancho Malibu property.

- Removed two (2) Taxodium mucronatum and adjusted the location of a third on the east side of the house. This adjustment aligns with the removed street trees and Olea europa to create a continuous view corridor down the draw to the ocean.
- Adjusted the location of the remaining Olea europas along the driveway to better screen the house.
- Added two (2) Arbutus marina in front of the house to be consistent with the change in location of the house and new footprint.
- Adjusted location of various trees on east side of the house to coordinate with revised architecture.

LOT 5-

- Added one (1) Erythrina caffra and adjusted the location of another on west side of the to be consistent with the change in location of the house and new footprint.
- Relocated Stenocarpus sinuatus trees on west side of the house to coordinate with changes in the location of the house and revised architecture.
- Adjusted location of Quercus agrifolia to west of the house in area between Bluffs Park ball field and driveway to coordinate with changes in the location of the house and revised architecture.
- Removed four (4) Heteromeles arbutifolia along south side of driveway to open views to the ocean.

The modifications to the Proposed Project and the Original Landscape Plan are referred to as the Reduced Project Alternative. The Owner requested that the Consultant prepare visual simulations of Reduced Project Alternative from the Initial Locations and the Additional Locations. The view simulations of the Proposed Project from the Additional Locations, the One-Story Alternative from the Additional Locations and Reduced Project Alternative from the Initial Locations and the Additional Locations are analyzed in this report.

With the visual simulations contained in this report, the Consultant has provided seventy-eight (78) visual simulations for analysis as follows:

- Proposed Project: 26 visual simulations

- One-Story Alternative: 26 visual simulations
- Reduced Project Alternative: 26 visual simulations

II. Environmental Setting.

The Project Site is 24-acres of undeveloped land. The DEIR (at page 5.1-24) notes that due to the topography of the Project Site, which is essentially a flat mesa with steep slopes on three sides, and surrounding area "the project site is prominently visible from portions of PCH east of the project site."

The Proposed Project should be assessed within the context of the extensive and diverse surrounding residential and commercial uses when analyzing the potential impacts from the Proposed Project to visual resources. It should be noted that the Project Site is located in an area that has seen substantial development. Development within approximately one-half of a mile from the Project Site include single family residential development on Malibu Road, the Malibu Knolls (229 homes) and the Malibu Country Estates (97 homes) subdivisions, two condominium developments totaling 152 units, office buildings, including the HRL Research complex (approximately 225,000 square feet), Malibu City Hall and Los Angeles County offices, two wastewater treatment plants, Pepperdine University and the Malibu Colony Plaza Shopping Center. Therefore, the DEIR concluded that while "the proposed project would alter the visual appearance of the project site" the Proposed Project "would not substantially degrade visual character of the [Project] site or introduce any aesthetic elements incompatible with the project area."

In fact, the Proposed Project, which consist of five (5) single-family residences on Lots ranging from approximately 3.5 acres to slightly over 5 acres, and 1.74 acres of recreational and open space spread over twenty-four (24) acres, when compared to the existing development surrounding the Project Site is a relatively low density and less intense use.

The Project Site is zoned Planned Development ("PD") and is intended for residential development and recreational facilities and the Proposed Project is consistent with its PD zoning designation. The Project Site does not contain any distinct landform features and the north boundary of the Project Site was created as a result of the construction of Pacific Coast Highway.

The Project Site has also been disked for many years pursuant to Los Angeles County's weed abatement requirements.

III. IMPACTS ANALYSIS

In assessing the visual impact of the Proposed Project, the DEIR utilized the following thresholds of significance, in which the Project would have a significant impact on the environment if it would:

AE-1 Have a substantial adverse effect on a scenic vista.

AE-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway.

AE-3 Substantially degrade the existing visual character or quality of the site and its surroundings.

AE-4 Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area. (The City of Malibu imposes standard conditions of approval which address the potential for light or glare and this threshold is not analyzed in this Report. DEIR page 5.1-10)

The following is a summary of the impacts to visual resources for the Proposed Project, the One-Story Alternative and the Reduced Project Alternative based on the visual simulations:

A. Proposed Project

View 1: Rancho Malibu Site looking south to southeast across PCH to the Project Site. This is a view from a privately owned, undeveloped property immediately north of the Project Site across PCH. Based on current plans filed with the City of Malibu and as discussed further in Section IV.A below, the Rancho Malibu project's primary views are oriented internally within the project or southeast toward the coastline of Santa Monica Bay and not directly south toward the Project Site as shown in this view simulation. It should be noted that the Rancho Malibu Hotel does not exist and the view from this location is hypothetical in the sense that the Rancho Malibu Hotel has not been approved or constructed. Nevertheless, a large portion of the ocean view remains unaffected by the Project and the mountain views and coastline remain entirely unaffected in this image. It should be noted that the large trees located to the left of the residence and

obscuring the ocean view are not located on the Project Site. The Proposed Project would have a less than significant impact on views from this location on the Rancho Malibu Hotel site.

View 2: Rancho Malibu Site (future casita placement, 2nd floor) looking south across PCH to the Project Site. This is a view from a privately owned, undeveloped property immediately north of the Project Site across PCH. The residence on Lot 4 blocks a portion of the ocean view and a row of trees also obscures a portion of the remaining ocean view. However, a portion of the ocean view remains above the trees and next to the residence. Based on current plans filed with the City of Malibu, the Rancho Malibu Hotel project's primary views are oriented internally within the project or southeast toward the coastline of Santa Monica Bay and not directly south toward the Project Site. It should be noted that the Rancho Malibu Hotel does not exist and the view from this location is hypothetical in the sense that the Rancho Malibu Hotel has not been approved or constructed. As discussed further in Section IV.A, this view from the Rancho Malibu Hotel site is not representative of the large majority of views from the Rancho Malibu Hotel site, which face in another direction and this view would be seen by only a small fraction of the proposed hotel rooms. For these reasons, the visual impact from this location is not considered to be significant.

View 3: Rancho Malibu Site (future casita placement, 2nd floor) looking southeast across PCH to the Project Site. This is a view from a privately owned, undeveloped property immediately north of the Project Site across the Pacific Coast Highway. The residence and landscaping obscure most of the view of the ocean from this location, with only a portion of the blue water visible above the Proposed Project. Similar to View 2, based on current plans filed with the City of Malibu, the Rancho Malibu Hotel project's primary views are oriented internally within the project or southeast toward the coastline of Santa Monica Bay and not directly south toward the Project Site. Thus, as discussed further in Section IV.A, this view from the Rancho Malibu Hotel site is not representative of the large majority of views from the Rancho Malibu Hotel site, which face in another direction and this view would be seen by only a small fraction of the proposed hotel rooms. For these reasons, the visual impact from this location is not considered to be significant. It should be noted that the Rancho Malibu Hotel does not exist and the view from this location is

hypothetical in the sense that the Rancho Malibu Hotel has not been approved or constructed.

View 4: Blue Dane Lane (Malibu Country Estates) looking southeast toward the Project Site. This is a view from a public street approximately one-half mile from the Project Site at an elevation approximately 100 feet above the Project Site. Because the Consultant was unable to identify a homeowner in the Malibu Country Estates neighborhood who would give him access to a private residence, this view is intended to represent a view from a private residence. The Project is contained within the center of this view. This image shows that the Project will block only a very small fraction of the blue water view from this location. However, because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project Site, the Project is almost imperceptible and the expansive blue water views are otherwise unobstructed. Existing development in the vicinity of the Project is also visible. The Proposed Project would have a less than significant impact on views from this location.

View 5: Vantage Point Terrace (Malibu Country Estates) looking southeast toward the Project Site. This is a view from a public street. Existing development in the vicinity of the Project is visible. The Project is visible from this location, however, the nearby housing, vegetation and topography block extensive ocean views to the east and west. This image shows the Project will block a very small fraction of the blue water view from this location. In addition, because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project Site, the changes to the blue water view are minor. The Proposed Project would have a less than significant impact on views from this location.

View 6: PCH and Cross Creek Road looking west toward the Project Site. Pacific Coast Highway is a designated as a scenic highway and is a public view point. However, the views from this portion of PCH are not of high scenic quality because views from this location include commercial development and the views do not contain striking views of vegetation, rock outcroppings, historic buildings or other unique valued aesthetic features, including the ocean or mountains. Rather, the view of the Project from this location is the eastern slope of the Project Site and a portion of the adjacent

Towing Site, which includes overhead power lines and some native and non-native vegetation. Existing development in the vicinity of the Project is visible. The visual impact to passing motorists would be of short duration. The Project's landscaping visible from this vantage point will have the effect of softening the buildings and helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 7: Malibu Colony Beach looking west toward the Project Site. While the areas above the mean high tide line are private property, the beach below the mean high tide line is public and would be considered a public viewing area. The view from this point shows a substantial degree of development along the beach with many residences packed closely together. The Project will be visible on top of the bluff with the sky as the background, but will not block views of the ocean, mountains or of vegetation, rock outcroppings or other unique aesthetic features. The Project's landscaping visible from this vantage point has the effect of softening the buildings helping the proposed development blend in with its surroundings and is compatible with the other residential development in the area. The Proposed Project would have a less than significant impact on visual resources from this location.

View 8: Malibu Legacy Park looking southwest toward the Project Site. This is a public viewing area. The Project will be on top of the bluff against with the sky as the background. However, there are no views of the ocean, mountains, trees or other vegetation, rock outcroppings or other valued aesthetic features from this location. Existing development in the vicinity of the Project is visible. The Project's landscaping visible from this vantage point has the effect of softening the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 9: PCH & Webb Way looking west toward the Project Site. The Pacific Coast Highway is a designated as a scenic highway and this is a public view. However, the views from this portion of PCH are not of high scenic quality because views from this location do not include the ocean, mountain, significant trees or vegetation or other valued aesthetic features.

Rather the Project is visible on top of the bluff with the sky as the background. Substantial existing development in the vicinity of the Project is visible from this view point, including the parking lot of a large shopping center and a large multifamily residential project. The appearance of the Project is compatible with the other development in this area. The visual impact to passing motorists would be of short duration. The Project's landscaping visible from this vantage point has the effect of softening the buildings helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 10: Coast View Drive (Malibu Knolls) looking south toward the Project Site. This is a private view from the yard of a home in Malibu Knolls, approximately one-half mile from the Project Site at an elevation approximately ten (10) feet above the Project Site. The Project is located in the center of this view. Existing development in the vicinity of the Project is visible. This image shows that, while the Project will block a small portion of the blue water view from this location, because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project, only a small fraction of the blue water views are affected by the Project. The appearance of the Project is compatible with the other development in this area. The Project's landscaping visible from this vantage point has the effect of softening the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 11: Malibu Canyon Road looking southwest toward the Project Site. Malibu Canyon Road is designated as a scenic highway. This location is approximately four-tenths of a mile from the Project Site at an elevation approximately 50 feet above the Project Site. The Project is located in the center of this view. Other existing development in the vicinity of the Project is visible. This image shows that while the Project will block a small portion of the blue water view from this location, because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project, only a small fraction of the blue water views are affected by the Project. The visual impact to passing motorists would be of short duration. The Project's landscaping visible from this vantage point

has the effect of softening the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 12: Malibu Road looking northeast toward the Project Site. This is a public view from a public street. Only a small portion of one residence can be seen on top of the bluff with the sky as the background. However, there are no views of the ocean, the mountains, or striking views or significant trees or other vegetation, geologic features, or any valued aesthetic unique features from this location. Existing single-family development on Malibu Road is visible from this location. The visual impact to passing motorists would be of short duration. The Proposed Project would have a less than significant impact on visual resources from this location.

View 13: Bluffs Park (Santa Monica Mountains Conservancy) looking east toward the Project Site. This location is considered a public viewing area. Other residential development along the coast line and on the slopes of the Santa Monica Mountains is visible in the distance. The appearance of the Project is compatible with the other development in this area. A portion of the Project is visible from this location and obscures a very small portion of the view of a part of the Santa Monica Mountains. However, none of the ocean views are affected and the Project blends into the background. The Project's landscaping visible from this vantage point has the effect of softening the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 14: Bluffs Park (baseball outfield) looking east toward the Project Site. This location is considered a public viewing area. The Project will block a small portion of the ocean and mountain views from this location. However, expansive ocean and mountain views will remain from this location. Existing development in the vicinity of the Project is also visible. In addition, the existing maintenance shed at the end of Winter Mesa Road currently blocking a portion of the ocean view from this location is to be relocated as part of the Project, which will reduce some of the existing blockage of blue water views. The Project's landscaping visible from this

vantage point has the effect of softening the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 15: Pepperdine University - Brock House Lawn-Panorama view from Brock House lawn looking southeast to southwest. This is a private view. This location is approximately one-half of a mile from the Project Site at an elevation approximately 400 feet above the Project Site. The Project is contained within the center of this view, which also shows considerable other development in the area. This image shows while that the Project is perceptible in the distance, but blocks very little of the blue water view from this location because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project. The Project's landscaping visible from this vantage point has the effect of softening the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 16: Pepperdine University - Thornton Administrative Center. **Panorama view looking southeast from the window in the reception area in the Thornton Administrative Center.** This is a private view. This location is approximately four-tenths mile from the Project Site at an elevation approximately 170 feet above the Project Site. The Project is contained within the center of this view, which also shows a considerable amount of other development in the Civic Center area and along the coastline. This image shows that the Project will block only a very small fraction of the blue water view from this location because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project. In addition, the appearance of the Project is aesthetically consistent with the other existing development in the vicinity of the Project that is visible. The Project's landscaping visible from this vantage point has the effect of softening the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 17: Pepperdine University - Campus Walk. **Panorama view looking southeast from the Campus Walk.** This view is located on private property that is available to Pepperdine University students, faculty and staff and visitors to the Pepperdine University campus. This location is approximately four-tenths mile from the Project Site at an elevation approximately 165 feet above the Project Site. The Project is contained within the center of this view and other substantial developments are visible, including a parking lot on the Pepperdine University campus, residential development along the coastline and development in the Civic Center area. This image shows while that while the Project will block a small fraction of the blue water view from this location, because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project, the blue water views are slightly impacted. The Project's landscaping visible from this vantage point has the effect of softening the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 18: Pepperdine University - Lake Sidewalk. **Panorama view looking south to southeast from the sidewalk above the lake in Alumni Park.** This view is located on private property that is available to Pepperdine University students, faculty and staff and visitors to the Pepperdine University campus. This location is approximately three-tenths of a mile from the Project Site at an elevation approximately 100 feet above the Project Site. The Project is located in the eastern portion of the image. This image shows while that while the Project will block a very small fraction of the blue water view from this location, because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project, the blue water views are slightly impacted. Existing development in the vicinity of the Project is visible. The Project's landscaping visible from this vantage point has the effect of softening the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 19: Pepperdine University - Alumni Park. **Panorama view looking south and east from the western portion of Alumni Park.** This

view is located on private property that is available to Pepperdine University students, faculty and staff and visitors to the Pepperdine University campus. This location is approximately three-tenths of a mile from the Project Site at an elevation approximately 50 feet above the Project Site. This image shows that the Project is only slightly visible from this location and does obstruct any of the blue water view because of the significant distance between the Project Site, the ocean and this location. The existing landscaping in Alumni Park blocks a small portion of the Project and the ocean views from this location. The Proposed Project would have a less than significant impact on visual resources from this location.

View 20: Surfrider Beach. **Standard view looking west from Surfrider Beach.** This is considered public viewing area. The Project can be seen on top of the bluff with the sky as the background. However, there are no views of the ocean or significant trees or other vegetation, geologic features, or other valued aesthetic features that are obstructed by the Project from this location. Other existing development in the vicinity of the Project is visible, including the Adamson House complex and large scale buildings on the Pepperdine University campus set against the Santa Monica Mountains in the background. The appearance of the Project in the context of the other buildings is appropriate in scale and massing and is aesthetically compatible with the other development. Similarly, the Project's landscaping visible from this vantage point has the effect of softening the appearance of the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 21: Malibu Colony Beach. Standard view looking west from Malibu Colony Beach. While the areas above the mean high tide line are private property, the beach below the mean high tide line is public and would be considered a public viewing area. This view is substantially similar to View 7. The view from this point shows a substantial degree of development along the beach with many residences packed closely together. The Project will be visible on top of the bluff and the Project will not block views of the ocean, mountains or of significant trees or other vegetation, rock outcroppings or other unique aesthetic features. The Project's landscaping visible from this vantage point has the effect of softening the buildings and helping the proposed development blend in with its

surroundings and is compatible with the other residential development in the area. The Proposed Project would have a less than significant impact on visual resources from this location.

View 22: Malibu Pier (south end of Pier). Standard view looking west from the end of the Malibu Pier. This is considered a public viewing area. The Project can be seen in the distance on top of the bluff with the sky as the background. The Project does not affect views of the ocean, the mountains or of significant trees or other vegetation, geological features, or other valued aesthetic features. Existing development in the vicinity of the Project is visible, including Pacific Coast Highway, the Adamson House complex and small buildings on Surfrider Beach. The appearance of the Project is aesthetically compatible with the other development that is visible from this view point. The Project's landscaping visible from this vantage point has the effect of softening the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 23: Malibu Library. **Standard view looking west from the sidewalk in from the Malibu Library.** This is a public viewing area. The Project can be seen on top of the bluff in the background. Existing development in the vicinity of the Project is visible, including Civic Center Way, a parking lot serving the Civic Center, a stretch of the Pacific Coast Highway and a large multifamily residential project. The scale and massing of the Project is aesthetically compatible with the other development that is visible from this view point. The Project does not affect views of the ocean, the mountains or of significant trees or other vegetation, geological features, or other valued aesthetic features. The Project's landscaping visible from this vantage point has the effect of softening the buildings, helping the proposed development blend in with its surroundings and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 24: Malibu Bluffs Park. Panorama view looking northeast from the lawn in Bluffs Park. This location is considered a public viewing area. The Santa Monica Mountains and existing development, including the HRL Research complex and buildings in Bluffs Park in the vicinity of the Project are visible. Only a very small portion of the Project is visible on the far right

side of this image and most of the project is obscured by vegetation. The Project does not block or impair any views of the ocean, the mountains or other geological features or other valued aesthetic features. The Proposed Project would have a less than significant impact on visual resources from this location.

View 25: Adamson House. Standard view looking west from the lawn of the Adamson House. This is considered a public viewing area. The Project can be seen in the center of the image on top of the bluff. Existing development in the vicinity of the Project is visible, including a portion of the commercial area along the Pacific Coast Highway, a large gas station sign, and numerous large buildings of the Pepperdine University Campus. The Project does not block or impair any views of the ocean, the mountains or other geological features or other valued aesthetic features. The scale and massing of the Project is aesthetically compatible with the other development that is visible from this view point. The Project's landscaping visible from this vantage point has the effect of softening the buildings and helping the proposed development blend in with its and reducing the perceived mass of the structures. The Proposed Project would have a less than significant impact on visual resources from this location.

View 26: Pacific Coast Highway. Standard view west of entrance to Bluffs Park. Pacific Coast Highway is a designated scenic highway. A large eucalyptus tree, which is approximately 30 feet high, is visible on the Project Site from this location and will be removed as part of the Project. The Project is not visible from this location and the Proposed Project would have no impact on the visual resources when viewed from this location.

Conclusion. Based on the foregoing, when analyzed as to each individual view point or when generalized across all of the representative view points for the Proposed Project as a whole, the Proposed Project would not**:** (i) obstruct or otherwise substantially impact scenic views or resources; (ii) degrade the visual appearance of the project site or its surroundings; (iii) substantially degrade the visual character of the site or introduce any aesthetic elements incompatible with the project area; or (iv) block any significant scenic resources from public view sheds or from protected private view corridors.

B. One-Story Alternative - This alternative reduces the maximum building height of each home to 18 feet. The total square footage of each of the homes and the lot sizes would remain the same as in the Proposed Project. The simulations from Views 1 - 26 of the One-Story Alternative are attached to this report as Appendix B.

The Proposed Project's two-story residences allow for greater separation between the homes which preserves existing view sheds and allows for more open space – single-story homes of a similar square footage would be wider with substantially larger footprint, potentially encroaching on lateral (horizontal) views to a greater extent and reduced space between the homes.

View 1: Rancho Malibu Site looking south to southeast across PCH to the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The reduction in height of the homes on Lots 1 and 2 visible from this location would very slightly increase the view of the ocean above the residence on Lot 1 while simultaneously marginally reducing the view of the ocean to the east of the residence on Lot 1. This results in virtually no reduction to already less than significant impacts to visual resources because extensive ocean and mountain views remain unaffected by the Proposed Project. Thus, the One-Story Alternative does not result in reduced impacts to visual resources from the less than significant impact from the Proposed Project.

View 2: Rancho Malibu Site (future casita placement, 2nd floor) looking south across PCH to the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. Similar to View 1, the reduction of height of the home on Lot 4 visible from this location would very slightly increase the view of the ocean above the residence on Lot 4 while simultaneously marginally reducing the view of the ocean to the east of the residence on Lot 4. This results in virtually no reduction to

already less than significant impacts to visual. Thus, the One-Story Alternative does not result in reduced impacts to visual resources from the less than significant impact from the Proposed Project.

View 3: Rancho Malibu Site (future casita placement, 2nd floor) looking southeast across PCH to the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The reduction in the height of the homes visible from this location would decrease a small portion of view blockage of the ocean caused by the second floor of the homes. However, the One-Story Alternative will result in a Project with residences with substantially greater footprints and a reduction of space between the homes. Thus, the One-Story Alternative from View 3 results in only a very marginal reduction in impacts to visual resources from the less than significant impact from the Proposed Project. As discussed further in Section IV.A, with respect to Views 1, 2 and 3, these views from the Rancho Malibu Hotel site are not representative of the large majority of views from the Rancho Malibu Hotel site, which face in another direction and this view would be seen by only a small fraction of the proposed hotel rooms.

View 4: Blue Dane Lane (Malibu Country Estates) looking southeast toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As noted above, because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project Site, similar to the Proposed Project, the One-Story Alternative is almost imperceptible and the One-Story Alternative does not result in any reduction to visual resources compared to the Proposed Project's already less than significant impacts to visual resources.

View 5: Vantage Point Terrace (Malibu Country Estates) looking southeast toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. Because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project Site, the expansive blue water views are not affected or otherwise obstructed by the One-Story Alternative. The One-Story Alternative is virtually indistinguishable from the Proposed Project and it does not materially reduce the Proposed Project's less than significant impacts to visual resources.

View 6: PCH & Cross Creek Road looking west toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The One-Story Alternative will result in a marginal horizontal increase in view blockage and a marginal decrease in vertical view blockage of the sky when compared to the Proposed Project. This View shows how the reduction in vertical height of the Proposed Project against the sky is offset by the increased horizontal view blockage. From this distance, the visual impact of the One-Story Alternative is virtually unchanged from that of the Proposed Project. Therefore, the One-Story Project Alternative does not materially reduce the Proposed Project's less than significant impacts to visual resources.

View 7: Malibu Colony Beach looking west toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to the Proposed Project**. Because of the distance between the Project Site and the elevation of this location relative to the Project Site, the One-Story Alternative provides no material reduction in the already less than significant impact of the Proposed Project to visual resources. The One-Story Alternative has a somewhat marginal reduction in the amount of sky that is obscured,

but this is offset by a similarly marginal horizontal increase in view blockage of the sky on the southern portion of the Project Site. However, the amount of sky that is obscured by the Project from this view point is so minimal that the difference is insignificant. Thus, both the Proposed Project and the One-Story Alternative have no significant impact on any visual resources from this view point.

View 8: Malibu Legacy Park looking southwest toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. Because of the distance between the Project Site and the elevation of this location relative to the Project Site, the One-Story Alternative provides no material reduction in the already less than significant impact of the Proposed Project to visual resources. The One-Story Alternative results in a slight horizontal increase in view blockage and a slight decrease in vertical view blockage of the sky when compared to the Proposed Project. However, because with the One-Story Alternative the residences have larger footprints than the Proposed Project, the visual effect of the One-Story Alternative is more monolithic and less varied than the Proposed Project.

View 9: PCH & Webb Way looking west toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. Because of the distance between the Project Site and the elevation of this location relative to the Project Site, the One-Story Alternative provides no material reduction in the already less than significant impact of the Proposed Project to visual resources. The One-Story Alternative results in a minimal horizontal increase in view blockage of the sky and a very small decrease in vertical view blockage of the sky when compared to the Proposed Project. However, as with View 8, because with the One-Story Alternative the residences have larger footprints than the Proposed Project, the visual effect of the One-Story Alternative is more monolithic and less compatible than the Proposed Project.

View 10: Coast View Drive (Malibu Knolls) looking south toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The One-Story Alternative will result in a marginal horizontal increase in view blockage and a marginal decrease in vertical view blockage of the sky when compared to the Proposed Project. The One-Story Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 11: Malibu Canyon Road looking southwest toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The One-Story Alternative will result a marginal horizontal increase in view blockage and a marginal decrease in vertical view blockage of the sky when compared to the Proposed Project. However, the One-Story Alternative also will not result in a significant impact to visual resources. Because the One-Story Alternative residences have larger footprints than the Proposed Project, the visual effect of the One-Story Alternative is more monolithic and less compatible than the Proposed Project. The One-Story Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 12: Malibu Road looking northeast toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, only a small portion of one home in the One-Story Alternative can be seen on top of the bluff and there are no views of the ocean, the mountains, or striking views or significant trees or other vegetation, geologic features, or any valued aesthetic unique features from this location. As with the Proposed Project, the One-Story Alternative

would have a less than significant impact on visual resources from this location.

View 13: Bluffs Park (Santa Monica Mountains Conservancy) looking east toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, a very small portion of the Project is visible from this location and obscures a very small portion of the view of a part of the Santa Monica Mountains. None of the ocean views are affected and the One-Story Alternative also blends into the background. Like the Proposed Project, the One-Story Alternative would have a less than significant impact on visual resources from this location.

View 14: Bluffs Park (baseball outfield) looking east toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The One-Story Alternative will result in an increase in horizontal view blockage that affects the view of the ocean and a marginal decrease in vertical view blockage of the sky when compared to the Proposed Project. However, the One-Story Alternative will also not result in a significant impact to visual resources. The One-Story Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 15: Pepperdine University - Brock House Lawn-Panorama view from Brock House lawn looking southeast to southwest.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, the One-Story Alternative is barely visible from this location and it blocks only a very small portion of the view of the ocean. Like the Proposed

Project, the One-Story Alternative would have a less than significant impact on visual resources from this location.

View 16: Pepperdine University - Thornton Administrative Center. **Panorama view looking southeast from the window in the reception area in the Thornton Administrative Center.**

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, the One-Story Alternative will also not result in a significant impact to visual resources from this view point as only a small area of the ocean view is obscured by the One-Story Alternative. Because the One-Story Alternative residences have larger footprints than the Proposed Project, the visual effect of the One-Story Alternative is more monolithic and the appearance is less varied than the Proposed Project. The One-Story Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 17: Pepperdine University - Campus Walk. **Panorama view looking southeast from the Campus Walk.**

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, the One-Story Alternative will also not result in a significant impact to visual resources from this view point as only a small area of the ocean view is obscured by the One-Story Alternative. Because the One-Story Alternative residences have larger footprints than the Proposed Project, additional areas of the ocean views are obscured by the One-Story Alternative. The One-Story Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 18: Pepperdine University - Lake Sidewalk. **Panorama view looking south to southeast from the sidewalk above the lake in Alumni Park.**

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, the One-Story Alternative will also not result in a significant impact to visual resources from this view point as only a small area of the expansive ocean view is obscured by the One-Story Alternative. Because the One-Story Alternative residences have larger footprints than the Proposed Project, slightly larger horizontal areas of the ocean views are obscured by the One-Story Alternative, which is largely offset by the reduced height of the One-Story Alternative. The One-Story Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 19: Pepperdine University - Alumni Park. **Panorama view looking south and east from the western portion of Alumni Park.**

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, this image shows that the One-Story Alternative is slightly visible from this location and does obstruct any of the blue water view because of the significant distance between the Project Site, the ocean and this location. Like the Proposed Project, the One-Story Alternative would have a less than significant impact on visual resources from this location.

View 20: Surfrider Beach. **Standard view looking west from Surfrider Beach.**

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The One-Story Alternative provides no material reduction in the already less than significant impact of the Proposed Project to visual resources from this view point. The One-Story Alternative does not adversely impact the view of the ocean, the mountains or any valued visual resource. Because with the One-Story Alternative the residences have larger footprints

than the Proposed Project, the horizontal extent of the One-Story Alternative is somewhat greater than the Proposed Project. Like the Proposed Project, the One-Story Alternative would have a less than significant impact on visual resources from this location.

View 21: Malibu Colony Beach. Standard view looking west from Malibu Colony Beach.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The One-Story Alternative provides no material reduction in the already less than significant impact of the Proposed Project to visual resources from this view point. The One-Story Alternative has a somewhat marginal vertical reduction in the amount of sky that is obscured, but this is offset by a similarly marginal horizontal increase in view blockage of the sky on the southern portion of the Project Site. Thus, both the Proposed Project and the One-Story Alternative have no significant impact on any visual resources from this view point.

View 22: Malibu Pier (south end of Pier). Standard view looking west from the end of the Malibu Pier.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, the One-Story Alternative is only slightly visible from this location and it affects only a very small portion of the view of the sky. Like the Proposed Project, the One-Story Alternative would have a less than significant impact on visual resources from this location.

View 23: Malibu Library. **Standard view looking west from the sidewalk in from the Malibu Library.**

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, the One-Story Alternative will also not result in a significant impact to

visual resources from this view point as the One-Story Alternative does not affect the view of the ocean, the mountains or any other aesthetically valued resource. Because the One-Story Alternative residences have larger footprints than the Proposed Project, the visual effect of the One-Story Alternative is somewhat more monolithic and the appearance is less varied than the Proposed Project. The One-Story Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 24: Malibu Bluffs Park. Panorama view looking northeast from the lawn in Bluffs Park.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The One-Story Project Alternative structures are not visible against the mountains in the background. The One-Story Alternative will also not result in a significant impact to visual resources from this view point. The One-Story Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 25: Adamson House. Standard view looking west from the lawn of the Adamson House.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. Like the Proposed Project, the One-Story Alternative does not block or impair any views of the ocean, the mountains or other geological features or other valued aesthetic features. The One-Story Alternative would have a less than significant impact on visual resources from this location. The One-Story Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 26: Pacific Coast Highway. Standard view west of entrance to Bluffs Park. Pacific Coast Highway is a designated scenic highway.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, this image shows that the One-Story Alternative is not visible from this location and does obstruct any views. Like the Proposed Project, the One-Story Alternative would have a less than significant impact on visual resources from this location.

Conclusion.

Based on the foregoing, when analyzed as to each individual view point or when generalized across all of the representative view points for the One-Story Alternative as a whole, the One-Story Alternative would not: (i) obstruct or otherwise substantially impact scenic views or resources; (ii) degrade the visual appearance of the project site or its surroundings; (iii) substantially degrade the visual character of the site or introduce any aesthetic elements incompatible with the project area; or (iv) block any significant scenic resources from public view sheds or from protected private view corridors. For these reasons, the One-Story Alternative would have a less than significant impact on visual resources.

Because the One-Story Alternative has a larger horizontal footprint that the Proposed Project, when viewed from certain locations, it will result a marginal horizontal increase in view blockage and a marginal decrease in vertical view blockage when compared to the Proposed Project. In general, the One-Story Alternative results in an immaterial reduction to visual impacts when compared to the Proposed Project's less than significant impacts. Moreover, because the One-Story Alternative residences have larger footprints than the Proposed Project, the visual effect of the One-Story Alternative is somewhat more monolithic, the overall aesthetic appearance is less varied than the Proposed Project and the character of the One-Story Alternative seems to be of higher density and intensity than the Proposed Project. Accordingly, the One-Story Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

C. Reduced Project Alternative - The Reduced Project Alternative is described in detail above and consists of the following: (i) reduction the square footage of each residence to comply with the maximum permitted under the City's development regulations, (ii) reduction of the height of the residence on Lot 2 to no more than 18 feet, (iii) reduction of the size of the second floor on two of the residences, and (iv) modifications of the landscaping plan. The visual simulations of the Reduced Project Alternative from the Initial Locations and the Additional Locations are attached to this report in Appendix B.

View 1: Rancho Malibu Site looking south to southeast across PCH to the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The reduction in height of the residence on Lot 1 visible from this location would not increase the view of the ocean above the residence on Lot 1. At the same time, the modified landscape plan does not increase the view of the ocean in the area of the residence on Lot 1. The Reduced Project Alternative results in virtually no reduction to already less than significant impacts to visual resources because much of the ocean and mountain views remain unaffected by the Proposed Project. Thus, the Reduced Project Alternative does not result in reduced impacts to visual resources from the less than significant impact of the Proposed Project.

View 2: Rancho Malibu Site (future casita placement, 2nd floor) looking south across PCH to the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative would not increase the view of the ocean above the residence shown in this view although, from this view point, the modified landscaping creates some additional visibility of the ocean by removing some trees from the Project's entrance road. In addition, the creation of additional ocean views over the western portion of the Project Site also makes the proposed recreational facilities somewhat more visible from the Rancho Malibu Hotel site. The Reduced Project Alternative results in virtually no reduction to already less than significant impacts to visual resources. Thus, the Reduced Project Alternative does not result in reduced impacts to visual resources from the less than significant impact from the Proposed Project.

View 3: Rancho Malibu Site (future casita placement, 2nd floor) looking southeast across PCH to the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The reduction in the height of the residence on Lot 2 and the changed massing of the residence on Lot 1 visible from this location would slightly increase the ocean view compared to the Proposed Project. Similarly, the change in the landscaping plan slightly increases the blue water view from this view point. Thus, the Reduce Project Alternative from View 3 results in a very small reduction in impacts to visual resources from the less than significant impact from the Proposed Project. As discussed further in Section IV.A, with respect to Views 1, 2 and 3, these views from the Rancho Malibu Hotel site are not representative of the large majority of views from the Rancho Malibu Hotel site, which face in another direction and this view would be seen by only a small fraction of the proposed hotel rooms.

View 4: Blue Dane Lane (Malibu Country Estates) looking southeast toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Proposed Project**. Because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project Site, the expansive blue water views from this location are not affected or otherwise obstructed by the Reduced Project Alternative. The Reduced Project Alternative is almost imperceptible in this view and does not have a significant effect on visual resources. The Reduced Project Alternative is virtually indistinguishable from the Proposed Project and it does not materially reduce the Proposed Project's less than significant impacts to visual resources.

View 5: Vantage Point Terrace (Malibu Country Estates) looking southeast toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. Because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project Site, the expansive blue water views from this location are not affected or otherwise obstructed by the Reduced Project Alternative. The Reduced Project Alternative is almost imperceptible in this view and does not have a significant effect on visual resources. The Reduced Project Alternative is virtually indistinguishable from the Proposed Project and it does not materially reduce the Proposed Project's less than significant impacts to visual resources.

View 6: PCH & Cross Creek Road looking west toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2, particularly when, as in this view, they are viewed against the sky as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative shields the residences somewhat more than the Proposed Project when viewed from this location. These

changes result in a slightly reduced profile and somewhat less prominent appearance than the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 7: Malibu Colony Beach looking west toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to the Proposed Project**. The Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2, particularly when, as in this view, they are viewed against the sky as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative shields the residences somewhat more than the Proposed Project when viewed from this location. These changes result in a slightly reduced profile and somewhat less prominent appearance than the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 8: Malibu Legacy Park looking southwest toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2, particularly when, as in this view, they are viewed against the sky as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative shields the residences somewhat more than the Proposed Project when viewed from this location. These changes result in a slightly reduced profile and somewhat less prominent appearance than the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 9: PCH & Webb Way looking west toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2, particularly when, as in this view, they are viewed against the sky as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative shields the residences somewhat more than the Proposed Project when viewed from this location. These changes result in a slightly reduced profile and somewhat less prominent appearance than the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 10: Coast View Drive (Malibu Knolls) looking south toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2, particularly when, as in this view, they are viewed against the ocean as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative shields the residences somewhat more than the Proposed Project when viewed from this location. These changes result in a slightly reduced profile and somewhat less prominent appearance than the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 11: Malibu Canyon Road looking southwest toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2, particularly when, as in this view, they are viewed against the ocean as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative shields the residences somewhat more than the Proposed Project when viewed from this location. These

changes result in a slightly reduced profile and somewhat less prominent appearance than the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 12: Malibu Road looking northeast toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative shows a slightly smaller profile for the residence on Lot 5, particularly when, as in this view, it is viewed against the sky as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative some additional shielding of the residence viewed from this location. However, these changes do not materially reduce the already less than significant impact of the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 13: Bluffs Park (Santa Monica Mountains Conservancy) looking east toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. Because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project Site, the expansive blue water views from this location are not affected or otherwise obstructed by the Reduced Project Alternative. The Reduced Project Alternative is almost imperceptible in this view and does not have a significant effect on visual resources. The Reduced Project Alternative is virtually indistinguishable from the Proposed Project and it does not materially reduce the Proposed Project's less than significant impacts to visual resources.

View 14: Bluffs Park (baseball outfield) looking east toward the Project Site.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The changes to the location of the residence on Lot 5 and the moving of the cabana from the west side of the pool to the east side create a marginal increase in ocean views to the south of Lot 5. Expansive blue water views remain and the Reduced Project Alternative's marginal increase in ocean views does not reduce the Proposed Project's less than significant impacts to visual resources.

View 15: Pepperdine University - Brock House Lawn-Panorama view from Brock House lawn looking southeast to southwest.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. Because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project Site, the expansive blue water views from this location are not affected or otherwise obstructed by the Reduced Project Alternative. The Reduced Project Alternative is almost imperceptible in this view and does not have a significant effect on visual resources. The Reduced Project Alternative is virtually indistinguishable from the Proposed Project and it does not materially reduce the Proposed Project's less than significant impacts to visual resources.

View 16: Pepperdine University - Thornton Administrative Center. **Panorama view looking southeast from the window in the reception area in the Thornton Administrative Center.**

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, the Reduced Project Alternative will also not result in a significant impact to visual resources from this view point as only a small area of the ocean view is obscured by the Reduced Project Alternative. This visual simulation shows that the Reduced Project Alternative results

in a very slight reduction in the profile of the residences on Lot 1 and Lot 2, thereby slightly increasing the visibility of the ocean over those residences. The Modified Landscape Plan that is part of the Reduced Project Alternative does not result in a material difference in the appearance of the Reduced Project Alternative from this location. Accordingly, the Reduced Project Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 17: Pepperdine University - Campus Walk. **Panorama view looking southeast from the Campus Walk.**

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, the Reduced Project Alternative will also not result in a significant impact to visual resources from this view point as only a small area of the ocean view is obscured by the Reduced Project Alternative. This visual simulation shows that the Reduced Project Alternative results in a very slight reduction in the profile of the residences on Lot 1 and Lot 2, thereby slightly increasing the visibility of the ocean over those residences. In addition, from this view point, the Modified Landscape Plan that is a part of the Reduced Project Alternative also appears to be somewhat lower in several places and this allows a very small increase in ocean views. Accordingly, the Reduced Project Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 18: Pepperdine University - Lake Sidewalk. **Panorama view looking south to southeast from the sidewalk above the lake in Alumni Park.**

a. **Description** Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. Because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project Site, the expansive blue water views from this location are not affected or otherwise

obstructed by the Reduced Project Alternative. The Reduced Project Alternative is virtually indistinguishable from the Proposed Project and it does not materially reduce the Proposed Project's less than significant impacts to visual resources.

View 19: Pepperdine University - Alumni Park. **Panorama view looking south and east from the western portion of Alumni Park.**

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. Because of the significant distance between the Project Site, the ocean and this location and the elevation of this location relative to the Project Site, the expansive blue water views from this location are not affected or otherwise obstructed by the Reduced Project Alternative. The Reduced Project Alternative is slightly visible in this view and does not have a significant effect on visual resources. The Reduced Project Alternative is virtually indistinguishable from the Proposed Project and it does not materially reduce the Proposed Project's less than significant impacts to visual resources.

View 20: Surfrider Beach. **Standard view looking west from Surfrider Beach.**

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2, particularly when, as in this view, they are viewed against the sky as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative shields the residences somewhat more than the Proposed Project when viewed from this location. These changes result in a slightly reduced profile and somewhat less prominent appearance than the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 21: Malibu Colony Beach. Standard view looking west from Malibu Colony Beach.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2, particularly when, as in this view, they are viewed against the sky as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative shields the residences somewhat more than the Proposed Project when viewed from this location. These changes result in a slightly reduced profile and somewhat less prominent appearance than the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 22: Malibu Pier (south end of Pier). Standard view looking west from the end of the Malibu Pier.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2, particularly when, as in this view, they are viewed against the sky as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative shields the residences somewhat more than the Proposed Project when viewed from this location. These changes result in a slightly reduced profile and somewhat less prominent appearance than the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 23: Malibu Library. **Standard view looking west from the sidewalk in from the Malibu Library.**

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2, particularly when, as in this view, they are viewed against the sky as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative shields the residences somewhat more than the Proposed Project when viewed from this location. These changes result in a slightly reduced profile and somewhat less prominent appearance than the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 24: Malibu Bluffs Park. Panorama view looking northeast from the lawn in Bluffs Park.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. As with the Proposed Project, only a small portion of the roof of the Reduced Project Alternative is visible on the far right side of this image. The Reduced Project Alternative does not block or impair any views of the ocean, the mountains or other geological features or other valued aesthetic features and it would have a less than significant impact on visual resources from this location. The Reduced Project Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

View 25: Adamson House. Standard view looking west from the lawn of the Adamson House.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. The Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2, particularly when, as in this view, they are viewed against the sky as the background. Similarly, the modified landscaping plan of the Reduced Project Alternative shields the residences somewhat more than the Proposed Project when viewed from this location. These changes result in a slightly reduced profile and somewhat less

prominent appearance than the Proposed Project. The Reduced Project Alternative, like the Proposed Project, results in a less than significant impact to visual resources.

View 26: Pacific Coast Highway. Standard view west of entrance to Bluffs Park. Pacific Coast Highway is a designated scenic highway.

a. **Description**. Please refer to Section III.A above for a general description of this View.

b. **Comparison to Proposed Project**. Like the Proposed Project, the Reduced Project Alternative is not visible from this location and the Reduced Project Alternative would have no impact on the visual resources when viewed from this location. Accordingly, the Reduced Project Alternative does not materially reduce the visual impact compared to the Proposed Project.

Conclusion.

Based on the foregoing, when analyzed as to each individual view point or when generalized across all of the representative view points for the Reduced Project Alternative as a whole, the Reduced Project Alternative would not: (i) obstruct or otherwise substantially impact scenic views or resources; (ii) degrade the visual appearance of the project site or its surroundings; (iii) substantially degrade the visual character of the site or introduce any aesthetic elements incompatible with the project area; or (iv) block any significant scenic resources from public view sheds or from protected private view corridors. For these reasons, the Reduced Project Alternative would have a less than significant impact on visual resources.

From certain view points at elevations lower than the Project Site the Project can be seen against the background of the sky. At these viewpoints the Reduced Project Alternative shows a slightly lower profile for the residences on Lot 1 and Lot 2. Similarly, the modified landscaping plan of the Reduced Project Alternative, when seen from these viewpoints, shields the residences somewhat more than the Proposed Project when viewed from the same locations. These changes result in a slightly reduced profile and somewhat less prominent appearance than the Proposed Project. However, the Reduced Project

Alternative does not materially reduce the visual impact compared to the Proposed Project's less than significant impacts.

D. Cumulative Impacts.

As noted in the DEIR, several other related projects have the potential to alter the aesthetic character of the project area. However, as shown by the visual simulations, the Rancho Malibu Hotel project is the only related project visible that would be visible from some of view points with the Proposed Project and in many of the visual simulations, the Rancho Malibu Hotel project is not visible. The DEIR (at page 5.1-24) notes that due to the topography of the Project Site and surrounding area "the project site is prominently visible from portions of PCH east of the project site." The Project Site is a flat bluff that is visible from many different locations so that virtually any development on the Project Site will be noticeable. Therefore, the DEIR acknowledges "the proposed project would alter the skyline of the bluff and would create buildings prominent from this vantage in an area where no buildings currently exist."

In the visual simulations shown in the DEIR (i.e., Views 1 through 14), the Rancho Malibu Hotel project is identified in several visual simulation by shading in the areas inside of the story poles, primarily to ensure that the story poles for the Rancho Malibu project are not mistaken for the Proposed Project (see Views 6, 9, 10 and 11). Similarly, in the additional visual simulations created in response to comments on the DEIR (i.e., Views 15 through 26), the story poles for the Rancho Malibu Hotel project are visible (see Views 15 – 18 and 23). These visual simulations where the Rancho Malibu Hotel site is visible allow an assessment of whether there are significant cumulative impacts to visual resources.

In several of these visual simulations (Views 6, 9 and 23), the Rancho Malibu Hotel project is not highly visible and is generally compatible with the other buildings in the field of view, which shows considerable other development. In Views 10 and 11, the Rancho Malibu Hotel project is visible against the sky as a background, but it does not obscure the views of

the ocean, mountains, trees or other valued aesthetic features. In Views 15 – 18, the Rancho Malibu Hotel site is located below the view point and does not block views of the sky, ocean, mountains or other valued aesthetic features. Furthermore, in these Views, there is a substantial degree of development also visible, including the Pepperdine University, the Civic Center, and other residential development.

Because neither architectural nor landscaping plans for the Rancho Malibu Site were available to the Consultant, no architectural or landscaping details for the Rancho Malibu Hotel project are shown. However, as noted in the DEIR, it is assumed that any approved development of the Rancho Malibu Hotel site will be in accordance with adopted plans and regulations applicable to visual quality.

Finally, the visual simulations prepared for the Initial Report and this Supplemental Report, where prepared for the primary purpose of comparing the potential visual impacts of three development alternatives for the Project Site. The visual simulations included in the Initial Report and this Report are not intended to be a comprehensive analysis of the potential visual impacts of the Rancho Malibu Hotel project, which potential impacts will be evaluated in separate Environmental Impact Report for that project.

Subject to the foregoing, based on the visual simulations in the Initial Report and this Report that take into account the Rancho Malibu Hotel project, significant cumulative visual impacts would not occur and the Proposed Project's less than significant impacts would not be cumulative considerable.

E. Summary and Conclusion.

Neither the One-Story Alternative nor the Reduced Project Alterative materially reduces the visual impact compared to the Proposed Project's less than significant impacts. In addition, the Proposed Project and the Rancho Malibu Hotel project would not result in significant cumulative visual impacts. Therefore, and the Proposed Project's less than significant impacts would not be cumulative considerable.

IV. ADDITIONAL COMMENTS

A. Rancho Malibu Project

On behalf of Green Acres, LLC, Henry Lenny submitted a letter report dated May 13, 2013 regarding visual impacts to a site owned by Green Acres, LLC (the "Lenny Report"). Green Acres, LLC has proposed to develop a hotel known as the proposed Rancho Malibu Hotel project, on its site, which located north of the Project Site across Pacific Coast Highway (the "Rancho Malibu Hotel").

The Lenny Report stated that it was a "peer review of the work done for the Crummer Property's Proposed Development at the request of my client" Green Acres, LLC.

The Lenny Report includes numerous exhibits, none of which are labeled. The exhibits appear to consist of three visual simulations that are based on the Initial Simulations of the Proposed Project from Views 1, 2 and 3 in the DEIR (Figures 5.1-5, 5.1-6 and 5.1-7). In addition, the Lenny Report mentions three photographic views, referred "New View A," "New View B," and "New View C," each of which purports to "reflect a wider view of the Crummer project." None of the photographic exhibits is labeled and it is impossible to determine which photographs are "New View A," "New View B," or "New View C." With respect to most of the photographic exhibits, the Lenny Report specifies a percentage of the water views that are purportedly reduced by the Proposed Project. In some cases, the percentage of reduction of the water views is calculated within the Proposed Project's property lines even though the view shed extends well beyond the Proposed Project's property lines.

As a preface to the comments below, it should be noted that the Lenny Report includes no discussion or other description of the methodology used to prepare the report, both with respect to the photographic representations or the calculation of the reduction in the view of the water. Similarly, the Lenny Report does not state his qualifications for or experience in compiling the photographic representations or conducting an analysis of impacts to visual resources.

The Consultant, and a representative of the Owner met with Mr. Lenny and representatives of Green Acres, LLC, at the Rancho Malibu Hotel Site on

August 14, 2012 in order to take the photographs used to create the visual simulations from the Rancho Malibu Hotel site included in the Initial Report and this report. As noted in the Initial Report, during the August 14, 2012 visit to the Rancho Malibu Site, the representative of Rancho Malibu Hotel and Mr. Henry indicated to the Consultant and the Owner's representative that the primary view from the casitas on the plans filed with the City for the Rancho Malibu Hotel is oriented into the Rancho Malibu Hotel site and east rather than south toward the Project Site (See Rancho Malibu site plan annexed as Appendix E. The Lenny Report includes a site plan for the Rancho Malibu Hotel that confirms this visual orientation of the Rancho Malibu Hotel project – the views from the proposed hotel building and casitas are uniformly oriented to the east to the sweeping daytime and nighttime views of the coastline, the Santa Monica Mountains, Catalina Island and Santa Monica Bay, rather than directly south across the Project Site to the ocean. Of the 21 casitas shown on the Rancho Malibu Hotel site plan, only a few appear to have views that could, if the buildings were re-orientated south, be considered a "primary view" into the Project Site. As noted above, all of the other casitas have views into the center of the Rancho Malibu Hotel site or east to coastline.

At the August 14, 2012 meeting, Rancho Malibu representatives requested that Owner prepare visual simulations from View locations 2 and 3 with primary views oriented south toward the Project Site because Rancho Malibu's ownership intended to prepare and file new plans changing the view orientation of the casitas to face the direction of the Project Site. Accordingly, Views 2 and 3 represent to the best of my knowledge the view from the casitas as indicated on August 14, 2012 by the owner of Rancho Malibu.

The Lenny Report states that the "New View A" and "New View C" "reflects a wider view of the Crummer project from the Rancho Malibu project, as a typical guest may experience the ocean". The Lenny Report also concludes that, based on the simulations in the Lenny Report, the Proposed Project would block a high percentage (ranging from 75% to 90%) of the "blue water views" in the simulations. It is my opinion that these statements are misleading and inaccurate for the following reasons:

- The site plan of Rancho Malibu Hotel included in the Lenny Report appears to be the same site plan referenced above in which the

primary views from all of the proposed buildings at Rancho Malibu Hotel are oriented east to the sweeping daytime and nighttime views of the coastline, the Santa Monica Mountains, Catalina Island and Santa Monica Bay, rather than south toward the Project Site. Therefore, the typical experience is looking east, not toward the Project Site. Thus, based on the Lenny Report and the site plan attached, it appears that the Rancho Malibu Hotel project has not changed the view orientation of the casitas to face the direction of the Project Site.

- The Rancho Malibu Hotel project proposed on the Rancho Malibu site plan consists of a (i) large main building with hotel rooms on the top floor and other hotel services located below and (ii) twenty-one detached buildings referred to as casitas.[4] Five two-story casitas and one one-story casitas are planned along the southern property line of Rancho Malibu Site. Therefore, even if the primary views from the Rancho Malibu Hotel were reoriented from the east to the south only six of the twenty-one casitas would have direct southern views toward the Project Site (the "Southern Casitas"). The views from the other casitas would be blocked by the Southern Casitas.

- It should be noted that the three eastern-most of the Southern Casitas have an approximately 120 degree view of the ocean from east to south before viewing any development on the Project Site and the views from the two Southern Casitas on the western portion of the Rancho Malibu site are oriented toward southwest over Bluffs Park.

- The Lenny Report includes three new visual representations, "New View A," "New View B," and "New View C," which were taken from the three easternmost of the Southern Casitas. In each case, the Lenny Report oriented the photographic view south across the Proposed Project Site. By referring to the Rancho Malibu Hotel site plan in the Lenny Report (and attached as Exhibit E hereto) it is obvious that the Lenny Report could have easily created a visual representation of the proper intended views from these locations to the east, in which case

[4] This summary does not include other development associated with the Rancho Malibu project

the Proposed Project would have minimal, if any, effect on those views.

- The views south from the other casitas and the rooms from the main building would be blocked by one, two or three buildings in the Rancho Malibu Hotel project, including the Southern Casitas. This as is inadvertently demonstrated on the western portion of Figure 5.1.5 in the DEIR where you can see the height of the proposed one-story casita.

- The landscape plan for the Rancho Malibu Hotel project also indicates the plant materials and site walls along the southern portion of the Rancho Malibu Hotel site and these elements of the Rancho Malibu Hotel project would affect the views from that area of the Rancho Malibu Hotel before the Proposed Project would.

- It should be noted that the landscaping on the Proposed Project is intended to soften the appearance of the Proposed Project and to provide privacy for both the residents of the Proposed Project and the guests of the Rancho Malibu Hotel.

Thus, in my opinion, it is a gross exaggeration and highly misleading to conclude that 75% to 90% of the ocean views from Rancho Malibu Hotel are blocked by the Proposed Project when only a small percentage of the Rancho Malibu Hotel guest room views would be affected by the Proposed Project and only if the Rancho Malibu project was redesigned to maximize views to the south rather than east. The Lenny Report analyzes the effect of the Proposed Project on the Rancho Malibu Hotel views as if all of the Hotel views are affected by the Proposed Project when, in fact, only a small percentage of the overall views are affected.

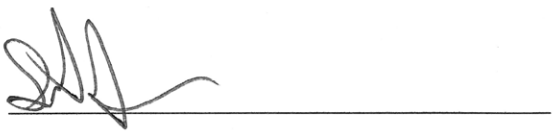
In addition, the Lenny Report states that based on its review "of the DEIR Aesthetic Section and The City of Malibu General Plan, I find that the Crummer proposal is inconsistent and non-compliant with the policies and guidelines prescribed therein." However, the Lenny Report contains no discussion or analysis of the City's policies, guidelines or regulations involving visual resources. This type of sweeping generalization, without any specific analysis of the City's policies, like the purported view blockage analysis, is highly misleading.

Finally, it should be noted that the Lenny Report, even with its misleading and inaccurate discussion, never concludes that the Proposed Project would have a significant impact on the visual resources from the proposed Rancho Malibu Hotel project.

V. Closure

Subject to the accuracy of the plans and other information provided to me by the Owner and Owner's other consultants, it is my professional opinion that the visual simulations annexed to this report were prepared in a manner consistent with accepted standards and accurately represent how the Proposed Project, One-Story Alternative and Reduced Project Alternative mature landscaping would look when viewed by human observer from the locations shown in the attached Appendices.

The undersigned consents to the inclusion of the visual simulations and this report in the EIR for the Project.



Scott A. Johnson

Dated: September 30, 2013

VI. BIOGRAPHY

Scott A. Johnson has more than eight years of experience in creating images for visual impact analysis, shade/shadow projections, solar access, and informational graphics. Scott has produced imagery for use in pre-visualization studies, constraints analysis, CEQA aesthetic analysis, and shade/shadow studies for a variety of private sector developers, legal teams, architects, and public agencies of all sizes. He has created a range of simulation products, from simple mass models to visualize the regulatory envelope, to multi-viewpoint, fully rendered photo-real composites as well as shade/shadow and solar access diagrams.

Project Experience

- Ascension Heights Subdivision Project (EIR)
- Belvedere-Tiburon Library Expansion Project (EIR)
- Beverly Hilton (Presentation, Peer Review)
- Big Wave Wellness Center & Office Park (EIR)
- Bradley Landfill and Recycling Center Master Plan (EIR)
- Century Plaza Mixed-Use Development (EIR)
- Deer Creek Plaza (EIR)
- Dutra (EIR, Peer Review)
- Laguna Beach Village Entrance (EIR)
- Mammoth Crossing (EIR)
- Millennium Hollywood Project (EIR)
- NBC Universal Evolution Plan (EIR)
- Ponte Vista (EIR)
- Ponte Vista/Bisno Project (EIR)
- Sierra Star Master Plan (EIR, Peer Review)
- Snowcreek VIII (EIR)
- 10000 Santa Monica (Presentation)
- Tehachapi Walmart (EIR)
- The Prospects Project (EIR)
- Travelodge Hotel Project (Presentation & EIR)
- Verdugo Hills Golf Course Residential Development (EIR)

APPENDIX A
PHOTOGRAPHY LOG

Appendix A: Photography Log for August 14, 2012 June 17, 2013 Site Visits; Malibu Coast Estates Project

View	Date	Time	Size	Exposure	Shutter Speed	ISO	Lens	35mm Equiv	FOV
1A	8/14/2012	11:12	4032X3024	11	500	200	Panasonic 20mm	40	46.78
1B	8/14/2012	11:12	4032X3024	11	500	200	Panasonic 20mm	40	46.78
1C	8/14/2012	11:12	4032X3024	10	400	200	Panasonic 20mm	40	46.78
1D	8/14/2012	11:13	4032X3024	6.3	1000	200	Panasonic 20mm	40	46.78
2	8/14/2012	11:20	4032X3024	10	400	200	Panasonic 20mm	40	46.78
3	8/14/2012	11:28	4032X3024	10	400	200	Panasonic 20mm	40	46.78
4	8/14/2012	11:54	4032X3024	10	500	200	Panasonic 20mm	40	46.78
5	8/14/2012	12:08	4032X3024	10	400	200	Panasonic 20mm	40	46.78
6	8/14/2012	13:10	4032X3024	6.3	1000	200	Panasonic 20mm	40	46.78
7	8/14/2012	13:28	4032X3024	10	500	200	Panasonic 20mm	40	46.78
8	8/14/2012	14:00	4032X3024	10	400	200	Panasonic 20mm	40	46.78
9	8/14/2012	14:23	4032X3024	10	500	200	Panasonic 20mm	40	46.78
10A	8/14/2012	14:29	4032X3024	6.3	1000	200	Panasonic 20mm	40	46.78
10B	8/14/2012	14:30	4032X3024	6.3	1000	200	Panasonic 20mm	40	46.78
10C	8/14/2012	14:30	4032X3024	10	400	200	Panasonic 20mm	40	46.78
11A	8/14/2012	14:40	4032X3024	5.6	800	200	Panasonic 20mm	40	46.78
11B	8/14/2012	14:40	4032X3024	5.6	800	200	Panasonic 20mm	40	46.78
12	8/14/2012	15:06	4032X3024	9	400	200	Panasonic 20mm	40	46.78
13	8/14/2013	15:17	3648X2736	5.5	500	125	Panasonic 20mm	40	46.78
14A	8/14/2012	15:35	4032X3024	10	400	200	Panasonic 20mm	40	46.78
14B	8/14/2012	15:36	4032X3024	6.3	1000	200	Panasonic 20mm	40	46.78
14C	8/14/2013	15:36	4032X3024	6.3	1000	200	Panasonic 20mm	40	46.78
15A	6/17/2013	13:52	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
15B	6/17/2013	13:52	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
15C	6/17/2013	13:52	6016x4016	8	250	100	AFS Nikor 28-85mr	50	46.8
15D	6/17/2013	13:52	6016x4016	8	250	100	AFS Nikor 28-85mr	50	46.8
15E	6/17/2013	13:52	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
16A	6/17/2013	14:02	6016x4016	6.3	160	100	AFS Nikor 28-85mr	50	46.8
16B	6/17/2013	14:02	6016x4016	6.3	160	100	AFS Nikor 28-85mr	50	46.8
17A	6/17/2013	14:12	6016x4016	8	250	100	AFS Nikor 28-85mr	50	46.8
17B	6/17/2013	14:12	6016x4016	8	250	100	AFS Nikor 28-85mr	50	46.8
18A	6/17/2013	14:23	6016x4016	8	250	100	AFS Nikor 28-85mr	52	45.2
18B	6/17/2013	14:23	6016x4016	8	250	100	AFS Nikor 28-85mr	52	45.2
18C	6/17/2013	14:23	6016x4016	8	250	100	AFS Nikor 28-85mr	52	45.2
18D	6/17/2013	14:23	6016x4016	8	250	100	AFS Nikor 28-85mr	52	45.2
18E	6/17/2013	14:23	6016x4016	8	250	100	AFS Nikor 28-85mr	52	45.2
19A	6/17/2013	14:33	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
19B	6/17/2013	14:33	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
19C	6/17/2013	14:33	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
19D	6/17/2013	14:34	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
19E	6/17/2013	14:34	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
19F	6/17/2013	14:34	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
19G	6/17/2013	14:34	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
19H	6/17/2013	14:34	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
19I	6/17/2013	14:34	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
20	6/17/2013	11:06	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
21	6/17/2013	12:33	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
22	6/17/2013	11:21	6016x4016	9	320	100	AFS Nikor 28-85mr	48	48.5
23	6/17/2013	10:43	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
24A	6/17/2013	13:36	6016x4016	8	250	100	AFS Nikor 28-85mr	50	46.8
24B	6/17/2013	13:36	6016x4016	8	250	100	AFS Nikor 28-85mr	50	46.8
25	6/17/2013	11:33	6016x4016	9	320	100	AFS Nikor 28-85mr	50	46.8
26	6/17/2013	15:23	6016x4016	8	250	100	AFS Nikor 28-85mr	50	46.8

APPENDIX B
AERIAL & SIMULATED VIEWS



0 250 500 750 1000

Scale (Feet)

NORTH

PROJECT OVERVIEW



EXISTING VIEW

VIEWPOINT 1
PANORAMA







REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 1
PANORAMA



EXISTING VIEW

VIEWPOINT 2





ONE STORY ALTERNATIVE VIEW

VIEWPOINT 2



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 2



EXISTING VIEW

VIEWPOINT 3





ONE STORY ALTERNATIVE VIEW

VIEWPOINT 3



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 3



EXISTING VIEW

VIEWPOINT 4









EXISTING VIEW

VIEWPOINT 5



PROJECT VIEW

VIEWPOINT 5



ONE STORY ALTERNATIVE VIEW

VIEWPOINT 5



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 5



EXISTING VIEW

VIEWPOINT 6



PROJECT VIEW

VIEWPOINT 6

Adjacent proposed project Rancho Malibu is shown in dark grey



ONE STORY ALTERNATIVE VIEW

VIEWPOINT 6

Adjacent proposed project Rancho Malibu is shown in dark grey



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 6

Adjacent proposed project Rancho Malibu is shown in dark grey



EXISTING VIEW

VIEWPOINT 7





ONE STORY ALTERNATIVE VIEW

VIEWPOINT 7



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 7



EXISTING VIEW

VIEWPOINT 8







REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 8



EXISTING VIEW

VIEWPOINT 9



PROJECT VIEW

VIEWPOINT 9

Adjacent proposed project Rancho Malibu is shown in dark grey



ONE STORY ALTERNATIVE VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 9



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 9

Adjacent proposed project Rancho Malibu is shown in dark grey



EXISTING VIEW

VIEWPOINT 10
PANORAMA



PROJECT VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 10
PANORAMA



ONE STORY ALTERNATIVE VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 10
PANORAMA



REDUCED PROJECT ALTERNATIVE VIEW
Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 10
PANORAMA



EXISTING VIEW

VIEWPOINT 11
PANORAMA



PROJECT VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 11
PANORAMA



ONE STORY ALTERNATIVE VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 11
PANORAMA



REDUCED PROJECT ALTERNATIVE VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 11
PANORAMA



EXISTING VIEW

VIEWPOINT 12





ONE STORY ALTERNATIVE VIEW

VIEWPOINT 12



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 12



EXISTING VIEW

VIEWPOINT 13







REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 13



EXISTING VIEW

VIEWPOINT 14
PANORAMA





ONE STORY ALTERNATIVE VIEW

VIEWPOINT 14
PANORAMA



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 14
PANORAMA



EXISTING VIEW

VIEWPOINT 4









EXISTING VIEW

VIEWPOINT 5



PROJECT VIEW

VIEWPOINT 5



ONE STORY ALTERNATIVE VIEW

VIEWPOINT 5



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 5



EXISTING VIEW

VIEWPOINT 6



PROJECT VIEW

VIEWPOINT 6

Adjacent proposed project Rancho Malibu is shown in dark grey



ONE STORY ALTERNATIVE VIEW

VIEWPOINT 6

Adjacent proposed project Rancho Malibu is shown in dark grey



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 6

Adjacent proposed project Rancho Malibu is shown in dark grey



EXISTING VIEW

VIEWPOINT 7





ONE STORY ALTERNATIVE VIEW

VIEWPOINT 7



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 7



EXISTING VIEW

VIEWPOINT 8







REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 8



EXISTING VIEW

VIEWPOINT 9



PROJECT VIEW

VIEWPOINT 9

Adjacent proposed project Rancho Malibu is shown in dark grey



ONE STORY ALTERNATIVE VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 9



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 9

Adjacent proposed project Rancho Malibu is shown in dark grey



EXISTING VIEW

VIEWPOINT 10
PANORAMA



PROJECT VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 10
PANORAMA



ONE STORY ALTERNATIVE VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 10
PANORAMA



REDUCED PROJECT ALTERNATIVE VIEW
Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 10
PANORAMA



EXISTING VIEW

VIEWPOINT 11
PANORAMA



PROJECT VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 11
PANORAMA



ONE STORY ALTERNATIVE VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 11
PANORAMA



REDUCED PROJECT ALTERNATIVE VIEW

Adjacent proposed project Rancho Malibu is shown in dark grey

VIEWPOINT 11
PANORAMA



EXISTING VIEW

VIEWPOINT 12





ONE STORY ALTERNATIVE VIEW

VIEWPOINT 12



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 12



EXISTING VIEW

VIEWPOINT 13







REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 13



EXISTING VIEW

VIEWPOINT 14
PANORAMA





ONE STORY ALTERNATIVE VIEW

VIEWPOINT 14
PANORAMA



REDUCED PROJECT ALTERNATIVE VIEW

VIEWPOINT 14
PANORAMA

GLENN LUKOS ASSOCIATES
Regulatory Services

July 22, 2013

PCH Project Owner, LLC
c/o BRP Management, LLC
315 South Beverly Boulevard, Suite 211
Beverly Hills, California 90212
Attention: Robert Gold

Subject: Biological Resources Responses to Comments on Draft Environmental Impact Report: Proposed Residential Development, "Crummer Site", 24108, 24120, 24134, 24150, 24174 Pacific Coast Highway, City of Malibu, California

Dear Mr. Gold:

Recently, a Draft Environmental Impact Report was prepared by The Planning Center DC&E (April, 2013) for the City of Malibu (DEIR) for the Crummer Site, (the "Site" or "Project Site"). Comments relating to the biological resources aspects of the DEIR have been made by various parties. The purpose of this letter is to provide written responses to the comments to the DEIR relating to biological resources.

California Department of Fish and Wildlife (A1)

A1-2

GLA concurs with the characterization that the Site is not expected to support Braunton's milkvetch, as set forth on page 5 of the March 12, 2013 GLA report and that the species was not observed on the Site in a 2012 inspection. See also Response to Comment O3-44. Nevertheless, because it was previously determined that there was slight potential for occurrence and as a precaution, pre-construction focused surveys for Braunton's milk-vetch will be performed in accordance with Mitigation Measure 3-1(a) in the DEIR. Implementation of Mitigation Measure 3-1(a) will protect against a significant impact to special status plant species.

In addition, the Project's landscape plan was prepared in accordance with the requirements of the City of Malibu prohibiting the use of exotic landscape vegetation. A copy of the Project's

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landscape plan, which was approved by the City of Malibu, contains the proposed plant species for the Project and is included in Appendix F to the DEIR. Mitigation Measure 3-1(b) will protect native plants from the effect of introduced invasive plant species. In addition, CC&Rs for the Project will implement exotic landscape vegetation control and restrictions to ensure that no invasive species can escape from the Project Site into adjacent open space. Finally, the proposed Project will remove all currently existing invasive plant species within the area of proposed grading.

A1-3

As set forth in the Impact Sciences 2009 Biological Resource Study, botanical surveys were conducted in a manner, both with respect to site coverage and timing based on flowering periods, sufficient to determine whether special-status plants occur on the Site. Furthermore, the surveys were conducted in a manner consistent with the Department's 2009 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities.* The following excerpt from the Impact Sciences 2009 Biological Resource Study shows that the surveys were consistent with the Department's 2009 protocols such that full visual coverage was provided and that surveys were conducted during optimal periods for detection.

> *Special-status plant and wildlife species with the potential to occur on Project Site were determined based on Impact Sciences' 2006 biological resource assessment and BonTerra Consultants' 1999 biological due diligence survey for the Project Site, and on the database search described above in Section 3.1. Biologists walked transects approximately 20 feet apart for 100 percent visual coverage in (accessible) suitable habitats located on the Project Site where special-status plants or wildlife could occur. Potentially suitable habitats located within approximately 100 feet from the west boundary of the Project Site were also evaluated. Focused surveys, as the name implies, concentrate the site inspection on discovering evidence to the presence or absence of the special-status species identified in the manner described above. To determine whether any special-status plants or wildlife species are present on the Project Site, focused surveys were conducted by Impact Sciences biologists on April 20, May 9, and June 1, 2007, as well as during the day of the biological resource assessment on May 3, 2006. All focused plant surveys in both 2006 and in 2007 were conducted during the appropriate flowering period for identification of special status plant species with the potential to occur on Project Site…*

It is important to note, that during the surveys, referenced in the excerpt above, two special-status plant species, the Catalina mariposa lily and the California black walnut were detected and mapped, further supporting the adequacy of the surveys. Finally, as suggested by the Department, it is important to note that the surveys were floristic in

nature as evidenced by the floral compendium included as Table 1 of the above-referenced Impact Science's 2009 Report.

GLA's Site visit conducted on April 16, 2012 did not include focused surveys for special-status plants; however, as noted in GLA's May, 2012 update to the Impact Sciences 2009 Report, "the entire Site was walked in a careful manner so as to ensure visual inspection of the entire Site." This level of survey effort was sufficient to confirm that the conditions on the Site were such that the conclusions set forth in the 2009 Impact Sciences Report were still accurate.

A1-4

As noted on page 5 of the March 12, 2013 GLA report, it is GLA's opinion that there is at best, very low potential for Braunton's milkvetch to occur on the Site based on a number of previous surveys which failed to detect it, including a survey in February 2008 by Impact Sciences following a fire in 2007 that created optimal conditions for the plant. Furthermore, based on the history of the Site, the only areas of suitable habitat occur within areas of scrub habitat associated with the two ravine areas and the slope at the eastern boundary of the Site. Ongoing disturbance of the grassland areas have rendered these areas as unsuitable for the Braunton's milkvetch. Nevertheless, because the 2009 Impact Science's Report proposed pre-construction surveys to ensure that the species was not present, this mitigation measure was retained "in an abundance of caution". It is also important to note that since the areas of suitable habitat occur within areas of scrub habitat that will be retained because they are beyond the limits of development and which are intended to be subject to a conservation easement (See Response to Comment R4-39), even if the species were discovered, it would not be in areas subject to impacts.

A1-5

In the unlikely event that Braunton's milkvetch were discovered during preconstruction surveys, the milkvetch would be subject to translocation in accordance with a translocation plan that would be developed by a biologist familiar with the ecology of the species and the plan would be approved by the U.S. Fish and Wildlife Service prior to implementation.

GLA understands that the Department typically does not support translocation efforts for rare plants; however, it is important to note that GLA conducted a translocation program for Braunton's milkvetch for the Oak Park Project, in Ventura County. The translocation program occurred in phases and was monitored over a 10-year period and was highly successful, in large measure because many characteristics of the plant (e.g., produces lots

of highly viable seed that is easy germinate in proper conditions) make it highly susceptible to translocation.

A1-6

GLA concurs with the Department and invasive exotic plants will not be used or allowed in Project landscaping. The Project's landscape plan was prepared in accordance with the requirements of the City of Malibu prohibiting the use of invasive exotic landscape vegetation. A copy of the Project's landscape plan, which was approved by the City of Malibu, contains the proposed plant species for the Project and is include in Appendix F to the DEIR.

A1-7

The Project complies with the Department's recommendation. Malibu LIP Section 3.10.1 (A) specifies which plant species are permitted and which species are prohibited on new development. Specifically, the following are the only species allowed to be planted:

"*Plantings shall be native, drought-tolerant plant species, and shall blend with the existing natural vegetation and natural habitats on the site, except as noted in Section 3.10.1 (A)(3) of the Malibu LIP. The native plant species shall be* chosen *from those listed by the California Native Plant Society, Santa Monica Mountains Chapter, in their document entitled Recommended List of Plants for Landscaping in the Santa Monica Mountains, dated February 5, 1996….. Non-invasive ornamental plants and lawn may be permitted in combination with native, drought tolerant species within the irrigated zone (Zone A) required for fuel modification nearest approved residential structures. Irrigated lawn, turf and ground cover shall be selected from the most drought tolerant species or subspecies, or varieties suited to the Mediterranean climate of the Santa Monica Mountains*."

In addition, LIP Section 3.10.1(A)(3) provides: "*Invasive plant species, as identified by the California Native Plant Society, Santa Monica Mountains Chapter, in their document entitled Recommended List of Plants for Landscaping in the Santa Monica Mountains, dated February 5, 1996 and identified in the City of Malibu's Invasive Exotic Plant Species of the Santa Monica Mountains, dated March 17, 1998, that tend to supplant native species and natural habitats shall be prohibited."*

The Project's landscape plan contained in appendix F has been reviewed and approved by the City's Biologist as in conformance with Section 3.10.1 of the LIP. Other than some non-invasive ornamental plants and 1,500 square feet of lawn on each residential lot in Fuel Modification Zone A, all of the plant species proposed for the Project Site are native to the Project Site's location, as recommended and contained in the *Recommended List of Plants for*

Landscaping in the Santa Monica Mountains, dated February 5, 1996. Remaining native habitat areas shall not be irrigated.

A1-8 and A1-9 (A1-8 is not a comment, just a summary of the EIR's Description)

As noted by Impact Sciences in 2009 and by GLA in 2012, the Project Site does not contain any habitats designated in the CNDDB as rare. No portions of the Site are designated as Environmentally Sensitive Habitat Area (ESHA) in the Malibu Local Coastal Program. The grassland onsite consists of non-native grassland, which has no special status. The majority of the scrub consists of coastal sage chaparral scrub, an ecotonal habitat that is not listed in the CNDDB and has no special status (chaparral is the most common scrub community in California). Venturan coastal sage scrub is not considered rare; however it is listed as G3/S3 in the CNDDB, which in larger blocks in undisturbed settings could trigger a finding of significant impact. However, the limited area of coastal sage scrub (1.35 acres) on the Project Site is located on a cut slope overlooking Pacific Coast Highway and exhibits minimal habitat value due to its limited size and proximity to a major roadway and does not support any significant habitat functions and as such, impacts to this area would not be considered significant. The Proposed Project and the Single Story Alternative result in the loss of 0.54 and 0.61 acre, respectively, which as noted in the GLA 2012 Update is not considered significant.

Additional areas of coastal sage scrub (0.72 acre and 0.61 acre, respectively), for the proposed Project and Single Story Alternative would be subject to thinning but would not be eliminated and would continue to provide refugia habitat for common species during fires (this function is already extremely limited by the small size of the area).

Coastal sage chaparral scrub is located on the slopes of the erosional features/ravines and at the southeast corner of the Site. Impacts associated with grading and fuel modification in Zone B were determined by Impact Sciences to be limited to only 0.43 acre of the 7.75 acres. Impact Sciences found this impact as not significant because (among other factors) this vegetation type is not considered sensitive and is widespread within the region and also because the area is not within defined ESHA. Under the approved fuel modification program, Zone B has expanded such that impacts to coastal sage chaparral scrub for the Project now totals 1.29 acres and for the Single Story Alternative the impacts would total 1.44 acres. As noted, coastal sage chaparral scrub is not considered sensitive, does not support special-status species, and is not ESHA. Therefore impacts to this habitat associated with grading and fuel modification within Zone B, would not be considered significant. Beyond impacts for grading and Zone B, there will be selective thinning of Fire Department defined "undesirable vegetation" within Zone C, all of which would occur within the limits of the property, and no impacts would extend into adjacent ESHA. The extent of thinning will be determined by the Fire Department; however for purposes

of this analysis, the maximum area of thinning under the Project would be 6.47 acres and for the Single Story Alternative would be 6.32 acres. The thinning of coastal sage chaparral scrub within Zone C, which is not a sensitive habitat, supports no special-status species and is not ESHA would not be a significant impact. Furthermore, by performing selective thinning, which would leave much of the vegetation intact, the area would continue to provide habitat functions for a variety of native species and would also serve as refugia areas during nearby wildfires. Refugia areas are areas where wildlife can take shelter and find safe conditions during events such as wildfire that displaces them from their live-in habitat.

Finally, the Site does not support breeding by any special-status raptors and foraging would be very limited due to the limited area of non-native grassland (14.56 aces) when considered in the context of the Santa Monica Mountains. For these reasons, the development of the Project does not result in a significant impact to these biological resources.

A1-10

As discussed above in response to Comment A1-9, given that the Project will not result in significant impacts to special-status biological resources, no mitigation is required in accordance with CEQA.

A1-11

As noted for Response A1-9 above, the Project would retain 6.47 acres of native coastal sage chaparral habitat under the proposed Project and 6.32 acres of native coastal sage chaparral habitat under the Single Story Alternative. While these areas would be subject to some thinning for fuel modification purposes, including the ravines, which as detailed below, do not contain jurisdictional drainages, these areas would remain as breeding, foraging, and dispersal habitat for a variety of common species, as well as potential refugia during nearby wildfires. For this reason, the Department's suggestion that a "wildlife habitat component" on the Project Site is not necessary.

A1-12

Multiple survey visits to the Project Site during the Burrowing Owl breeding season were conducted on March 30, April 5, April 20, May 4, May 9, May 16, and June 1, 2007 by Impact Sciences as well as April 16, 2012 by Glenn Lukos Associates. As described by both Impact Sciences and Glenn Lukos Associates, many of these survey visits included walking transects across the entire Site, approximately 20 feet apart to allow visual coverage of the entire property. No evidence of Burrowing Owl has ever been detected

and as such, it has not been necessary to conduct focused surveys as the Burrowing Owl is not expected to occur on the Site during the breeding season as there are no records in the California Natural Diversity Database ("CNDDB") of burrowing owl breeding or wintering for either the Malibu Beach or Point Dume quadrangles.

As such, there is very limited potential for wintering burrowing owls to occur on the Site, (generally between November 1 and February 28) based on habitat characteristics (e.g., flat areas with low-growing grasses). However, as noted there are no CNDDB records of wintering burrowing owl in a large area in the surrounding the Site, and they are not expected to occur during the wintering season. Finally, pursuant to Section 8.4 of the LIP, the City of Malibu does not substantially prohibits all grading during the rainy season (November 1 to March 1), which coincides with the wintering season for burrowing owl, eliminating potential impacts on wintering owls.

A1-13 and A1-15 (A1-13 is not a comment, just a summary of the EIR's Description, A1-14 is missing in the numbering)

The Project will maintain the 100-foot buffer as proposed with some potential for fuel modification within the 100-foot buffer.

A1-16 and A1-17

The two ravines on the westerly half of the Site do not exhibit conditions consistent with jurisdictional drainages and as such GLA believes that the description of the two ravines on pages 5.3-1 and 5.3-26, the DEIR as "ephemeral drainages" is inaccurate. Specifically, these features were subject to a jurisdictional determination by GLA conducted in 2008, based on site visits on June 30 and August 25, 2008 at which time it was determined that these features did not meet the minimum required for a stream (nor are the ravines designated as streams on the City's ESHA Map) as defined by the Department as excepted below from the August 26, 2008 Jurisdictional Delineation Report by GLA:[1]

> ***1. Central Swale/Gully***
>
> *As noted above, for Corps jurisdiction, the Central swale/gully exhibits only limited signs of ephemeral flow. More importantly there is no evidence that surface water is present for sufficient duration to provide even minimal support for fish, other stream-dependent vertebrates such as mammals or amphibians, or invertebrates including aquatic insects (e.g., water striders, water boatmen, back*

[1] Glenn Lukos Associates. August 26, 2008. Letter Report addressed to AZ Winter Mesa, LLC: Jurisdictional Determination for the Approximately 25-Acre Property Located at 24600 Pacific Coast Highway, in the City of Malibu, Los Angeles County a/k/a The Crummer Trust Property (the "Property").

swimmers, toe biters, or varieties of beetles) or insects that exhibit an aquatic larval form (e.g., dragonflies, mayflies, damselflies, or mosquitoes). In addition, the swale/gully supports no wetland or riparian vegetation of any kind. Rather the swale/gully supports only upland vegetation including: California encelia (Encelia californica, UPL), Laurel Sumac (Malosma laurina UPL), Giant Wildrye (Leymus condensates, UPL), California Morning Glory (Calystegia macrostegia, UPL), Fennel (Foeniculum vulgare, UPL), and Coyote Brush (Baccharis pilularis, UPL). Site photographs of this feature are enclosed as Exhibit 4. Given these characteristics, the swale/gully does not meet CDFG's definition of a stream due to the absence of or potential to support any aquatic organisms or riparian habitat. This conclusion receives additional support from stream mapping performed by CDFG in northern California for purposes of managing fisheries habitat. For this application, CDFG "considers only solid blue line streams when determining stream order…on the USGS 1:24,000 topographic map[s]." As such, small swales, gullies and ravines such as on the Property are not considered "streams" by CDFG.

2. Westerly Swale/Gully

The westerly swale/gully receives limited runoff from Bluffs Park located immediately to the north and northwest, as storm water is conveyed along the adjacent road and picked up in a storm drain and discharged to the upper portions of the gully. Flows are ephemeral, only occurring in direct response to rainfall. The ephemeral hydrologic regime of the western swale/gully, as for the central swale/gully already discussed, is so brief that it is not capable of supporting aquatic organisms of any kind. Furthermore, the swale supports a predominance of upland vegetation with only one small individual clump of willow in the upper portions of the swale/gully, above where at least some sign of flow becomes evident (i.e., presence of litter and debris). The habitat is best characterized as chaparral, coastal sage scrub, and in some areas, invasive exotic species such as castor bean (Ricinus communis, FACU), Laurel Sumac (Malosma laurina, UPL), Giant Wildrye (Leymus condensates, UPL), California Morning Glory (Calystegia macrostegia, UPL), Fennel (Foeniculum vulgare, UPL), Coyote Brush (Baccharis pilularis, UPL) and ashy-leaved buckwheat (Eriogonum cinereum, UPL). As discussed in detail above under Corps jurisdiction, there is one potential riparian indicator species within the upper portion of the swale; however, as noted in the above discussion, the willow in this context is dependent upon perched subsurface water and not stream flow and is not an indicator of stream-like conditions.

> *Given these characteristics, the westerly swale/gully does not meet CDFG's definition of a stream due to the absence of or potential to support any aquatic organisms or riparian habitat. As noted for the central swale/gully, this conclusion receives additional support from stream mapping performed by CDFG in northern California for purposes of managing fisheries habitat. For this application, CDFG "considers only solid blue line streams when determining stream order…on the USGS 1:24,000 topographic map[s]." As such, small swales, gullies and ravines such as on the Property are not considered "streams" by CDFG.*

For reference, the Department's definition of a stream along with the definition of a stream provided in the Malibu LCP is provided in the table below.

Table 1

CDFG Definition	Malibu LCP Definition
1. A stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks	**1.** STREAM - is a topographic feature that at least periodically conveys water through a bed or channel having banks
2. and supports fish or other aquatic life	**2.**
3. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.	**3.** This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.

The following conclusions are also excerpted from the GLA August 26, 2008 Report:

> *Both the Corps and CDFG provide reasonably clear definitions of what is required for the presence of a stream or watercourse that is subject to regulation under the Clean Water Act and California Fish and Game Code, respectively. In his written opinion on Rapanos, Justice Scalia concluded that under the Clean Water Act, the phrase "waters of the United States" includes only those relatively permanent, standing or continuously flowing bodies of water "forming geographic features" that are described in ordinary parlance as "streams" as defined in Webster's New International Dictionary.*[2]
>
> *The majority's use of the term "forming geographic features" is similar to the Malibu LCP phrase "is a topographic feature" in defining what a stream is and is not. In addition, the use of these two phrases appears to be consistent with the*

[2] Rapanos et ux., et al v. United States Nos. 04-1034 and 04-1384. United States Supreme Court, argued February 21, 2006, decided June 19, 2006, p 1.

> *"streams" mapped on the LCP ESHA Maps, which are generally limited to streams that in fact are considered streams in ordinary parlance. Furthermore, the language addressing streams in the Revised Findings is very consistent with this concept of a stream, both of which require the ability to support aquatic wildlife or (at a minimum) riparian habitat in order for a "geographic" or "topographic" feature to be defined as a stream.*
>
> *Given these considerations, it is GLA's opinion that the Central and Westerly Gullies on the Property are not streams under the LCP and that the proposed project, which proposes full avoidance of these features, exhibit no potential to affect streams as defined by the Corps; CDFG; or in the LCP, including the associated ESHA Maps and discussed in the Revised Findings.*

Finally, these features are not subject to Project impacts and there is no work proposed within these areas that would require coordination with or authorization by the Department.

A1-17

For the reasons stated in response to Comment A1-16, the small ravines on the Project Site do not support jurisdictional drainages. Additionally, these areas are not subject to Project impacts and there is no work proposed within these areas that would require coordination with or authorization by the Department.

A1-18

The two ravines on the westerly half of the on the Project Site do not support jurisdictional drainages as outlined in response to Comment A1-16 and A1-17. Additionally, these areas are not subject to Project impacts and there is no work proposed within these areas that would require coordination with or authorization by the Department. Furthermore, because there are no streams and there is no riparian habitat that would be subject to regulation by the Department under the California Fish and Game Code Section 1602.

A1-19

Project fencing will not include any materials that would be potentially harmful to wildlife, including but not limited to spikes, glass, razor or barbed wired. In order to ensure that project fencing is consistent with the Department's recommendation the following condition is proposed:

Project fencing will not include any materials that would be potentially harmful to wildlife, including but not limited to spikes, glass, razor or barbed wired. Prior to construction, the project plans that include fencing design and components will be reviewed by a qualified biologist who will prepare a letter report that will be submitted to the City of Malibu Biologist, certifying that the fencing proposed for the project would not be harmful to wildlife in accordance with the Department's recommendations.

A1-20

Grading associated with the Project exhibits the potential for displacement of small mammals, reptiles and common avifauna; however, such impacts would not be considered significant impacts to common wildlife. Therefore, mitigation is not required relative to any incidental impacts that occur during clearing or grading to common wildlife.

Gaines & Stacey (03)

The Santa Monica Mountains Conservancy (SMMC) addressed a number of concerns regarding potential biological impacts that could be associated with the project. These are summarized as follows with the summary also including the Response wherein each of these concerns is addressed in the Responses to Comments:

Maintenance of wildlife connectivity between the Malibu Bluffs and open space areas northeast of Pepperdine University (see Response 03-39)

Whether portions of the Project Site should be considered ESHA (see Response 03-40)

Need for and status of Conservation Easement (see Responses R4-39)

Discussion of Potential Fuel Modification Zone impacts (see Section 5.3.1 of DEIR that includes a complete analysis of potential FMZ impacts as well as Responses A1-9 and A1-11).

Potential impacts to raptor foraging (see Response 03-43 that shows no significant impacts to raptor foraging)

Potential edge effects on Malibu Bluffs park associated with project fencing and domestic cats (see Responses A1-19 and 03-41) that show no significant impacts would occur from the project).

Potential impacts associated with introduction of non-native invasive plant species (see Response A1-6 and A1-7, which includes standard conditions from the City of Malibu restricting the use of non-native invasive species.)

Potential indirect impacts to biological resources on the Malibu Bluffs Conservancy property associated with night lighting (see Response 03-42)

03-39

In considering the importance of the Project Site as a potential area that provides for wildlife movement between areas of open space to the north of Pepperdine University and the Malibu Bluffs, it is necessary to consider each group of species separately.

Avifauna

Avifauna (birds) observed on the Site consists of both resident species and migratory species. The majority of resident species observed on the Site (e.g., northern mockingbird, scrub jay, American crow, common raven, black phoebe, mourning dove, American robin, bushtit, Anna's hummingbird, Allen's hummingbird, California towhee, spotted towhee, etc.,) are urban adapted and are able to move through a variety of landscapes, both natural and developed. The proposed development would have no effect on the ability of resident avifauna to disperse to and from the Site. Migratory species, such as the violet green swallow, northern rough-winged swallow, western kingbird, etc.,) have the ability to migrate hundreds of miles, and the proposed development would have no impact of dispersal of these species, to the extent that they utilize the Site. The proposed Project would not result in significant impacts to avian movement.

Large Mammals

The only large mammals common to the Santa Monica Mountains and with potential to use the Site are the coyote and the bobcat. The coyote is highly urban adapted and will have no problem moving between the Malibu Bluffs open space and areas to the north either through the Puerco Canyon environs to the west of the Project Site, across Pepperdine University (including the large turf area mostly at night) or through the Project Site at build-out. At build-out, the Project Site will retain an approximately 200-foot wide area of undeveloped land, mostly consisting of native vegetation, along the southern and eastern boundaries of the Site, providing a "corridor", portions of which would be subject to a conservation easement (See Response to Comment R4-39) and associated long-term protection and management, that would allow movement of both coyotes and bobcats. Therefore, the Project would not result in significant impacts to large mammal movement.

Small Mammals

Impact Sciences identified a number of common small mammals that occur, or have potential to occur on the Site, which are also expected to occur in the adjacent Malibu Bluffs open space, including Virginia opossum, common raccoon, striped skunk, long-tailed weasel, ornate shrew, broad-footed mole, western harvest mouse, deer mouse, California mouse, brush mouse, and California vole. Movement of these species across Pacific Coast Highway is already restricted by the four-lane highway and the Project would not measurably affect such movement. As noted for large mammals, small mammals would still have the ability (to the extent that they do so now, which is very limited) to move from the Malibu Bluffs in the Puerco Canyon environs as well as from the eastern portion of the property, which will remain in open space, portions of which would be subject to a conservation easement and associated long-term protection and management. The Project would not result in significant impacts to small mammal movement.

Reptiles

Impact Sciences identified a number of common reptiles that occur on the Site or have potential to occur, which are also expected to occur in the adjacent Malibu Bluffs open space, include side-blotched lizard, and western fence lizard, southern alligator lizard, gopher snake, common kingsnake, and southern Pacific rattlesnake. Movement of these species across Pacific Coast Highway is already restricted by the four-lane highway and the Project would not measurably affect such movement. As noted for small mammals, reptiles would still have the ability (to the extent that they do now, which is very limited) to move from the Malibu Bluffs in the Puerco Canyon environs as well as from the eastern portion of the property, which will remain in open space. The Project would not result in significant impacts to reptile movement.

Therefore, the proposed Project will not create impacts to wildlife movement. However, in deference to concerns about biological connectivity between the Project Site and the adjacent portion of Bluffs Park owned by the Santa Monica Mountains Conservancy (SMMC), the prior owner of the Site had voluntarily agreed to provide a conservation easement over approximately 7 acres of the Project Site, consisting of the southern and eastern bluffs (including the western and central swale/gully feature and a portion of the Project Site. See further description of proposed conservation easement in response to Comment R4-39. The current owner has agreed to offer to dedicate the conservation easement over the same area pursuant to the same terms and conditions.

03-40

As previously noted, the Project Site does not support any biological resources that can be considered to be rare, especially valuable, and easily disturbed or degraded by human activities or the proposed development of the Site. As observed by Impact Sciences and confirmed by

GLA, the southern, southwestern, eastern and northern boundaries of the Project Site contain native plant communities; however, no special-status species covered by the Malibu LIP were observed on the Site. The Catalina mariposa lilies located near the eastern boundary are CNPS List 4, as is the Southern California black walnut, both of which are located in areas that will not be affected by Project grading. Section 4.3 B of Malibu's LUP contains six habitats that are considered ESHA. None of those habitats exist on the Project Site and therefore designating the Site as ESHA is not warranted, based on the biological conditions on the Site. Furthermore, as noted in the DEIR discussion on pages 5.3-27 and -27 that the Project Site is not designated ESHA by the City, which based its determination on the following criteria listed in Section 4.3 of the City of Malibu Local Implementation Program (LIP), Adopted by the California Coastal Commission on September 13, 2002.

> *1. Any habitat area that is rare or especially valuable from a local, regional, or statewide basis*
> *2. Any habitat area that contributes to the viability of plant or animal species that are designated or are candidates for listing as rare, threatened, or endangered under State or Federal law*
> *3. Any habitat area that contributes to the viability of species that are designated "fully protected" or "species of special concern" under State law or regulations.*
> *4. Any habitat area that contributes to the viability of species for which there is other compelling evidence of rarity, for example plant species eligible for state listing as demonstrated by their designation as "1b" (Rare or endangered in California and elsewhere) or designation as "2" (rare, threatened or endangered in California but more common elsewhere) by the California Native Plant Society,*
> *5. Any designated Area of Special Biological Significance, or Marine Protected Area.*
> *6. Streams.*

As noted by all of the biological surveys conducted for the site, none of the above LIP criteria are met for the site and the City's determination that the site does not include ESHA is confirmed.

03-41

While potential presence of domestic cats does exhibit potential for impacts to native avifauna, small mammals and reptiles, such impacts would not be considered significant given the limited number of residences (five) associated with the Project for a variety of reasons. First, because portions of the Project Site occur on the interface with open space, potential residents will be discouraged from having "outdoor" cats due to the potential threat from predation by coyotes. To the extent that residents allow cats to stay out-of-doors, there is a high likelihood that such cats would be eliminated by coyotes, reducing the potential threats to native wildlife.

Nevertheless, the Project will include provisions that restrict residents from allowing cats to go out-of-doors. This is best accomplished through the Project's CC&Rs, which will include a provisions that residents will not allow domestic cats to go out-of-doors without (for example) a leash or a bell on the collar, to ensure maximum protection of avifauna, small mammals and reptiles.

03-42

The Project has been designed to limit potential indirect impact associated with night lighting through the location and type of lighting used as well as shielding wherever appropriate, including removal of street lights. An illustrative lighting plan has been developed that will reduce lighting impacts to the maximum extent practicable while still allowing for public safety. The sports field will not have night lighting and exhibits no potential for lighting impacts to areas of adjacent habitat. Because of the restriction on night lighting, the Project exhibits no potential for significant light impacts to the Malibu Bluffs area, including significant impacts on wildlife.

03-43

The Malibu environs and the larger Santa Monica Mountains contain vast areas of open space that is highly suitable for foraging raptors. As noted by Impact Sciences and GLA, there are no nesting raptors on the Site and no special-status raptors have been observed on the Site during a number of surveys during nesting seasons. In addition, approximately 9 acres will be subject to a conservation easement and will continue to provide habitat and opportunities for the movement of small mammals and therefore raptor foraging. As such, the Project does not exhibit the potential for significant direct or cumulative impacts on foraging raptors.

03-44

Surveys efforts conducted by Impact Sciences in February 2008, following the 2007 wildfire which severely burned the northern, eastern, southern and southwestern portions of the Project Site show that Braunton's milkvetch does not occur on the Site, and an important point of clarification is necessary to explain why this is the case. It is well documented that Braunton's milkvetch is a fire-follower as this species requires fire to scarify (break down) the seed coat, allowing germination. In the absence of fire (or other mechanical scarification), this species remains undetected as it is present only in the seed bank. Its establishment on a Site following a fire is not due to dispersal from offsite, but specifically because it was present and the occurrence of a fire is what allows the species to germinate and become detectable. Once this species germinates on a site, it is a short-lived perennial (living three to four years) during which time it reaches heights of over four feet and is very distinctive and easily detected and identified. The fact that Braunton's mikvetch was not detected on the Site in 2008 and 2012 is very strong evidence that this species does not occur on the Project Site, which is consistent with GLA's

observation that the Site does exhibit soils typically associated with this species. The mitigation measure requiring surveys is being implemented in an abundance of caution and it is GLA's opinion, based on extensive experience with this species, that there is very low potential for it to occur on the Site. Also, as noted in Response A1-4, to the extent that this species exhibits any potential to occur on the Site, the most likely locations would be in the existing coastal sage chaparral scrub, which is in large measure subject to preservation, with only limited impacts associated with thinning of undesirable plants in Zone C of the Fuel Modification areas. Nevertheless, while it can be shown that the conditions do not exist for the Braunton's milk-vetch to occur on the developed portions of the Site, and the species has a very low potential to occur in areas that will be subject to conservation, a mitigation measure has been included to reduce any potential impact to insignificance and the pre-construction survey, performed in an abundance of caution, should not be considered deferred mitigation under CEQA.

Meridian Consultants (05)

05-1

The Santa Monica Mountains Conservancy (SMMC) comments that responded to the Notice of Preparation for the Project addressed a number of issues including:

- The role of the Site in providing wildlife movement between the Malibu Bluffs and open space north of Pepperdine University. This comment is addressed in detail in Responses 03-39 and R4-23 above.
- Whether the Site (or portions thereof) should be designated ESHA, which is addressed in Responses 03-40 and A1-9.
- Conservation Easements, which is addressed in Response 05-2 below.
- Fuel Modification Impacts, which is fully addressed for the Single Story Alternative and the Proposed Project in GLA's March 12, 2013 "Revised Update".
- Raptor Foraging, which is addressed in Response 03-43 above.
- Domestic cats and their potential for affect wildlife, which is addressed in Response 03-41 above.
- Weeds/Invasive Species, which is addressed by the Project landscaping plan that prohibits use of non-native invasive species.
- Night lighting and potential indirect impacts to wildlife, which is address in Response 03-42 above.

As such, all of the issues raised by the SMMC have been addressed and significant impacts to biological resources have not been identified with any of the issues raised.

05-2

See Response to R4-39

05-3

See response to 03-39.

05-4

See response to 03-40.

05-5

See response to 03-41.

05-6

See response to 03-42.

05-7

See response to 03-43.

05-8

See response to 03-44.

Healy, Patt (R-4)

R4-23

For detailed of wildlife movement see Response 03-39.

Specific to nocturnal movement, it is expected that medium-sized mammals (raccoons and possums), along with large mammals including bobcat and coyote often disperse and forage at night. As described in Response 03-39, the Project Site does not exhibit potential for significant impacts to movement of the groups of animals evaluated, including those species that migrate or forage at night.

R4-24

Pursuant to CEQA, the Project Site was analyzed in its current condition. While GLA is not aware of any potential unauthorized activities on the Site, to the extent that such (theoretical) activities occurred prior to site inspections or the notice of preparation, the current condition would nevertheless be defined as the "baseline" for the studies. As such there is no requirement under CEQA to consider past unauthorized actions on the property. Based on the baseline conditions, the Project will not result in significant impacts on Biological Resources.

R4-25

LIP Section 4.4.2 requires new development to include an analysis of "project alternatives designed to avoid and minimize impacts to sensitive resources." The Project does not impact sensitive biological resources and therefore no alternative designs are required.

Table 5.3-1 contains six Special Status Plant Species with Potential to Occur on the Project Site. However, for each species listed the "Potential for Occurrence and Survey Results" indicate that they are "Not Expected" to occur due to lack of suitable habitat (including suitable soils) or because the Project Site is below known elevations. As such, there is not suitable habitat or other necessary conditions for five of these species, including Plummer's mariposa lily, San Fernando Valley spineflower, Parry's spineflower, Dune larkspur, and Chaparral nolina.

The DEIR stated that the sixth species, Braunton's milk-vetch, had the potential to occur on the Project Site since it is "know to occur within suitable habitat following burns" i.e. wildfires. As noted in Response to Comment A1-14, the biological survey was conducted in February 2008 by Impact Sciences following a fire in 2007 that created optimal conditions for the plant species to occur. However, as document in the 2008 Impact Science report, the Braunton's milk vetch species was not observed. Furthermore, based on the history of the Site, the only areas of suitable habitat for the Braunton's milk vetch occur within areas of scrub habitat associated with the two ravine areas and the slope at the eastern boundary of the Site, which areas will not be affected by the proposed Project. Ongoing disturbance of the grassland areas where the Project development will occur have rendered these development areas as unsuitable for the Braunton's milk vetch. Nevertheless, because the 2009 Impact Science's Report proposed pre-construction surveys to ensure that the species was not present, this mitigation measure was retained "in an abundance of caution". It is also important to note that since the areas of suitable habitat for the Braunton's milk-vetch occur within areas of scrub habitat that will be retained because they are beyond the limits of the Project's development and which are intended to be subject to a conservation easement (See Response to Comment R4-39), even if the species were discovered, it would not be in areas subject to development impacts.

Table 5.3-2 identifies seven Special Status Wildlife Species with Potential to Occur on the Project Site. Of the seven, one has No Potential to occur, two have Low to No Potential to occur, three have Low Potential to occur and one has Moderate Potential to occur. However, when each of these wildlife species is examined, it is highly unlikely that any of these species will be impacted as a result of the Project because either (i) limited suitable habitat occurs on the Project Site (ii) limited suitable habitat occurs surrounding the Project Site (iii) any suitable habitat that may exist is outside of the proposed Project limits of development or (iv) the species are sufficiently common that the minimal impacts potentially associated with the Project, would not be significant.

Each of the six species with at least some potential to occur is addressed in more detail below:

California Mountain Kingsnake and Coast Patchnosed Snake were noted as having low potential to occur because of limited habitat on the Site and limited offsite areas that could serve as source populations for either species. It is also important to note, these species occupy areas of coastal sage shrub and chaparral. The coastal sage scrub on the Site is limited to the slope overlooking Pacific Coast Highway and would not serve as potential habitat for these species due to proximity to a major roadway and associated edge effects. The areas of coast sage chaparral scrub are the only areas where these species could occur and are largely unaffected by Project's grading and as such, potential impacts would be very limited. Given that these species have low potential to occur and that impacts to the areas where they could occur are limited, it must be concluded that the Project does not have the potential for significant impacts to these species.

San Diego Horned Lizard was noted by Impact Sciences as having low potential for occurring on the Project Site; however, further assessment by GLA found lack of suitable soils on the Project Site and as such no potential for occurrence. As such, there are no potential for significant impacts to this species.

Southern California Rufous-crowned Sparrow was noted by impact sciences as having low potential for occurring on the Project Site. The only areas of suitable habitat are the areas of coastal sage scrub and the sage scrub chaparral scrub. This species has been removed from the list of Species of Concern by CDFW (this should have been corrected in Table 5.3-2 of the DEIR), and is now a CDFW "Watch List" species. Impacts to such "watch list" species are not considered significant under CEQA. Therefore, while the species is not expected to occur, and to the extent that it could occur on the Project Site it would be in areas of preserved scrub, any impacts to this species would not rise to the level of significant due to its current conservation status.

Bell's Sage Sparrow requires large areas of unbroken scrub habitat, which the Project Site does not support and there is no potential for this species to occur on the Project Site and no potential for significant impacts.

San Diego Desert Woodrat is noted as having potential for occurrence within the onsite ravines; although it was never observed during Site surveys (the nest and associated middens are easily detected as they can grow to several feet in height and width). Given the lack of detection of this highly visible species and given that the ravines will be avoided by grading and are beuond the Project's limit of development, the Project has no potential for significant impacts on this species.

Accordingly, the mitigation measures included in the DEIR with respect to wildlife are also included in an abundance of caution. Therefore, because no impacts would occur, Project alternatives are not necessary to protect potentially sensitive wildlife species. Finally, the in the unlikely event there are residual impacts to sensitive resource as a result of the Project, the mitigation measures contained in the DEIR would minimize or mitigate such residual impacts.

R4-26

The mitigation measures in Section 5.3.7 of the DEIR are included in an abundance of caution and are sufficient to mitigate any residual impacts, if any.

R4-27

See Response 03-42

R4-28

Both Impact Sciences and GLA determined that there were no special-status species associated with the non-native grassland as none have been documented on the Site. Red-winged blackbirds are widespread and common and their use of the Site is not biologically important (e.g., they occur in parking lots and other urban areas). The potential use of the Site by a white-tailed kite, based on observations (including by the commenter), suggest that such use would be occasional and the loss of portions of the grassland would not be considered significant.

R4-29

The non-native grasslands exhibit potential for supporting only a limited suite of avifauna with no potential nesting for special-status species and only limited foraging opportunities. As requested by the commenter, potential avifauna are addressed by group.
Waterfowl (e.g., ducks and geese): No potential habitat exists on the Project Site for breeding or foraging and no potential for significant impacts.

Shorebirds (sandpipers and plovers): No potential habitat exists on the Project Site for breeding or foraging with the exception of the killdeer, which is very common and highly urban adapted. No potential for significant impacts.

Herons and Egrets: The Site could be visited by species such a great egret and great blue heron, as these species occasionally forage in upland areas. While such species may occasionally visit the Site, these species are widespread and common and development of the Site would not result in significant impacts.

Owls and Raptors The Malibu environs and the larger Santa Monica Mountains contain vast areas of open space that is highly suitable for foraging raptors. As noted by Impact Sciences and GLA, there are no nesting owls or raptors on the Site and no special-status raptors have been observed on the Site during a number of surveys during nesting seasons. In addition, approximately 9 acres will be subject to a conservation easement [Discuss with City] and will continue to provide habitat and opportunities for the movement of small mammals and therefore raptor foraging. As such, the Project does not exhibit the potential for significant direct or cumulative impacts on foraging raptors.

Crows and Jays: These species are expected to visit the Site; however, these species are common and widespread and highly adapted to the urban environment. There is no potential for significant impacts to this group of species.

Hummingbirds and Swifts: Two hummingbirds, Anna's and Allen's have been documented on the Site. These species are not associated with non-native grasslands; nevertheless, they are very common in coastal southern California and highly urban adapted and the Project exhibits no potential for impacts to these species. Swifts have limited potential for foraging over the Site; however, they are incapable of "perching" and roost in caves or artificial structures such as chimneys and as such the Project has no potential for impacts to these species.
Flycatchers: One flycatcher, Says phoebe, is typically associated with grasslands and potentially occurs on the Site. Says phoebe is common and has no special-status and potential impacts of the Project would not be considered significant. Other flycatchers that exhibit potential for using the Site include the western kingbird, ash-throated flycatcher, and the black phoebe. All of these are common, none have special status and potential impacts of the Project would not be considered significant.

Songbirds (e.g., vireos, warblers, wrens, sparrows, swallows, finches, blackbirds, orioles, thrushes, etc.): There are no special-status songbirds that exhibit potential for breeding within the grasslands, with occasional or intermittent foraging by such species as blackbirds, white crowned sparrows, savannah sparrows, house finches, yellow-rumped warblers, and robins. All of these are common, none have special status and potential impacts of the Project would not be considered significant.

R4-30

Pursuant to CEQA, the Project Site was analyzed in its current state. While GLA is not aware of any potential unauthorized activities on the Site, to the extent that such (theoretical) activities occurred prior to site inspections, such conditions would have defined the "baseline" for the studies. As such there is no requirement under CEQA to consider past actions on the property. Based on the baseline conditions, the Project will not result in significant impacts on Biological Resources.

R4-31

See Response R4-30.

R4-32

See Response R4-30.

R4-33

As to ESHA, refer to Response 03-40

R4-34

The Catalina mariposa lily is a California Native Plant Society List 4 taxon. List 4 is a watch list and List 4 species are not considered rare or endangered and impacts to List 4 species, do not typically result in a finding of significant impacts. Based on the mapping of this species by Impact Sciences, the majority of the area occupied by this species, occurs in preserved open space and would not be impacted by Project grading.

R4-35

For detailed of wildlife movement see Response 03-39.

Specific to nocturnal movement, it is expected that medium-sized mammal (raccoons and possums), along with large mammals including bobcat and coyote often disperse and forage at night. As described in Response 03-39, the Project does not exhibit potential for significant impacts to movement of the groups of animals evaluated, including those species that migrate or forage at night and there is no need for additional studies.

R4-36

There will be no significant impacts to wildlife movement. As such, no mitigation measures are required pursuant to CEQA.

R4-37

Relative to migratory birds, see Response R4-29 above.

Relative to the non-jurisdictional drainages within the ravines, the Project avoids grading impacts to the ravines including the westerly ravine, where limited amounts of drainage originate offsite.

R4-38

The U.S. Army Corps of Engineers requires that all three criteria (a predominance of wetland vegetation, hydric soils and wetland hydrology) be present for an area to meet the Corps' wetland definition. Typically the State of California only requires one of the criteria be present to make a wetland determination; however, it is important to note, that for an area to be a wetland, even under the single criteria test, it must exhibit true wetland conditions. For any area to be a wetland under the State definition, it must exhibit anaerobic conditions during at least every other year. Sites that fail to meet this test are not wetlands since vegetation is often not a reliable indicator of wetlands. The GLA jurisdictional delineation was based on the the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual[3] (Wetland Manual) and the 2006 Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement).[4] and did not detect any of the three criteria necessary for making a determination that wetlands are present, which include 1) a predominance of wetland plants, hydric soils, or wetland hydrology. As such, there are no wetlands on the Project Site or that would be affected by the Project using either the federal definition or the State definition.

---

[3] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

[4] U.S. Army Corps of Engineers. 2006. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement. Ed. J.S. Wakeley, R.W. Lichevar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center. Note since the delineation was completed, this has been superseded by: U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. Ed. J.S. Wakeley, R.W. Lichevar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center. The finalization of the manual resulted in no changes to the criteria that would affect this delineation, and thus no change to the conclusion that there are no criteria for wetlands on this site.

R4-39

In 2009, Applicant's predecessor in interest, AZ Winter Mesa, LLC voluntarily agreed to dedicate to the Mountains Recreation and Conservation Authority ("MRCA") a conservation easement totaling approximately 7 acres, as indicated on Exhibit 1 attached, along the southern portion of the Project Site and the eastern property line of the adjacent property (the "Conservation Easement") and the MRCA agreed to accept the dedication of the Conservation Easement. The following summarizes the terms and conditions of the Conservation Easement:

1. The Conservation Easement shall consist of approximately 7 contiguous acres and shall be located on the southern and easternmost portions of the Project Site including as much area of the canyon in the center of Project Site as feasible;
2. The Conservation Easement shall be dedicated directly to the MRCA prior to or simultaneously with the recordation of any Parcel or Tract Map for the Project Site;
3. Applicant shall pay all direct costs for the preparation and recordation of the easement and a $1,000 processing fee to the MRCA for review of same;
4. The Conservation Easement shall prohibit all roads, paved paths, fencing (except subject to the prior approval of the City of Malibu's Biologist fencing that contains at least 3.5 inch gaps between the vertical fence posts to allow for the passage of small animals and is not closed at the bottom to allow for the passage of small animals and reptiles under the fence shall be permitted within the conservation easement in a small on the western side of Lot 5 above the 170 foot contour line), lighting, trails, plants not native to the Santa Monica Mountains Coastal Zone and animal keeping of any duration or type. Stables, equestrian facilities, grazing and vineyards shall be prohibited in the Conservation Easement;
5. The Conservation Easement shall permit the installation, maintenance, upgrade and replacement of all drainage, underground utilities, irrigation, groundwater monitoring wells, fire department prescribed fuel modification, and other non-conflicting infrastructure (collectively "Infrastructure") that may be required in the approvals of the proposed project pursuant to its EIR, Coastal Development Permits or associated with the Project's Tract or Parcel Map;
6. No pedestrian, non-vehicular or vehicular paths or roads may be placed in the Conservation Easement area except vehicular and pedestrian access will be permitted, as necessary to inspect, repair, upgrade and/or replace the Infrastructure and for fuel modification. Except as otherwise provided, pedestrian access shall be solely for residents and guests in the residential portions of the Project Site in the event of an emergency;
7. The Conservation Easement will allow for the inspection and repair of the Infrastructure by landowners, including the homeowners association, if applicable as well as inspections by the MRCA solely for the purpose of monitoring compliance with the terms

of the Conservation Easement. MRCA's access to the Conservation Easement shall be from the MRCA's portion of Bluffs Park and not from the residential portions of the Project Site;

8. No portion of the easement shall be located over a Caltrans right-of way except for an approximately 115 foot wide section in the northeast corner of the Project Site abutting Pacific Coast Highway. The Conservation Easement will be subordinate to any existing or to be recorded Caltrans, governmental, and utility easements as well as such other easements as may be necessary to carry out the proposed development on either the Project Site and the property sharing the eastern property line (23917-23923 Malibu Road);
9. Simultaneously with the recordation of the Conservation Easement property owner shall provide a $25,000 endowment to the MRCA to monitor the Conservation Easement in perpetuity. The endowment shall be delivered to the MRCA within thirty (30) days after the approval of the Project Sites CDPs by the Malibu City Council without any material changes in the project description in the final CDPs and the expiration of all appeal periods related to the CDPs or other periods during which one could file a legal challenge to the City's approval of the CDPs or the Project Site's EIR. The endowment shall then be held in escrow by the MRCA until recordation of the Conservation Easement, MRCA acknowledges that the conservation easement was voluntarily offered by the property owner with the understanding that the property owner intends to obtain tax benefits associated with the donation of the conservation easement;
10. Property owner will consult with the MRCA to minimize brush clearance of native habitat in the Conservation Easement; and
11. In view of the fact the EIR for the Crummer Site has not been completed, neither the exact location of any proposed conservation easement on the Project Site nor the precise limits of development Infrastructure that would be necessary for the success of the project are known and until such time it is impossible to finalize a definitive boundaries of Conservation Easement at this time. Subject to all of the above property owner shall use commercially reasonable efforts to locate the Conservation Easement in the area contained on Exhibit 1 attached hereto.

Project ownert has agreed to voluntarily offer to dedicate the Conservation Easement to the MRCA subject to the same terms and conditions outlined above and intends to enter into an agreement with the MRCA in accordance with the terms described above. The Conservation Easement is not necessary to mitigate any significant impacts. Therefore, the Conservation Easement is not included as a mitigation measure.

R4-40

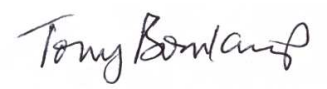
The Project has been designed to cluster the residences and to minimize Site grading and land transformation in a manner consistent with the Site's topography and the LCP. The Project, as

proposed, does not result in a significant impact to the coastal sage habitat or sensitive biological resources. Modifying the Project to move the residences further from the bluffs and reducing the first floor footprint as suggested by the Commenter would not significantly reduce brush clearance or other impacts to biological resources to less than significant, since that has already been achieved by the design of the Project. Therefore, pursuant to CEQA, evaluation of additional alternatives is not required.

If you have any questions regarding these responses I can be reached at (949) 837-0404 ext 41.

Sincerely,

GLENN LUKOS ASSOCIATES



Tony Bomkamp
Senior Biologist/Regulatory Specialist

S:784-3_Biological Response Letter.docx

MEMORANDUM

GLENN LUKOS ASSOCIATES
Regulatory Services

PROJECT NUMBER: 0984-3CRU2

TO: Robert Gold

FROM: Tony Bomkamp

DATE: September 20, 2013

SUBJECT: Responses to Comments

A1-10

As discussed above in response to Comment A1-9, given that the Project will not result in significant impacts to special-status biological resources, no mitigation is required in accordance with CEQA. The loss or thinning of limited amounts of coastal sage scrub on the slope overlooking Pacific Coast Highway as well as a the loss of or thinning of coastal sage/chaparral scrub would be adverse; however, the impacts to not meet the minimum threshold under CEQA or the LCP.

A-12

Burrowing owl habitat assessments are appropriately initiated when there are known occurrences of the species in the project area. To date, there are no records of burrowing owl within Malibu and the nearest record is from an area north of Highway 101 approximately 9.5 miles north of the project site (between Calabasas and Agoura Hills). Additionally, there was no indication of burrowing owl presence during at least 8 site surveys conducted by qualified biologists from two different consulting firms. Therefore, there is no reason to assume the presence of burrowing owls and subsequently, it is reasonable to make the determination that the project would not impact burrowing owls. Because there are no potentially significant impacts to this species, mitigation is not warranted.

29 Orchard ▪ Lake Forest ▪ California 92630-8300
Telephone: (949) 837-0404 Facsimile: (949) 837-5834

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

July 19, 2007

Robert J. Wlodarski
Principal Investigator
HEART
8701 Lava Place
West Hills, CA 91304

Sent by FAX: 818-340-6676
Number of pages: 3

Re: Proposed project located in the City of Malibu; Los Angeles County.

Dear Mr. Wlodarski:

The Native American Heritage Commission was able to perform a record search of its Sacred Lands File (SLF) for the affected project area. The SLF failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the Sacred Lands File does not guarantee the absence of cultural resources in any 'area of potential effect (APE).'

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the nearest tribes that may have knowledge of cultural resources in the project area. A List of Native American contacts are attached to assist you. The Commission makes no recommendation of a single individual or group over another. It is advisable to contact the person listed; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area (APE).

Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Attachment: Native American Contact List

Native American Contacts
Los Angeles County
July 19, 2007

Charles Cooke
32835 Santiago Road
Acton , CA 93510
(661) 269-1422
(661) 733-1812
Chumash
Fernandeno
Tataviam
Kitanemuk

Owl Clan
Qun-tan Shup
48825 Sapaque Road
Bradley , CA 93426
(805) 472-9536
(805) 835-2382 - CELL
Chumash

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand , CA 91362
805 492-7255
Chumash
Tataviam
Fernandeño

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Administrator
4712 Admiralty Way, Suite 172
Marina Del Rey , CA 90292
310-570-6567
Gabrielino Tongva

Julie Lynn Tumamait
365 North Pole Ave
Ojai , CA 93023
jtumamait@hotmail.com
(805) 646-6214
Chumash

Diane Napoleone and Associates
Diane Napoleone
6997 Vista del Rincon
La Conchita , CA 93001
dnaassociates@sbcglobal.net
805-643-7482
Chumash

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th Street, Rm. 403
Los Angeles , CA 90020
(213) 351-5324
(213) 386-3995 FAX

Coastal Band of the Chumash Nation
Roberta Cordero
4451 La Paloma Road
Santa Barbara , CA 93105
roberta.cordero@gmail.com
805-681-9133
Chumash

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed 24-acre Development Project located in the City of Malibu; Los Angeles County, California for which a Sacred Lands File search was requested. The site is west of 23015 Malibu road in a subregion that is known to be culturally sensitive; however, no cultural resources (Native American) were identified at the site.

Native American Contacts
Los Angeles County
July 19, 2007

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Tribal Chair/Cultural Resources
5450 Slauson, Ave, Suite 151 PMB Gabrielino Tongva
Culver City , CA 90230
gtongva@verizon.net
562-761-6417 - voice
562-920-9449 - fax

Carol A. Pulido
165 Mountainview Street Chumash
Oak View , CA 93022
805-649-2743 (Home)

Melissa M. Para-Hernandez
119 North Balsam Street Chumash
Oxnard , CA 93030
805-988-9171

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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed 24-acre Development Project located in the City of Malibu; Los Angeles County, California for which a Sacred Lands File search was requested. The site is west of 23215 Malibu road in a subregion that is known to be culturally sensitive; however, no cultural resources (Native American) were identified at this site.

NATIVE AMERICAN HERITAGE COMMISSION
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RECEIVED
OCT 23 2008
PLANNING DIV.

October 20, 2008

Ms. Stefanie Edmondson, AICP, Principal Planner
CITY OF MALIBU
23815 Stuart Ranch Road
Malibu, CA 90265

Re: SCH# 2008091155 CEQA Notice of Preparation (NOP) draft Environmental Impact Report (DEIR) for **the Crummer Site Subdivision (24120 Pacific Coast Highway)**; City of Malibu; Los Angeles County, California

Dear Ms. Edmondson:

Thank you for the opportunity to comment on the above-referenced document. The Native American Heritage Commission is the state agency designated for the protection of California's Native American cultural resources. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR per the California Code of Regulations § 15064.5(b)(c)(f) (CEQA Guidelines). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE),' and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

√ Contact the appropriate California Historic Resources Information Center (CHRIS). Contact information for the 'Information Center' nearest you is available from the State Office of Historic Preservation in Sacramento (916/653-7278). The record search will determine:

- If a part or the entire (APE) has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.

√ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

√ The Native American Heritage Commission (NAHC) has conducted a Sacred Lands File (SLF) search of the project area and did not identify any cultural resources within 1./2 mile radius of the project site (APE). However, the NAHC has identified Native American cultural sites in proximity to the APE. A local tribe may be the only source of information about a Native American cultural resource. Therefore, provided is information on tribal contacts that are culturally affiliated to the project location who may have information on cultural resources in or near the APE. Also, we recommend that you contact the Native American contacts on the attached list to get their input on the effect of potential project (e.g. APE) impact. As noted above, a culturally-affiliated Native American tribe or person will be the only source of information about the existence of a cultural resource.

√ Also, lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f)of the California Code of Regulations (CEQA Guidelines). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, is recommended should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

0√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigations plans.

- CEQA Guidelines §15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the Initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American groups, identified by the NAHE, to ensure the appropriate and dignified treatment of Native American human remains and any associated grave goods.
- Health and Safety Code §7050.5, Public Resources Code §5097.98 and CEQA Guidelines §15064.5(d) mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

√ Lead agencies should consider avoidance, as defined in CEQA Guidelines §15370 when significant cultural resources are discovered during the course of project planning or execution.

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton
Program Analyst

Attachment: Native American Contact List.

Cc: State Clearinghouse

Native American Contacts
Los Angeles County
October 20, 2008

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks , CA 91362
805 492-7255
(805) 558-1154 - cell
folkes9@msn.com

Chumash
Tataviam
Fe†rnandeño

Randy Guzman - Folkes
4577 Alamo Street, Unit C
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(805) 905-1675 - cell

Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

Julie Lynn Tumamait
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jtumamait@sbcglobal.net
(805) 646-6214

Chumash

Carol A. Pulido
165 Mountainview Street
Oak View , CA 93022
805-649-2743 (Home)

Chumash

Patrick Tumamait
992 El Camino Corto
Ojai , CA 93023
(805) 640-0481
(805) 216-1253 Cell

Chumash

Owl Clan
Qun-tan Shup
48825 Sapaque Road
Bradley , CA 93426
(805) 472-9536
(805) 835-2382 - CELL

Chumash

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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2008091155; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Crummer Site Subdivision (24120 Pacific Coast Highway); City of Malibu; Los Angeles, California.

MEMORANDUM

Date: **July 1, 2013**

To: **PCH Project Owner, LLC**

From: **Andrew Nickerson, PE**
Psomas

Re: **Psomas Civil Engineering Responses to Comments on**
Draft Environmental Impact Report: Proposed Residential Development, "Crummer Site", Lots 1 through 5, 24108, 24120, 24134, 24150 and 24174 Pacific Coast Highway, City of Malibu, California (the "Site").

Psomas submits to you our responses to civil engineering comments related to the DEIR for the Crummer site, dated April 2013.

Gaines & Stacey

Page 12
Comment 03-50: The analysis of impacts to hydrology and water quality is inadequate. 1) The DEIR must incorporate and address issues identified by GeoSoils Consultants
Response 03-50: See Psomas responses to comments 03-10 and 03-20.

GeoSoils Consultants Inc.

Page 5
Comment 03-10: Project development could result in substantial soil erosion or the loss of topsoil.
Response 03-10: While project development could result in soil erosion or the loss of topsoil, erosion projection measures will reduce this effect to less than significant. Per City of Malibu requirements for a Grading Permit, an Erosion Control Plan and Stormwater Pollution Prevention Plan (SWPPP) will be developed to stabilize the Site during construction. Best Management Practices (BMPs) such as stabilized construction entrance, silt fences, and desilting basins will be incorporated into the plan. Implementation of these plans is required by the Regional Water Quality Control Board, committed to by the owner, monitored by a Qualified SWPPP Practioner, and inspected by the City. Long term surface erosion will be reduced through the construction of hardscape surfaces which are not susceptible to erosion and landscaped areas which will stabilize the surface. Long term BMPs consisting of the subsurface installation of bio-retention facilities and stormwater detention tanks will also reduce the process of erosion with implementation of the project to less than significant. See also Psomas response to comment 03-20, 01-11,01-15, and Leighton and Associate's Geotechnical Responses, 2013.

Page 8
Comment 03-20: DEIR and reports do not adequately address stability along the southern slope area of the site.
Response 03-20: In the Site's present condition, there currently is no control over how storm water leaves the Site and descends down the southern slopes. The proposed project will include design

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features and storm water control measures that will provide for control of the storm water leaving the Site and therefore provides an opportunity to reduce future erosion along the southern slope. Specifically, as shown on the Erosion Control Plan, during construction storm water that flows from the graded areas will be captured with desilting basins where the storm water will be detained and cleaned and then rerouted through storm drain pipes to drainage channels and then to existing storm drains. After construction, as shown on the Grading and Drainage Plan, storm water that flows from the developed portions of the Site will be captured, detained and rerouted through storm drain pipes to minor drainage channels and then to existing storm drains. In each case there will be a reduction in both the volume of and rate at which the storm water flows over the southern slope by diverting it at the surface through minor drainage channels and other drainage devices thus reducing the erosion of the slope due to storm water runoff, which will improve slope stability. See also Leighton and Associate's Geotechnical Responses, 2013.

AEI Consultants

Pages 3 and 4
Comment 01-11: Will the stormwater detention tanks on each lot mitigate adverse water quality (i.e., oil/grease, paint, solvents, fertilizer, etc.) or provide treatment before discharge?
Response 01-11: The purpose of the detention tanks is to detain storm water until the peak storm passes. A secondary consequence of the tank is to reduce the transport of sediment downstream. Each residential lot will have at least one detention tank which is designed to hold the difference in stormwater flow between the existing undeveloped condition and the proposed developed condition. Since different storm events create different amounts of flow, the 2, 10, and 100 year storm events are studied and the largest flow difference becomes the amount of designed detention. The outlet of the detention tank will have a small pipe that will only allow the pre-development flow to be released downstream. This results in two benefits. First, erosion downstream is minimized as a result of slowing the rate in which the stormwater would otherwise sheet flow off the Site. Second, the amount of pollutants that would otherwise be deposited into the ocean will be reduced because detaining the stormwater in the detention tanks will allow suspended sediments in the storm water to settle into the detention tanks. Short term pollutants during construction such as paints, solvents, fertilizer, and other on-site construction materials will be contained through the use of Best Management Practice (BMP) devices specified in the Water Quality Management Plan (WQMP). In addition to the detention tanks, after completion of construction pollutants such as oil/grease, suspended metals, and bacteria suspended in stormwater will be first treated on each lot permanently through at least one bio-retention facility located in the landscaping areas, each capable of cleaning 2,000 to 3,000 cubic feet of storm water runoff. The bio-retention facilities are designed to, within a 48-hour period, hold temporarily small storms that would typically occur about 10 times per year, resulting in approximately 6" to 12" of stormwater on the surface of the landscaped yard The storm water will seep into the landscaping soil layer and pollutants will be removed from the water as the water percolates through the soil. The plants in the landscaped area will, over time, break down many of these pollutants and often absorb them as nutrients. A layer of gravel beneath the soil will allow the clean water to settle and be collected in a storm drain pipe. An impervious liner under the gravel will prevent the stormwater from percolating any deeper into the hillside, as recommended by the geotechnical engineer. The cleaned storm water will be rerouted through storm drain pipes and then to existing storm drains. Any trash that is remaining on the surface of the bio-retention facility will be removed by the residents as it will be in plain sight within their yards. This method is an effective way to remove the types of pollutants expected and the use of bio-retention facilities is promoted by the State Water Resources Control Board.

Comment 01-12: Is there a contingency for failure/partial failure of the detention tank system?
Response 01-12: Yes, the contingency for failure or partial failure of the detention tank and bio-retention tank system is repair or replacement of the tank. In the event of replacement of the tank, construction crews will dig up and remove the old tank and install a new one of the same size. None of the tanks are located within the proposed conservation easement. Each homeowner will be responsible for proper maintenance, which consists of yearly inspections and removal of sediment that has been deposited in the tank. The maintenance and functionality of the stormwater treatment systems, which includes the detention tanks, is enforced through the recordation of a BMP covenant agreement, signed by the owner and recorded in the official records of the County Recorder, obligating the owner to provide periodic inspection and maintenance/repair of the system in perpetuity. The covenant runs with the land and binds all successive owners of the property. Proper water quality and water quantity are also enforced by the City of Malibu municipal code as described in Comment 3 below. The tank fails if it is unable to detain water, or if sediment has built up to prevent discharge of the water. Cracking of the tank is highly unusual and would occur only if heavy trucks drive over them, which is unlikely in sloping, landscaped areas. Heavy sedimentation in the tanks would occur if maintenance were neglected. Furthermore, maintenance and monitoring of the detention tanks will be included in the covenants and responsibilities of the Homeowners Association (HOA), which will be able to ensure that periodic, independent professional review of the tanks occurs. The tanks and bio-retention facilities will be inspected annually to make any necessary repairs, and to remove sediment and trash which was deposited in the tank.

Comment 01-13: How can the public be assured that the runoff water quality standards are maintained and no increase in drainage through adjacent residential areas?
Response 01-13: See Response 01-12 for assurance that the runoff water quality standards are maintained. As discussed in Response 03-20, the project includes drainage features that divert storm water through a drainage system into an existing storm drain and the Project will not increase drainage through adjacent residential areas. Additionally, potential increase in drainage through adjacent residential areas is prohibited without review of a hydrology study and issuance of a building permit by the City of Malibu. Any new development on undeveloped land or a subdivision is prohibited unless a storm water management plan is approved by the Department of Public Works and the Department of Environmental Sustainability Building Safety confirming that the new development will not increase storm water runoff from existing conditions. Specifically, Malibu Municipal Code Section 13.04.100 contains requirements with respect to drainage and storm water of undeveloped land prior to the issuance of a building permit and is provided in part as follows:

> A. Prior to issuance of a building permit for any new development (on undeveloped land) or final map approval for any subdivision of property the applicant shall be required to have approval of a storm water management plan from the department of public works and the department of environmental and building safety.
>
> B. The stormwater management plan shall incorporate the following elements:
>
> 1. Construction erosion control, as required under Title 15, building regulations of this code;
>
> 2. Storm drainage improvement measures to mitigate any offsite/downstream negative impacts due the proposed development. This includes, but not limited to;
>
> a. Mitigating increased runoff rate due to new impervious surfaces through on-site detention such that peak runoff rate after development does not exceed the peak runoff of the site before development for the one hundred (100) year clear flow storm event (note; Q/100 is calculated using the Caltrans Nomograph for converting to any frequency, from the Caltrans "Hydraulic Design and Procedures Manual"). The detention basin/facility is

to be designed to provide attenuation and released in stages through orifices for two-year, ten (10)-year and one hundred (100)-year flow rates, and the required storage volume of the basin/facility is to be based upon one-inch of rainfall over the proposed impermeable surfaces plus one-half-inch of rainfall over the permeable surfaces. All on-site drainage devices, including pipe, channel, and/or street and gutter, shall be sized to cumulatively convey a one hundred (100) year clear flow storm event to the detention facility,

b. Demonstrating by submission of hydrology/hydraulic report by a registered engineer that determines entire downstream storm drain conveyance devices (from project site to the ocean outlet) are adequate for twenty-five (25)-year storm event,

c. Constructing necessary off-site storm drain improvements to satisfy subsection (B)(2)(b) of this section, or

d. Other measures accomplishing the goal of mitigating all offsite/downstream impacts;

3. Storm drain pollution prevention measures including all construction elements and best management practices (BMP's) to address the following goals in connection with both construction and long-term operation of the site;

a. Maximize, to the extent practicable, the percentage of permeable surfaces in order to allow more percolation of runoff into the ground,

b. Maximize, to the extent practicable, retention of dry-weather runoff on-site to allow percolation into the ground, or installation of other treatment measures thereby preventing pollutants from entering the storm drain system.

As discussed in the Draft EIR and noted above, the Project's grading and drainage plan satisfy the requirements of the Malibu Municipal Code Section 13.04.100. In addition to Municipal Code Section 13.04.100 as a means of enforcement, if an increase in drainage is identified Malibu Municipal Code Section 13.04.120 which provides an enforcement mechanism, including a right of action by the City of Malibu to seek injunctive relief and recover its costs, as follows:

A. Violations Deemed a Public Nuisance.

1. Any condition caused or permitted to exist in violation of:

a. Any of the provisions of this chapter;

b. Any failure to comply with any applicable requirement of either the SUSMP or an approved stormwater mitigation plan with respect to a property;

c. Any false certification or verification, or any failure to comply with a certification or verification provided by a project applicant or the applicant's successor in interest; or

d. Any failure to properly operate and maintain any structural or treatment control BMP on a property in accordance with an approved stormwater mitigation plan or the SUSMP, is hereby determined to be a threat to the public health, safety and welfare, is declared and deemed a public nuisance, and may be abated or restored by any authorized enforcement officer, and a civil or criminal action to abate, enjoin or otherwise compel the cessation of such nuisance may be brought by the city attorney.

2. The cost of such abatement and restoration shall be borne by the owner of the property and the cost thereof shall be invoiced to the owner of the property, as provided by law or

ordinance for the recovery of nuisance abatement costs.

3. If any violation of this chapter constitutes a seasonal and recurrent nuisance, the city manager shall so declare. The failure of any person to take appropriate annual precautions to prevent such violations after written notice of a determination under this paragraph shall constitute a public nuisance and a violation of this chapter.

B. Concealment. Causing, permitting, aiding, abetting, or concealing a violation of any provision of this chapter shall constitute a violation of such provision.

C. Civil Actions. In addition to any other remedies provided in this section, any violation of this chapter may be enforced by civil action brought by the city. In any such action, the city may seek, as appropriate, any or all of the following remedies:

1. A temporary and/or permanent injunction;

2. Assessment of the violator for the costs of any investigation, inspection, or monitoring survey which led to the establishment of the violation, and for the reasonable costs of preparing and bringing legal action under this subsection;

3. Costs incurred in removing, correcting, or terminating the adverse effects resulting from violation;

4. Compensatory damages for loss or destruction to water quality, wildlife, fish and aquatic life.

D. Administrative Enforcement Powers. In addition to the other enforcement powers and remedies established by this chapter, the authorized enforcement officer has the authority to issue a cease and desist order to require remediation of any existing or potential violation of this chapter. When an authorized enforcement officer finds that a violation of this chapter has taken place or is likely to take place, the officer may issue an order to cease and desist such action and direct that those persons not complying shall: (i) comply with the requirement; (ii) comply with a time schedule for compliance; and (iii) take appropriate remedial or preventive action to prevent the violation from recurring.

E. Violations and Penalties. In addition to any criminal, civil or other legal remedy established by law that may be pursued to address violations of the municipal code, violations of the provisions of this chapter are subject to the administrative penalty provisions of Chapter 1.10. Each day that a violation continues shall constitute a separate offense.

F. Permit Revocation. To the extent the city makes a provision of this chapter or any identified BMP a condition of approval to the issuance of a permit or license, any person in violation of such condition is subject to the permit revocation procedures set forth in this code.

G. Remedies. Remedies specified in this chapter are in addition to and do not supersede or limit any and all other remedies, civil or criminal. The remedies provided for herein shall be cumulative and not exclusive.

H. Authority to Conduct Samplings and Establishing Sampling Devices. With the consent of the owner or occupant or pursuant to an inspection warrant, any authorized enforcement officer may establish on any property such devices as necessary to conduct sampling and monitoring activities necessary to determining the concentrations of pollutants in stormwater and/or nonstormwater runoff. The inspections provided for herein may include but are not limited to:

1. Inspecting efficiency or adequacy of construction or post construction BMPs;

2. Inspection, sampling and testing any area runoff, soils in areas subject to runoff, and or

treatment system discharges;

3. Inspection of the integrity of all storm drain and sanitary sewer systems, including the use of smoke and dye tests and video survey of such pipes and conveyance systems;

4. Inspection of all records of the owner, contractor, developer or occupant of public or private property relating to BMP inspections conducted by the owner, contractor, developer or occupant and obtaining copies of such records as necessary;

5. Identifying points of stormwater discharge from the premises whether surface or subsurface and locating any illicit connection or discharge. (Ord. 235 § 11, 2008; Ord. 243 § 18, 2003; Ord. 219 § 6, 2001; Ord. 157 § 1, 1996; prior code § 5410)

Finally, the five residences included in the project will be subject to covenants, conditions and restrictions (CC&Rs) that will require the homeowners to properly maintain the drainage systems on their property. The HOA established for the project will have the right to enforce the covenants and will also maintain any drainage systems located on the Lot 6 common area. If a homeowner failed to properly maintain the drainage systems located on its property, the HOA will have the right to take steps to maintain the drainages system and recover the cost of doing so from the property owner. If other neighboring property owners in the Project detect redirection of runoff onto their property, this could also be a violation of the CC&Rs and authorize the affect property owner or the HOA to take steps to remedy the problem.

Comment 01-14: Will stormwater discharge to slopes and canyons below the proposed site result in adverse geologic conditions (i.e. Erosion, slope failure, affect mapped landslides along the south facing bluffs, etc.)?
Response 01-14: See Psomas response to comment 03-10, 03-20, 01-15, and Leighton and Associate's Geotechnical Responses, 2013.

Comment 01-15: Planned earthen berms at top of bluffs to divert runoff will channelize flow which in turn increases the runoff energy and rate which will increase erosive potential along slope faces and in canyons below the site.
Response 01-15: The berms at the top of the bluffs provide an opportunity to divert runoff off of unprotected slopes and into a controlled storm drain system. The portion of the berms that capture channelized flow will be lined with a concrete swale to prevent erosion and the swale will contain small check dams or "rip rap" (rock used to armor drainage channels) to control the runoff velocity. Compared to existing conditions where the runoff is not currently controlled, the energy of the runoff will be reduced to zero at check dams, thus decreasing erosive potential along slope faces and in the drainage channels below the Site. Stormwater will be collected in non-erosive devices and discharged into level dispersal drainage structures which spread out the flow per City of Malibu Dispersal Structure Example detailed drawing. The Dispersal Structure Example detailed drawing is an acceptable design detail consisting of a U-shaped concrete trough with ½" slots on the downhill side to allow storm water to trickle into boulders of 3" to 8" diameter and intermittent planting before being released to the natural slope below. The spreading out of storm water reduces the erosive effect of storm water to less than significant.

Comment 01-16: How will the individual lot owner be responsible for their own storm water runoff quality as stated in the DEIR?
Response 01-16: See Psomas response to comments 01-12 and 01-13 above.

Comment 01-17: Can the existing public stormwater system handle the component of runoff that is not detained and released as well as the controlled released volumes?
Response 01-17: As discussed in Response 01-13, Malibu Municipal Code Section 13.04100 provides that "Prior to issuance of a building permit for any new development (on undeveloped land) or final map approval for any subdivision of property" both of which conditions apply to the Project Site, "the applicant shall be required to have approval of a storm water management plan from the department of public works and the department of environmental and building safety." Such storm water management plan must mitigate "increased runoff rate due to new impervious surfaces through on-site detention such that peak runoff rate after development does not exceed the peak runoff of the site before development for the one hundred (100) year clear flow storm event". Psomas prepared a Hydrology Study that quantified the amount of detention for each lot. Residential lot detention ranged from approximately 2,000 to 3,000 cubic feet; private street detention was approximately 5,000 cubic feet, Lot 7 detention was also quantified for both a possible additional ball field, of approximately 1,000 cubic feet, and a 12,500 square foot skate park, of approximately 1,300 cubic feet. These additional volumes will be detained and released after the peak storm event so that the existing storm drain systems do not experience an increase in runoff. As a result, the proposed development of the Project Site will have no negative impact on the existing storm water system. To the contrary, in certain instances the proposed development of the Project Site will have a positive impact on the existing storm water systems by (i) detaining storm water runoff from the Project Site which in its current state is uncontrolled, thus reducing the volume of runoff entering the existing storm water system (ii) redirecting storm water runoff away from locations that have experienced damage as a result of uncontrolled storm water runoff and (iii) improving the quality of the water that would otherwise carry sediment to the ocean through collection of pollutants in the detention tanks and installation of non-erosive drainage devices.

Comment 01-23: Development (and approval by governing agency) of OM&M program of stormwater detention systems.
Response 01-23: See Psomas response to comment 01-12 for detention system operations, maintenance and monitoring.

Kari Kramer, 5/20/2013

Page 6 Hydrology and Water Quality
Comment R8-20: … similar monitoring systems …. should be specified and required as mitigation in the EIR. Additionally, such monitoring should include safeguards and fail safe measures and technology regarding the potential leakage and future replacement and/or repair of the proposed detention tanks.
Response R8-20: Monitoring of detention tanks is typically provided through a periodic, on-going operations and maintenance inspection program. Inspection by a professional is the most appropriate method to assess the condition and functionality of the tanks. The maintenance and monitoring of the detention tanks will be included in the responsibilities of the HOA so that periodic, independent professional review of the tanks can be ensured. See Psomas response to comment 01-12 for further discussion on contingency for potential tank failure. Additionally, Mitigation Measure 5.8-1 requires that Best Management Practices (BMPs) facilities are implemented to ensure that water quality standards are met. For this project, the BMPs will consist of bio-retention facilities and storm water detention tanks. As discussed in our response to Comment 01-13, maintenance of the BMPs, including the detention tanks, are subject to covenants, conditions and restrictions (CC&Rs) that will require the homeowners to properly maintain the drainage systems on their property. Therefore, storm water and drainage system design features, together with Mitigation Measure 5.8-1 and the required maintenance of the system, will reduce the impact to less than significant.

Land Phases, Inc.

Page 4
Comment R8-28: …the site development/grading plans for these lots currently indicate that grading (i.e. The construction of engineered fill-slopes) is planned to the south of the established geotechnical setback line.
Response R8-28: Leighton's establishment of the 1.5 factor of safety line (i.e. Geotechnical setback line) did consider the proposed grades, not the existing grades, and therefore grading beyond this setback line conforms to the City of Malibu's geotechnical requirements. See also Leighton and Associate's Geotechnical Responses, 2013.

Joan Lavine

Page 2
Comment R10-9: How will these … houses, with swimming pools, be supplied with water?
Response R10-9: Based on requirements provided by the Los Angeles County Department of Public Works, Waterworks Division, the developer must construct approximately 3,200 linear feet of new 12 inch water pipe along Malibu Canyon Road. With these improvements, Los Angeles County Waterworks District Number 29 will provide water to the Site, as reflected in the County's 12/26/12 Condition Will Serve Letter and this water supply will be sufficient to provide water for the swimming pools.

Russell Kern

Comment R6-01: …concern about water absorption and water shed controls… subject to a significant mudslide.
Response R6-01: Based on concerns from Russell Kern, expressed as a comment to the Crummer Initial Study in October 2008, the Crummer project owner and its, geotechnical engineer, Leighton & Associates, and civil engineer, Psomas, visited Mr. Kern at his home in 2008 and reviewed the existing slope condition. Based on their field observations, the project geotechnical engineer noted that distressed areas on the hillside slope appear to be concentrated where surface water runoff is concentrated on the slope. Leighton recommended in its Geotechnical Consultation letter of November 20, 2008 that storm water runoff on the areas beyond the top of the slope should be controlled to collect and divert storm water runoff away from the current runoff pathways that have developed on the slope. Accordingly, Psomas incorporated this proactive recommendation to reduce erosion into our Grading Plan by specifying new berms to be constructed at the top of the existing bluff, above the Kern residence and above adjacent residences with similar exposure to similar historical runoff patterns. Construction of these berms will divert runoff from the upper portion of the Site to non-erosive devices, which will redirect runoff away from the bluff slopes and into drainage channels. Implementation of the berms will improve the surface stability of the bluffs.

Kari Kremer

Comment R9-03: Site drainage and hydrology needs to be addressed as a separate item. This should include the potential impact of lubrication of landslide properties to the south of the development site.
Response R9-03: Site drainage and hydrology was evaluated separately through a Site specific Hydrology Study by Psomas dated December 5, 2007. See also Psomas response to comments 01-13,01-15.

With regards to the potential impact of lubrication, this impact should be dramatically reduced since infiltration into sub-surface grade will be reduced with the collection, detention and slow release of storm water to controlled drainage channels, rather than current infiltration of storm water. For further information on potential impact of lubrication, see also Leighton and Associate's Geotechnical Responses, 2013.

PSOMAS

Balancing the Natural and Built Environment

MEMORANDUM

Date: **September 23, 2013**

To: **PCH Project Owner, LLC**

From: **Andrew Nickerson, PE**
Psomas

Re: **Psomas Civil Engineering Responses to Comment to City of Malibu**
Draft Environmental Impact Report: Proposed Residential Development, "Crummer Site", Lots 1 through 5, 24108, 24120, 24134, 24150 and 24174 Pacific Coast Highway, City of Malibu, California (the "Site").

Psomas submits to you our response to civil engineering comment related to the DEIR for the Crummer site, dated April 2013.

City of Malibu, via email
Question from Rob DuBoux, Esq., P.E.on 9/9/13
Assistant Public Works Director/City Engineer

Comment:

The MS4 permit states that the project will be required to mitigate the greater of the 0.75-inch, 24-hour storm event or the 85th percentile, 24-hour storm event. Usually, the 0.75-inch storm event is the greater. However, the engineer should make a quick calculation on this to verify.

Response:

Psomas agrees with Robert Duboux's email and provide the following information:

According to the State of California Regional Water Quality Control Board, Los Angeles Tentative Order R4-2012-0175, NPDES Permit No. CAS004001, effective December 28, 2012, storm water quality design volume--defined as runoff from the 0.75-inch, 24-hour storm event, or runoff from the 85th percentile, 24-hour storm event, whichever is greater—must be treated.

In the case of the Crummer site, the 0.75-inch, 24-hour rainfall event generates the greater peak mitigation flows and volumes. The following minimum design storm water mitigation volumes per lot are provided as follows:

555 S. Flower Street
Suite 4400
Los Angeles, CA 90071

P: 213.223.1400
F: 213.223.1444

www.psomas.com

Peak Mitigation Volume Comparison

Lot Number	**VPM 3/4"** (0.75-Inch, 24-Hour Storm Event Volume in cubic feet)	**VPM 85TH Percentile** (85^{th} Percentile 24-Hour Storm Event Volume in cubic feet)
1	1699	1586
2	2109	1968
3	1659	1548
4	1709	1595
5	1984	1852
6	2646	2470
7 (Ball Field Alt.)	818	764
7 (Skate Park Alt.)	1741	1625

The proposed site storm water detention and BMP systems for the Crummer project have been adequately sized to handle these volumes.

See attachments for calculations and County Map for rainfall intensity which is used in the calculations.

Lot 1 - SUSMP Calculations

3/4" Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.53	0.5334	0.1424	266	0.026	21	6
21	0.228	0.12	0.53	0.5334	0.1216	266	0.026	23	2
23	0.218	0.12	0.53	0.5334	0.1163	266	0.026	23	0

A_{site} [acre]	1.17	A_I [acre]	0.62	A_P [acre]	0.55	A_U (acre)	0.000
A_{total} [acre]	1.17	A_I [%]	53%	A_P [%]	47%	A_U [%]	0%
Q_{PM} [cfs]	**0.14**	V_M [ft^3]	**1,699**	V_M [ac-ft]	**0.04**		

85th Percentile 24-hour Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.53	0.5334	0.1424	266	0.026	21	6
21	0.228	0.12	0.53	0.5334	0.1216	266	0.026	23	2
23	0.218	0.12	0.53	0.5334	0.1163	266	0.026	23	0

A_{site} [acre]	1.17	A_I [acre]	0.62	A_P [acre]	0.55	A_U (acre)	0.000
A_{total} [acre]	1.17	A_I [%]	53%	A_P [%]	47%	A_U [%]	0%
Q_{PM} [cfs]	**0.14**	V_M [ft^3]	**1,586**	V_M [ac-ft]	**0.04**		

Lot 2 - SUSMP Calculations

3/4" Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.61	0.5958	0.1591	454	0.059	23	8
23	0.218	0.12	0.61	0.5958	0.1299	454	0.059	25	2
25	0.21	0.12	0.61	0.5958	0.1251	454	0.059	26	1

A_{site} [acre]	1.3	A_I [acre]	0.79	A_P [acre]	0.51	A_U (acre)	0.000
A_{total} [acre]	1.30	A_I [%]	61%	A_P [%]	39%	A_U [%]	0%
Q_{PM} [cfs]	**0.16**	V_M [ft^3]	**2,109**	V_M [ac-ft]	**0.05**		

85th Percentile 24-hour Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.61	0.5958	0.1591	454	0.059	23	8
23	0.218	0.12	0.61	0.5958	0.1299	454	0.059	25	2
25	0.21	0.12	0.61	0.5958	0.1251	454	0.059	26	1

A_{site} [acre]	1.3	A_I [acre]	0.79	A_P [acre]	0.51	A_U (acre)	0.000
A_{total} [acre]	1.30	A_I [%]	61%	A_P [%]	39%	A_U [%]	0%
Q_{PM} [cfs]	**0.16**	V_M [ft^3]	**1,968**	V_M [ac-ft]	**0.05**		

Lot 3- SUSMP Calculations

3/4" Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.59	0.5802	0.1549	292	0.058	19	4
19	0.239	0.12	0.59	0.5802	0.1387	292	0.058	20	1
20	0.233	0.12	0.59	0.5802	0.1352	292	0.058	20	0

A_{site} [acre]	1.05	A_I [acre]	0.62	A_P [acre]	0.43	A_U (acre)	0.000
A_{total} [acre]	1.05	A_I [%]	59%	A_P [%]	41%	A_U [%]	0%
Q_{PM} [cfs]	**0.14**	V_M [ft^3]	**1,659**	V_M [ac-ft]	**0.04**		

85th Percentile 24-hour Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.59	0.5802	0.1549	292	0.058	19	4
19	0.239	0.12	0.59	0.5802	0.1387	292	0.058	20	1
20	0.233	0.12	0.59	0.5802	0.1352	292	0.058	20	0

A_{site} [acre]	1.05	A_I [acre]	0.62	A_P [acre]	0.43	A_U (acre)	0.000
A_{total} [acre]	1.05	A_I [%]	59%	A_P [%]	41%	A_U [%]	0%
Q_{PM} [cfs]	**0.14**	V_M [ft^3]	**1,548**	V_M [ac-ft]	**0.04**		

Lot 4 - SUSMP Calculations

3/4" Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.34	0.3852	0.1028	319	0.011	30	15
30	0.193	0.12	0.34	0.3852	0.0743	319	0.011	36	6
30	0.193	0.12	0.34	0.3852	0.0743	319	0.011	36	6

A_{site} [acre]	1.63	A_I [acre]	0.55	A_P [acre]	1.08	A_U (acre)	0.000
A_{total} [acre]	1.63	A_I [%]	34%	A_P [%]	66%	A_U [%]	0%
Q_{PM} [cfs]	**0.12**	V_M [ft^3]	**1,709**	V_M [ac-ft]	**0.04**		

85th Percentile 24-hour Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.34	0.3852	0.1028	319	0.011	30	15
30	0.193	0.12	0.34	0.3852	0.0743	319	0.011	36	6
30	0.193	0.12	0.34	0.3852	0.0743	319	0.011	36	6

A_{site} [acre]	1.63	A_I [acre]	0.55	A_P [acre]	1.08	A_U (acre)	0.000
A_{total} [acre]	1.63	A_I [%]	34%	A_P [%]	66%	A_U [%]	0%
Q_{PM} [cfs]	**0.12**	V_M [ft^3]	**1,595**	V_M [ac-ft]	**0.04**		

Lot 5 - SUSMP Calculations

3/4" Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.38	0.4164	0.1112	710	0.025	38	23
30	0.193	0.12	0.38	0.4164	0.0804	710	0.025	45	15
30	0.193	0.12	0.38	0.4164	0.0804	710	0.025	45	15

A_{site} [acre]	1.75	A_I [acre]	0.67	A_P [acre]	1.09	A_U (acre)	0.000
A_{total} [acre]	1.75	A_I [%]	38%	A_P [%]	62%	A_U [%]	0%
Q_{PM} [cfs]	**0.14**	V_M [ft^3]	**1,984**	V_M [ac-ft]	**0.05**		

85th Percentile 24-hour Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.38	0.4164	0.1112	710	0.025	38	23
30	0.193	0.12	0.38	0.4164	0.0804	710	0.025	45	15
30	0.193	0.12	0.38	0.4164	0.0804	710	0.025	45	15

A_{site} [acre]	1.75	A_I [acre]	0.67	A_P [acre]	1.09	A_U (acre)	0.000
A_{total} [acre]	1.75	A_I [%]	38%	A_P [%]	62%	A_U [%]	0%
Q_{PM} [cfs]	**0.14**	V_M [ft^3]	**1,852**	V_M [ac-ft]	**0.04**		

Lot 6-east - SUSMP Calculations

3/4" Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.4	0.432	0.1153	802	0.022	40	25
30	0.193	0.12	0.4	0.432	0.0834	802	0.022	48	18
30	0.193	0.12	0.4	0.432	0.0834	802	0.022	48	18

A_{site} [acre]	1.39	A_I [acre]	0.56	A_P [acre]	0.83	A_U (acre)	0.000
A_{total} [acre]	1.39	A_I [%]	40%	A_P [%]	60%	A_U [%]	0%
Q_{PM} [cfs]	**0.12**	V_M [ft^3]	**1,635**	V_M [ac-ft]	**0.04**		

85th Percentile 24-hour Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.4	0.432	0.1153	802	0.022	40	25
30	0.193	0.12	0.4	0.432	0.0834	802	0.022	48	18
30	0.193	0.12	0.4	0.432	0.0834	802	0.022	48	18

A_{site} [acre]	1.39	A_I [acre]	0.56	A_P [acre]	0.83	A_U (acre)	0.000
A_{total} [acre]	1.39	A_I [%]	40%	A_P [%]	60%	A_U [%]	0%
Q_{PM} [cfs]	**0.12**	V_M [ft^3]	**1,526**	V_M [ac-ft]	**0.04**		

Lot 6-west - SUSMP Calculations

3/4" Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.4	0.432	0.1153	396	0.167	22	7
22	0.223	0.12	0.4	0.432	0.0963	396	0.167	24	2
24	0.214	0.12	0.4	0.432	0.0924	396	0.167	25	1

A_{site} [acre]	0.86	A_I [acre]	0.34	A_P [acre]	0.52	A_U (acre)	0.000
A_{total} [acre]	0.86	A_I [%]	40%	A_P [%]	60%	A_U [%]	0%
Q_{PM} [cfs]	**0.08**	V_M [ft^3]	**1,011**	V_M [ac-ft]	**0.02**		

85th Percentile 24-hour Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.4	0.432	0.1153	396	0.167	22	7
22	0.223	0.12	0.4	0.432	0.0963	396	0.167	24	2
24	0.214	0.12	0.4	0.432	0.0924	396	0.167	25	1

A_{site} [acre]	0.86	A_I [acre]	0.34	A_P [acre]	0.52	A_U (acre)	0.000
A_{total} [acre]	0.86	A_I [%]	40%	A_P [%]	60%	A_U [%]	0%
Q_{PM} [cfs]	**0.08**	V_M [ft^3]	**944**	V_M [ac-ft]	**0.02**		

Lot 7 Ball Park - SUSMP Calculations

3/4" Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.05	0.159	0.0425	307	0.033	40	25
30	0.193	0.12	0.05	0.159	0.0307	307	0.033	48	18
30	0.193	0.12	0.05	0.159	0.0307	307	0.033	48	18

A_{site} [acre]	1.89	A_I [acre]	0.09	A_P [acre]	1.80	A_U (acre)	0.000
A_{total} [acre]	1.89	A_I [%]	5%	A_P [%]	95%	A_U [%]	0%
Q_{PM} [cfs]	**0.06**	V_M [ft^3]	**818**	V_M [ac-ft]	**0.02**		

85th Percentile 24-hour Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.05	0.159	0.0425	307	0.033	40	25
30	0.193	0.12	0.05	0.159	0.0307	307	0.033	48	18
30	0.193	0.12	0.05	0.159	0.0307	307	0.033	48	18

A_{site} [acre]	1.89	A_I [acre]	0.09	A_P [acre]	1.80	A_U (acre)	0.000
A_{total} [acre]	1.89	A_I [%]	5%	A_P [%]	95%	A_U [%]	0%
Q_{PM} [cfs]	**0.06**	V_M [ft^3]	**764**	V_M [ac-ft]	**0.02**		

Lot7 Skate Park - SUSMP Calculations

3/4" Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.28	0.3384	0.0904	307	0.033	27	12
27	0.203	0.12	0.28	0.3384	0.0687	307	0.033	32	5
30	0.193	0.12	0.28	0.3384	0.0653	307	0.033	32	2

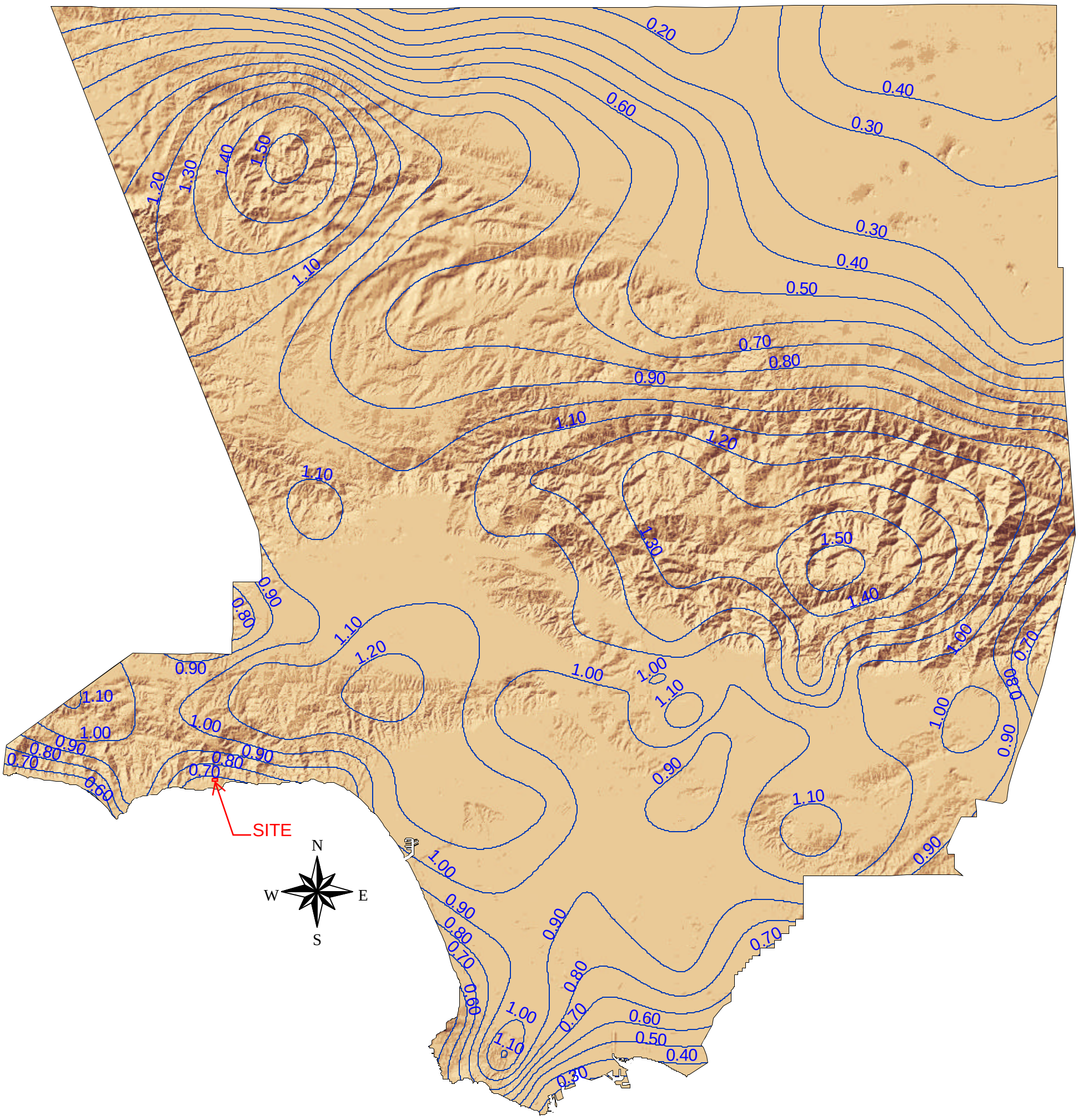
A_{site} [acre]	1.89	A_I [acre]	0.53	A_P [acre]	1.36	A_U (acre)	0.000
A_{total} [acre]	1.89	A_I [%]	28%	A_P [%]	72%	A_U [%]	0%
Q_{PM} [cfs]	**0.12**	V_M [ft^3]	**1,741**	V_M [ac-ft]	**0.04**		

85th Percentile 24-hour Rainfall

T_c [min]	I_X [in/hr]	C_u	% imp	C_D	C_d*I_X [in/hr]	Length [ft]	Slope [ft/ft]	T_c [min]	Difference [min]
15	0.267	0.12	0.28	0.3384	0.0904	307	0.033	27	12
27	0.203	0.12	0.28	0.3384	0.0687	307	0.033	32	5
30	0.193	0.12	0.28	0.3384	0.0653	307	0.033	32	2

A_{site} [acre]	1.89	A_I [acre]	0.53	A_P [acre]	1.36	A_U (acre)	0.000
A_{total} [acre]	1.89	A_I [%]	28%	A_P [%]	72%	A_U [%]	0%
Q_{PM} [cfs]	**0.12**	V_M [ft^3]	**1,625**	V_M [ac-ft]	**0.04**		

85th Percentile 24-hr Rainfall Isohyetal Map



7. *Alternatives to the Proposed Project*

7.1 INTRODUCTION

7.1.1 Purpose and Scope

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines Section 15126.6). This chapter identifies potential alternatives to the proposed project and evaluates them, as required by CEQA.

Key provisions of the CEQA Guidelines on alternatives are summarized to explain the foundation and legal requirements for the alternatives analysis in the EIR:

- "The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly" (15126.6(b)).



- "The specific alternative of 'no project' shall also be evaluated along with its impact" (15126.6(e)(1)).

- "The no project analysis shall discuss the existing conditions at the time the Notice of Preparation (NOP) is published, and at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives" (15126.6(e)(2)).

- "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project" (15126.6(f)).

- "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (15126.6(f)(1)).

- For alternative locations, "only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR" (15126.6(f)(2)(A)).

- "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative" (15126.6(f)(3)).

As noted in Section 8.0, a number of impacts relating to Aesthetics, Greenhouse Gas Emissions, Land Use, Noise, and Recreation were determined to have no impact or a less than significant impact without mitigation. All other potentially significant impact of the project can be mitigated to a less than significant level. ~~The significant unavoidable adverse impacts of the project are the following:~~

~~**Impact 5.11-1: The proposed project with baseball field option would result in a substantial increase in traffic in Opening Year 2017 and Future Year 2030 if the intersection of PCH and Malibu Canyon Road/Winter Mesa Road, which is operated and maintained by Caltrans, is not improved.**~~

~~Improvements to the intersection of Malibu Canyon Road/PCH outlined in Mitigation Measure 11-1 would reduce traffic impacts to a less than significant level. However, implementation of transportation improvements to Caltrans facilities is the primary responsibility of Caltrans. Any modifications to the operation of a roadway by the project applicant and/or a contractor would require the issuance of an encroachment permit by Caltrans, the responsible agency for the intersection of Malibu Canyon Road/PCH. There is the potential that significant impacts may not be fully mitigated if such improvements are not completed for reasons beyond the City's control (i.e., the City cannot undertake or require improvements within the control of Caltrans).~~

For each alternative, this analysis:

- Describes the alternative.
- Analyzes the impact of the alternative as compared to the proposed project.
- Identifies the impacts of the project that would be avoided or lessened by the alternative.
- Assesses whether the alternative would meet most of the basic project objectives.
- ~~Evaluates the comparative merits of the alternative and the project.~~

Per the CEQA Guidelines Section 15126.6(d), additional significant effects of the alternatives are discussed in less detail than the significant effects of the project as proposed.

7.1.2 Project Objectives

As described in Section 3.2, the following objectives have been established for the proposed project and will aid decision makers in their review of the project, the project alternatives, and associated environmental impacts: The following objectives have been established for the Crummer Site Subdivision project and will aid decision makers in their review of the project, associated environmental impacts, and alternatives:

- Contribute to the range of housing choices in the City of Malibu.
- Dedicate land sufficient for the City of Malibu to expand Bluffs Park and design a recreational facility that meets the community's needs for active recreation.
- Provide additional public parking for the Malibu Bluffs Park.
- Preserve view sheds, maximize open space, and maintain the area's rural character.
- Maintain residential privacy.

- Maximize separation of building areas from significant environmental resources.
- Preserve habitat connectivity and wildlife corridors.
- Develop a project consistent with codes, regulations, and consistent with the City's General Plan and Local Coastal Program.
- Preserve public bluewater ocean views.

- Provide an onsite wastewater treatment system that will treat wastewater from the proposed project development, addressing environmental concerns regarding wastewater discharges.

7.2 ALTERNATIVES CONSIDERED AND REJECTED DURING THE SCOPING/PROJECT PLANNING PROCESS

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. The EIR should briefly describe the rationale for selecting the alternatives to be discussed; identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process; and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: 1) failure to meet most of the basic project objectives; 2) infeasibility; or 3) inability to avoid significant environmental impacts (CEQA Guidelines Section 15126.6[c]). The following two alternatives, considered by both the lead agency and project applicant, were eliminated from consideration:



- Other Development Areas Alternative
- No Development/Existing Use Alternative

7.2.1 Other Development Areas Alternative

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. The key question and first step in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (Guidelines Sec. 15126.6(B)). In general, any development of the size and type proposed by the proposed project would have substantially similar impacts on air quality, land use/planning, noise, population/housing, public services, recreation, transportation/traffic and utilities/service systems.

The project site and the towing site immediately east of the project site are owned by the same entity. An EIR for the subdivision of this site and the construction of four homes has been approved. The towing site is therefore not available as a development area for the Crummer Site Subdivision project. The project applicant does not own any other sites within the jurisdiction of the City of Malibu that are considered feasible alternatives to the proposed project. Since the project applicant cannot reasonably acquire, control, or otherwise access any other sites, and since the analysis of other sites would be speculative without site-specific data, no other sites will be further considered.

7.2.2 No Project, No Development Alternative

This alternative assumes that the existing 24-acre site would remain unchanged. The project site would not be subdivided, no new housing or recreational facilities would be constructed, and no improvements would be made. The site would remain vacant, in its current form, and would not be developed for other uses, including the proposed project. The No Project, No Development Alternative would avoid or reduce impacts associated with air quality, biological resources, cultural resources, geology and soils, fire hazards, hydrology and water quality, and traffic and transportation. However, this alternative has been rejected because it would not attain any of the primary objectives of the proposed project. While it would preserve the rural character of site and bluewater views, it is not reasonable to assume that the project applicant would never develop this site, a valuable economic resource, and that it would remain in its current physical condition. Consequently, the No Project, No Development Alternative has been rejected from further analysis.

7.3 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are feasible and therefore merit in-depth consideration, and which are infeasible. With the exception of the mandatory No Project Alternative, the alternatives were selected due to their potential to attain basic project objectives and lessen or avoid potentially significant environmental effects resulting from implementation of the proposed project, even though the proposed project would not result in any significant and unavoidable environmental effects. The selection of alternatives may include those that would impede to some degree the attainment of the project objectives or would be more costly.

CEQA Guidelines require the analysis of a No Project Alternative. The No Project analysis must discuss the existing site conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and site zoning, and must be consistent with available infrastructure and community services. If the project is a development project on an identifiable property, the No Project Alternative is the circumstance under which the project does not proceed. Here, the discussion would compare the environmental effects of the property remaining in its existing state against the environmental effects that would occur if the project were approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this No Project consequence should be discussed. In certain instances, the No Project alternative would mean "no build," wherein the existing environmental setting would be maintained. However, where failure to proceed with the project would not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's nonapproval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment. In this EIR, the "no build" scenario is evaluated and rejected under the No Project, No Development Alternative in Section 7.2.2, and the predictable action of others is evaluated in the No Project, Foreseeable Development Alternative.

~~Two~~Four alternatives have been identified to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the proposed project but may avoid or substantially lessen any of the potentially significant effects of the project. These alternatives will be analyzed in detail.

- Two-Story Homes with Skate Park Only Alternative
- One-Story Homes with Recreational Facilities Alternative
- No Project, Foreseeable Development Alternative
- Reduced Project Alternative

In accordance with the CEQA Guidelines (Section 15126.6(d)), the EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. Discussion of the environmental effects of the alternatives may be less detailed than that of the impacts of the proposed project.

A summary of the alternatives to the proposed project is shown on Table 7-1. A complete discussion of each alternative, including those rejected, is provided below.

Table 7-1
Summary of Development Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
Proposed Project	• 5 single-family, two-story, residential units • Dedication of Lot 7 for active recreational uses (either skate park or baseball field) • New 94-stall parking lot for recreational uses • Local Coastal Program Amendment (LCPA) and Zoning Text Amendment to correct the inconsistency created between the LUP Policy and the zoning designation and incorporate the Planned Development Ordinance in the LCP and Malibu Municipal Code • 5 single-family residential units would generate 48 ADT, 4 AM and 5 PM weekday peak hour trips; 10.08 ADT and .93 Saturday peak hour • With the inclusion trips generated as a result of dedication of Lot 7 for active recreational uses (either skate park or baseball field) the site would ~~Would~~ generate 168 ADT, 4 AM and 65 PM weekday peak hour trips • Would generate 970 ADT and 97 Saturday peak hour • 24,511 cubic yards soil export; 11,658 cubic yards soil import [1]	
Project Alternatives		

[1] The proposed project requests two-story homes on Lots 1 through 6. However, as discussed in Section 3, *Project Description*, a conservative approach is taken and grading volume calculations are based upon 5 one-story homes because one-story homes would have larger building foot prints and require slightly more grading than two-story homes. Air Quality, Noise and construction traffic impacts are modeled upon the largest possible grading volumes, those of 5 one-story homes on Lots 1 through 6 and Skate Park on Lot 7.

Table 7-1
Summary of Development Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
1. Two-Story Homes with Skate Park Only Alternative	• 5 two-story residential units • Dedication of Lot 7 for active recreational uses (for skate park, not baseball field) • New 94-stall parking lot for recreational uses • Local Coastal Program Amendment (LCPA) and Zoning Text Amendment to correct the inconsistency created between the LUP Policy and the zoning designation and incorporate the Planned Development Ordinance in the LCP and Malibu Municipal Code • 5 single-family residential units would generate 48 ADT, 4 AM and 5 PM weekday peak hour trips; 10.08 ADT and .93 Saturday peak hour • With the inclusion trips generated as a result of dedication of Lot 7 for active recreational uses (skate park) the site would ~~Would~~ generate 78 ADT, 4 AM and 15 PM weekday peak hour trips; • ~~W~~ would generate 110 ADT and 25 Saturday peak hour • 24,511 cubic yards soil export; 11,658 cubic yards soil import	• Reduces the intensity of future recreation uses on Lot 7 to avoid significant traffic impacts • Reduces weekday PM peak hour tips by 77 percent and Saturday peak hour trips by 74 percent • May lessen some impacts • Meets some of the project objectives but not to the degree of the proposed project • Avoid significant traffic impacts in Opening Year 2017 and Future Year 2030
2. One-Story Homes with Skate Park or Baseball Field Alternative	• 5 single-family, one-story, residential units • Dedication of Lot 7 for active recreational uses (either skate park or baseball field) • New 94-stall parking lot for recreational uses • LCPA and Zoning Text Amendment to correct the inconsistency created between the LUP Policy and the zoning designation and incorporate the Planned Development Ordinance in the LCP and Malibu Municipal Code • 5 single-family residential units would generate 48 ADT, 4 AM and 5 PM weekday peak hour trips; 10.08 ADT and .93 Saturday peak hour trips. • With the inclusion trips generated as a result of dedication of Lot 7 for active recreational uses (either skate park or baseball field) the site would~~Would~~ generate up to 168 ADT, 4 AM and 65 PM weekday peak hour trips; • w~~W~~ould generate 970 ADT and 97 Saturday peak hour • 24,511 cubic yards soil export; 11, 658 cubic yards soil import	• Requested at EIR Scoping Meeting • May lessen some impacts • Meets some of the project objectives but not to the degree of the proposed project • Does not avoid significant environmental impacts • Avoids need for Site Plan Review Nos. 07-139 through 07-143 for construction over 18 feet in height on Lots 1 through 5.

Table 7-1
Summary of Development Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
3. No Project, Foreseeable Development Alternative	• 8 single-family, two-story homes on 2-acre lots • Dedication of Lot 7 for active recreational uses (baseball field and basketball court) • LCPA and Zoning Text Amendment to correct the inconsistency created between the LUP Policy and the zoning designation and incorporate the Planned Development Ordinance in the LCP and Malibu Municipal Code • New 100-stall parking lot for recreational uses • Would generate: 151 additional ADT on Saturday ; and 89 additional ADT weekdays (3 AM peak hour and 64 PM peak hour) • Would generate total 257 ADT, 7 AM, and 69 PM weekdays; and 1,121 ADT Saturday (15 peak hour) • Approximately 65,000 cubic yards of cut, 100,000 cubic yards of fill, and 35,000 cubic yards of import.	• No Project Alternative • Required by CEQA • May lessen some impacts • Does not avoid significant environmental impacts • Meets some of the project objectives but not to the degree of the proposed project
4. Reduced Project Alternative	• 5 single-family residential units • Dedication of Lot 7 for active recreational uses (either skate park or baseball field) • 5 single-family residential units would generate 48 ADT, 4 AM and 5 PM weekday peak hour trips; and 10.08 ADT and .93 Saturday peak hour trips. • With the inclusion trips generated as a result of dedication of Lot 7 for active recreational uses (future development of either skate park or baseball field) the site would generate up to 168 ADT, 4 AM and 65 PM weekday peak hour trips; would generate 970 ADT and 97 Saturday peak hour Compared to the Proposed Project: • Reduction of the square footage of each residence to comply with the maximum permitted under the City's development regulations (overall reduction of approximately 11 percent) • Reduction of the height of the residence on Lot 2 to no more than 18 feet • Reduction of the size of the second floor on two of the residences • Modifications to the landscaping plan	• Requested during Draft EIR public review period • May lessen some impacts

7.3.1 Two-Story Homes with Skate Park Only Alternative

This alternative is designed to eliminate the project's only significant and unavoidable impact. As discussed in Section 5.11, *Transportation and Traffic*, the proposed project is the development of 5 single-family homes with the dedication of

Lot 7. Although no recreational improvements would be permitted on Lot 7 as part of the applicant's current proposal, the land dedication is intended to expand Malibu Bluffs Park. Furthermore, the LCPA and corollary zoning text amendment being requested—including language that specifies the type, density and intensity of development permitted in the PD zoning designation—apply to all seven lots. Therefore development of reasonably foreseeable active recreational uses on Lot 7 was analyzed as part of the DEIR. Future development of the site with the proposed project (5 single-family homes) and Lot 7 with a baseball field ~~development option~~ would result in a substantial increase in traffic in Opening Year 2017 and Future Year 2030 if the intersection of PCH and Malibu Canyon Road/Winter Mesa Road, which is operated and maintained by Caltrans, is not improved. However, re-striping the existing southbound through plus left-turn lane on PCH to a through plus left- and right-turn lane does not require Caltrans approval because the restriping will occur on Malibu Canyon Road, and is within the City's public right-of-way. Furthermore, the City Public Works Department has determined that the preference is to keep the right turn overlap phase for the existing No. 2 Lane dedicated right-turn lane on PCH (status quo) because it will result in a higher level of service than modifying the existing traffic signal to remove the right turn overlap phase to a standard right-turn-on-red permissive phase. Therefore, the mitigation measures do not require approval from Caltrans.

~~Any modifications to the operation of a roadway by the project applicant and/or a contractor would require the issuance of an encroachment permit by Caltrans, the responsible agency for the intersection of Malibu Canyon Road/PCH. There is the potential that significant impacts may not be fully mitigated if such improvements are not completed for reasons beyond the City's control (i.e., the City cannot undertake or require improvements within the control of Caltrans).~~ The Two-Story Homes with Skate Park Only Alternative assumes that the project would be developed with 5 two-story homes and that future development of Lot 7 would be limited to ~~improved with~~ a skate park and new 94-stall parking lot. Lot 7 would not be developed with a baseball field to avoid significant traffic impacts (before implementation of mitigation measures).

This alternative would generate 78 ADT, 4 AM and 15 PM weekday peak hour trips and 110 ADT and 25 Saturday peak hour. Weekday and Saturday ADT would be reduced by 54 percent and 89 percent, respectively. Weekday PM peak hour trips would be reduced by 77 percent. Saturday midday peak hour trips would be reduced by 74 percent. The skate park would generate a parking demand of 10 vehicles, which is based on an assumption that up to 20 people would be using the skate park at any given time and that the average vehicle occupancy would be two-person per car.

The Two-Story Homes with Skate Park Only Alternative assumes that the construction schedule, grading volumes, and development footprints are the same as the proposed project.

Aesthetics

The residential structures, including height, bulk and mass, for the Two-Story Homes with Skate Park Only Alternative would be the same as the proposed project. .Like the proposed project, there would be no nighttime lighting of the skate park. The elimination of the baseball field under this alternative would not have any impact on the project's aesthetics. As with the proposed project, this alternative would not obstruct existing public scenic views or otherwise substantially impact scenic views or resources. The nearest parcel within the Malibu Knolls neighborhood is located approximately 2,000 feet away from the project site. While development of the project site under this alternative would be visible; the project would not block any primary views as defined in Malibu Municipal Code (M.M.C.) Section 17.40.040(A)17). A condominium development is located approximately 400 feet northeast of the project site on De Ville Way. Due to both the condominium development's and project site's existing topography, there are no ocean views and thus no primary views as defined by the M.M.C. Like the proposed project, some views of the skyline from the condominium development would be obscured under this alternative. However, sky views are not protected.

Therefore, impacts of this alternative, like the proposed project, would remain less than significant. As a result, this alternative would be environmentally equal to the proposed project with regard to aesthetics.

Air Quality

This Alternative would construct five single-story homes and donate Lot 7 for recreational purposes to be developed as a skate park. This would not result in more construction-related impacts related to hauling soil offsite. As with the proposed project, construction activities associated with the this alternative would generate short-term emissions in exceedance of SCAQMD's threshold criteria for NO_X and would therefore contribute to the ozone (O_3) and particulate matter (PM_{10} and $PM_{2.5}$) nonattainment designations of the SoCAB. Compared to the proposed project, there would not be any greater short-term construction related impacts. However, with mitigation, impacts would remain less than significant. This alternative would therefore be environmentally equal to the proposed project with regard to air quality impacts.

Biological Impacts

The building footprints and square footages would remain the same for each unit, as would the lot sizes. Fire fuel modification zones are measured from the edge of any combustible structure and would remain the same and thinning activities would not disturb additional native grasslands and special status species. This alternative would therefore be environmentally equal to the proposed project with regard to biological impacts.

Cultural

This alternative would involve the same amount of ground-disturbing activities, which would have a similar likelihood of impacting archaeological or paleontological resources compared to the proposed project. As a result, this alternative would be just as likely to disturb undiscovered cultural resources. Impacts are likely to remain less than significant, and the impacts of the Two-Story Homes with Skate Park Only Alternative would therefore be equal to those of the proposed project.

Geology and Soils

The proposed project's two-story homes would remain unchanged in this alternative. Development of a skate park rather than a baseball field does not impact the grading volumes or slope stability. The proposed project would require the same amount of grading and export as this alternative. The impacts for this alternative would be equal to the proposed project with regard to geology and soils.

Greenhouse Gas Emissions

This alternative, like the proposed project, would generate a nominal increase in greenhouse (GHG) emissions onsite and would not exceed the SCAQMD's proposed GHG screening threshold. Impacts would remain less than significant. Therefore, this alternative has no impact on GHG impacts.

Hazards and Hazardous Materials

The project site, and all of Malibu, is considered a Very High Fire Hazard Severity Zone (VHFHSZ) and has been impacted by wildfires in the past. This alternative would not change the building footprints or fuel modification zones. As with the proposed project, impacts related to fire hazards would remain less than significant with mitigation. The Two-Story Homes with Skate Park Only Alternative is therefore environmentally similar to the proposed project with regard to hazards and hazardous materials.

Hydrology and Water Quality

The construction and operation of the Two-Story Homes with Skate Park Only Alternative would be similar to the proposed project and therefor the impacts to hydrology and water quality would be the same. As with the proposed project, neither the construction nor the operation of the Two-Story Homes with Skate Park Only Alternative would result in a significant degradation of water quality, or in a violation of any water quality standards. Likewise, neither the construction nor the operation of this alternative would significantly reduce, degrade, or otherwise impact groundwater. Therefore, the hydrology and water quality impacts of this alternative would be similar to those of the proposed project.

Land Use

As noted, the property is specifically mentioned in both Malibu's Land Use Plan (LUP) and Local Implementation Plan (LIP). The LIP and its zoning maps designate the property as PD, which allows for a mix of residential and recreational uses. The project site is the only property designated PD in the Malibu General Pan and the Malibu LCP. The PD zone currently has no design standards. Therefore, a local coastal program amendment (LCPA) and corollary zoning text amendment would be required for the proposed project and for the Two-Story Homes with Skate Park Only Alternative —including language that specifies the type, density, and intensity of development permitted in the PD zoning designation The LIP provides that "the uses and structures permitted and conditionally permitted in the PD District shall be as indicated in the associated approved Planned Development." The definition of the PD District further provides that "in addition to the regulations contained in this Chapter, all uses in the PD District shall be subject to the applicable standards located in the Malibu LIP, unless indicated otherwise in the approved Planned Development." The LCP contemplated that the PD District could deviate from the Malibu Development Standards.

Neither proposed project nor the Two-Story Homes with Skate Park Only Alternative homes exceed the City's established limits on height allowed pursuant to site plan review, bulk, impervious area, and square footage. The two-story homes of this size are consistent with other residential developments throughout Malibu. Therefore, land use impacts would be similar to those associated with the proposed project.

Noise

This alternative would not extend the overall duration of construction activities and would not require more grading. Project-generated noise during the operations phase of the project would be from project-generated traffic (mobile-source noise) and onsite operations (stationary-source noise). This alternative would reduce traffic noise as compared to the five homes with baseball field development option because it reduces the number of weekday and Saturday peak hour trips. Typical noises from baseball games include general spectator cheering and noise from the game itself, which includes the calls of the umpires, activity on the base paths, and when the bat makes contact with the ball. Overall, though, the primary noise source for baseball games is from cheering/yelling spectators. This alternative would eliminate the baseball field as a use and therefore reduce operational noise impacts. Impacts related to noise for the Two-Story Homes with Skate Park Only Alternative are expected to remain less than significant. Consequently, this alternative would slightly reduce noise impacts compared to the proposed project.

Recreation

This alternative would have no impact on recreation facilities since no additional residential units would be constructed and no new population would be introduced to the area compared to the proposed project. As with the proposed project, this alternative would require contribution to park fees to fund future neighborhood parks and other recreational amenities. Overall, this alternative would not impact recreational resources.

Transportation and Traffic

This alternative would generate 78 ADT, 4 AM and 15 PM weekday peak hour trips and 110 ADT and 25 Saturday peak hour. Compared to the proposed project~~,~~ (5 single-family homes) plus Lot 7 developed with a ball field, ~~-~~weekday and Saturday ADT would be reduced by 54 percent and 89 percent, respectively. Weekday PM peak hour trips would be reduced by 77 percent. Saturday midday peak hour trips would be reduced by 74 percent. The skate park would generate a parking demand of 10 vehicles, which is based on an assumption that up to 20 people would be using the skate park at any given time and that the average vehicle occupancy would be two-persons per car.

As discussed in Section 5.11, *Transportation and Traffic*, the five homes with Lot 7 developed as a skate park in the future development option does not result in any significant traffic impacts or parking demand. Based on the Opening Year 2017 plus Project and Future year 2030 LOS analyses and the City's significance criteria the proposed project would not create a significant impact at Malibu Canyon Road/PCH. However, the five homes with Lot 7 developed as a baseball filed in the future~~Those~~ would create impacts, ~~and~~ including ~~any~~ parking demand impacts, as a result ~~from the~~of heavy use of the ~~proposed~~ baseball field. ~~While proposed~~Proposed mitigation to restripe Malibu Canyon Road is within the City's public right-of-way. Mitigation ~~improve the intersection of Malibu Canyon Road/PCH~~ is feasible and would reduce traffic impacts to less than significant. ~~, the intersection is operated and maintained by Caltrans. Only Caltrans has jurisdiction over improvements to Caltrans facilities. If the traffic mitigation measure is not implemented by Caltrans, the project's impacts to the intersection of Malibu Canyon Road/PCH, would remain significant and unmitigated.~~ This alternative would eliminate the baseball field as a potential future use for Lot 7 and would develop Lot 7 with a skate park. Therefore this alternative would reduce ~~the project's only~~the significant ~~and unavoidable~~ impact associated with development of Lot 7 with a baseball field (pre-mitigation). This alternative would therefore be environmentally superior to the proposed project with future development of Lot 7 with a baseball field with regard to transportation and traffic.

Conclusion

Avoid or Substantially Lessen Project Impacts

Compared to the future development of dedicated Lot 7 with a ball field, ~~T~~this alternative would reduce cumulative traffic impacts. ~~the project's only significant and unavoidable impact.~~

Attainment of Project Objectives

This alternative would meet all of the project objectives.

Comparative Merits

This alternative would eliminate the significant ~~and unavoidable~~ traffic impact (pre-mitigation) if dedicated Lot 7 is developed with a baseball filed.~~-~~ It would also reduce parking demand impacts and operational noise impacts if dedicated Lot 7 is developed with a baseball filed. This alternative would be environmentally similar to the proposed project in the area of operational air quality, biological resources, cultural resources, greenhouse gas emissions, fire hazards, hydrology and water quality, land use, construction noise, and recreation.

7.3.2 One-Story Homes with Skate Park or Baseball Field Alternative

This alternative was requested at the public scoping meeting held for the project held on June 7, 2012. As discussed in Chapter 5.1, *Aesthetics*, the proposed project would not obstruct existing public scenic views or otherwise substantially impact scenic views or resources. Impacts would be less than significant without mitigation. However, the proposed residential buildings would appear very prominent when viewed from the low-lying portions of the City to the east. In

addition, when viewed from higher-elevation residential areas of Malibu Country Estates to north of the site, the proposed project would alter the horizon of the bluff, and would create buildings visible from these vantage points where no buildings currently exist. As requested by the public, the One-Story Homes Alternative analyzes the impact of developing all one-story homes instead of all two-story homes.

The One-Story Homes Alternative assumes that the project site is developed with five single-family, single-story homes and dedicated Lot 7 is developed with either a skate park or baseball field in the future. This alternative would reduce the maximum building height of the residential structures from 28 feet to 18 feet and eliminate the need for a Site Plan Review. The building square footages would remain approximately the same for each unit, as would the lot sizes. The two-story structures represent a more compact building zone, which would result in less building mass and allow for more landscaping and open area on each of the five lots. As a result, there would be a reduction of space between the homes when compared to the proposed project. The single-story alternative would almost double the building footprints for each of the five homes. This Alternative would require 24,511 cubic yards of soil export; 11,658 cubic yards of soil import. As discussed in Draft EIR Section 3.3.4, *Proposed Land Uses*, the proposed project requests two-story homes on Lots 1 through 5~~6~~. However, a conservative approach was taken and grading volume calculations were based upon 5 one-story homes because one-story homes would have larger building foot prints and require slightly more grading than two-story homes. Air Quality, Noise and construction traffic impacts were modeled upon the largest overall grading volumes, those of 5 one-story homes on Lots 1 through 5~~6~~ and Skate Park on Lot 7. As discussed, Air Quality, Noise, and construction traffic impacts are less than significant. The length of construction activities would be approximately 39 months, slightly longer than the 38-month estimate for the proposed project. In addition, construction phasing and duration is only an estimate and could exceed the 39-month assumption given current market conditions.

Aesthetics

Under this alternative, single-story homes of a similar square footage would be wider, but not as high. As a result, they would preserve more bluewater views for the surrounding community, including from the proposed Rancho Malibu hotel site adjacent and the higher-elevation residential areas of Malibu Country Estates to north of the site. View simulations comparing the visual impacts of this alternative's one-story homes to the proposed project's two-story homes are presented as Figures 7-1 to 7-14. Each figure contains two images. The first image simulates the mass and height of the one-story homes against the outline of the story poles for the two-story buildings. The second image presents the simulation of the two-story homes (as previously shown in Chapter 5.1, *Aesthetics*). An aerial image with plotted photograph locations ~~was previously~~ is provided as Figure ~~5.1-4~~7a, *Photo Location Map*.

Figures 7-1 to 7-3 show how the project site would appear from the site of the proposed Rancho Malibu hotel, adjacent to the project site. Figure 7-1 is a panorama view from the Rancho Malibu hotel site looking south to southeast across PCH to the project site. This is the proposed site of a gazebo and focal point for landscaping in the proposed Rancho Malibu hotel project. Figure 7-2 is a standard view from the Rancho Malibu hotel site (future casita/~~-~~secondary hotel building placement, 2nd floor) looking south across PCH to the project site. Figure 7-3 is another standard view from the Rancho Malibu site (future casita/ secondary hotel building placement, 2nd floor) looking southeast across PCH to the project site.

Figures 7-4 and 7-5 illustrate the proposed project as viewed from higher elevation residential areas (Malibu Country Estates). Figures 7-6 to 7-9 illustrate the proposed project from areas east of the site. Figure 7-6 is a standard view from PCH and Cross Creek Road looking west toward the project site. This view also approximates the view from an automobile moving along or across PCH. Figure 7-7 is a standard view from the beach looking west toward the project

site and approximates the view one would have walking west along the beach. Figure 7-8 is a standard view from Malibu Legacy Park looking west toward the project site.

Figure7-9 is a view from PCH and Webb Way looking west toward the project site, and it approximates the view from an automobile moving along or across PCH.

Figure 7-10 is a panorama view from Malibu Canyon Road looking south toward the project site. This view also approximates the view from an automobile traveling toward the ocean on Malibu Canyon Road.

Figures 7-11 and 7-12 illustrate the proposed project from areas south of the site. Figure 7-11 is a standard view from Malibu Road looking northeast toward the project site. Figure 7-12 is a standard view from Bluffs Park (Santa Monica Mountains Conservancy) looking east toward the project site. Finally, Figure 7-14 is a panorama view from an adjacent baseball outfield looking east toward the project site and approximates the view one would have standing in center field of the existing baseball field at Bluffs Park.

As discussed in Chapter 5.1, *Aesthetics*, the proposed project would alter the horizon/skyline of the bluff and create buildings visible from various vantage points where no buildings currently exist. However, as shown in Figures 7-4 to 7-14, due to the distance of the project site from all public and most private views, there is little discernible difference between the amount of ocean obscured by the One-Story Alternative and the two-story homes of the proposed project. Compared to the proposed project, the One-Story Alternative would not significantly preserve a noticeable portion of the ocean view and would not otherwise significantly improve the view from the residential areas, Legacy Park, Malibu Canyon Road, or the beach. As shown in Figures 7-6 and 7-9, the views of the project site from PCH are slightly improved with this alternative, but any development on the bluff would be prominent because of the project site's topography. The only views that would be noticeably improved by this alternative are those from the Rancho Malibu Hotel site, as shown in Figures 7-1 to 7-3. Here, the One-Story Alternative would preserve more private bluewater views than the proposed project.

The Malibu Knolls neighborhood is more than 1,000 feet away and the proposed project, while visible, would not block any primary views of the ocean. A condominium development is located approximately 160 feet northeast of the project site. Due to both the condominium development's and project site's existing topography, there are no ocean views and thus no primary views as defined by the Malibu Municipal Code (M.M.C.) Section 17.40.040(A)(17). Some views of the skyline from the condominium development would be obscured by the proposed project. The One-Story Alternative would preserve more skyline compared to the proposed project. However, sky views are not protected. Therefore, as with the proposed project, impacts of the One-Story would remain less than significant.

As with the proposed project, this alternative would not obstruct existing public scenic views or otherwise substantially impact scenic views or resources. As a result, this alternative would be environmentally equal to or of slightly less impact than the proposed project with regard to aesthetic impacts.

Air Quality

The One-Story Alternative would construct five single-story homes and donate Lot 7 for recreational purposes. This would result in additional grading and more construction-related impacts related to hauling soil offsite. The proposed project requests two-story homes on Lots 1 through 6. However, as discussed in Draft EIR Section 3.3.4, *Proposed Land Uses*, a conservative approach was taken and the project's impacts are based upon five single-story homes. As with the proposed project, construction activities associated with the One-Story Alternative would generate short-term emissions in exceedance of SCAQMD's threshold criteria for NO_X and would therefore contribute to the ozone (O_3) and particulate matter (PM_{10} and $PM_{2.5}$) nonattainment designations of the SoCAB. Compared to the proposed two-

story homes project, there would be greater short-term construction related impacts due to slightly higher grading volumes. However, with mitigation, impacts would remain less than significant. This alternative would therefore be environmentally equal to or of slightly more impact than the proposed project with regard to air quality impacts.

Biological Impacts

The building square footages would remain approximately the same for each unit, as would the lot sizes. The two-story structures represent a more compact building zone, which would result in less building mass and allow for more landscaping and open area on each of the five lots. As a result, there would be a reduction of space between the homes and between building areas and significant environmental resources. Fire fuel modification zones are measured from the edge of any combustible structure. Due to denser development, landscaping, and other improvements, the fuel modification zones may be extended, and thinning activities could disturb additional native grasslands As discussed in Draft EIR Section 3.3.4, *Proposed Land Uses*, the proposed project requests two-story homes on Lots 1 through 6. However, as discussed in Section 5.3, *Biological Resources*, a conservative approach was taken and the project's impacts are based upon five single-story homes. This alternative would therefore be environmentally similar to the proposed project with regard to biological impacts disclosed.

Cultural

This alternative would involve ground-disturbing activities throughout more of the site, which would have a greater likelihood of impacting archaeological or paleontological resources than the proposed project. As a result, this alternative would be slightly more likely to disturb undiscovered cultural resources. Impacts are likely to remain less than significant, and the impacts of the One-Story Alternative would therefore be equal to those of the proposed project.

Geology and Soils

The proposed project's two-story homes have a smaller footprint than the one-story homes. As a result, the proposed project would require less grading and export. Although the homes for this alternative would still be on the flattest areas of the property, the property is not flat. Smaller footprints would in turn reduce the need for retaining walls, grading, and similar landform alteration. Larger footprints would encompass areas with more natural grade changes, increasing the need for retaining walls. As discussed previously, impacts were modeled upon the largest overall grading volumes, those of 5 one-story homes on Lots 1 through 6 and Skate Park on Lot 7. Those impacts were found to be less than significant. With larger building footprints and more grading required, the impacts for the One-Story Alternative would be slightly greater than the proposed project with regard to geology and soils. Although this alternative would result in additional grading volumes and larger building footprints than the proposed project, impacts would remain less than significant.

Greenhouse Gas Emissions

This alternative, like the proposed project, would generate a nominal increase in greenhouse (GHG) emissions onsite and would not exceed the SCAQMD's proposed GHG screening threshold. Impacts would remain less than significant. Therefore, this alternative has no impact on GHG impacts.

Hazards and Hazardous Materials

The project site, and all of Malibu, is considered a Very High Fire Hazard Severity Zone (VHFHSZ) and has been impacted by wildfires in the past. This alternative would create larger building footprints, and fuel modification zones are measured from the edge of any combustible structure. Therefore, the larger structures and building footprints would require additional room for fuel modification. However, as with the proposed project, impacts related to fire

hazards would remain less than significant with mitigation. The One-Story Alternative is therefore environmentally similar to the proposed project with regard to hazards and hazardous materials.

Hydrology and Water Quality

This alternative would create larger building footprints. The larger structures and building footprints would create more impervious areas. By comparison, the proposed project would minimize the amount of new impervious areas, which in turn would reduce sheet flow runoff while providing larger open space areas for infiltration and allowing for greater flexibility in treating runoff. As a result, reduced sheet flow runoff would be easier to control, direct and detain, thereby reducing runoff from the property. As with the proposed project, new infrastructure, such as curbs, gutters, and drains, would minimize runoff.

The construction and operation of the One-Story Alternative would be similar to the proposed project and therefore the impacts to hydrology and water quality would be the same. As with the proposed project, neither the construction nor the operation of the One-Story Alternative would result in a significant degradation of water quality, or in a violation of any water quality standards. Likewise, neither the construction nor the operation of this alternative would significantly reduce, degrade, or otherwise impact groundwater.

Therefore, the hydrology and water quality impacts of this alternative would be similar to those of the proposed project.

Land Use

As noted, the property is specifically mentioned in both Malibu's Land Use Plan (LUP) and Local Implementation Plan (LIP). The LIP and its zoning maps designate the property as PD, which allows for a mix of residential and recreational uses. The project site is the only property designated PD in the Malibu General Pan and the Malibu LCP. The PD zone currently has no design standards. Therefore, a local coastal program amendment (LCPA) and corollary zoning text amendment would be required for the proposed project and for the No Project, Foreseeable Development Alternative—including language that specifies the type, density, and intensity of development permitted in the PD zoning designation The LIP provides that "the uses and structures permitted and conditionally permitted in the PD District shall be as indicated in the associated approved Planned Development." The definition of the PD District further provides that "in addition to the regulations contained in this Chapter, all uses in the PD District shall be subject to the applicable standards located in the Malibu LIP, unless indicated otherwise in the approved Planned Development." The LCP contemplated that the PD District could deviate from the Malibu Development Standards.

Neither proposed project nor the One-Story Alternative homes exceed the City's established limits on height allowed pursuant to site plan review, bulk, impervious area, and square footage. The two-story homes of this size are consistent with other developments in the vicinity of the property. Therefore, land use impacts would be similar to those associated with the proposed project.

Noise

This alternative may extend the overall duration of construction activities by one month and would require more grading. During the operational phase, this alternative would be equal to the proposed project. Consequently, this alternative may slightly increase construction-related noise impacts compared to the proposed project. However, based on the project's conservative analysis, impacts related to noise for the One-Story Alternative are expected to remain less than significant.

Recreation

This alternative would have no impact on recreation facilities since no additional residential units would be constructed and no new population would be introduced to the area compared to the proposed project. As with the proposed project, this alternative would require contribution to park fees to fund future neighborhood parks and other recreational amenities. Overall, this alternative would not impact recreational resources.

Transportation and Traffic

This alternative would have no impact on transportation or traffic since no additional residential units would be constructed and no new population would be introduced to the area compared to the proposed project. This alternative would therefore be environmentally similar to the proposed project (5 two-story single-family homes) and Lot 7 developed with active recreational uses in the future with regard to transportation and traffic.

Conclusion

Avoid or Substantially Lessen Project Impacts

Although not significant, this alternative would reduce aesthetic impacts.

Attainment of Project Objectives

While the alternative would meet many of the project objectives, it would not meet the following project objective to the same extent as the proposed project:

- Maximize separation of building areas from significant environmental resources.

Comparative Merits

This alternative would slightly increase impacts in a variety of environmental categories, including construction air quality, geotechnical, and construction noise. However, these impacts would remain less than significant. The increased fuel modification zones have the potential to cause a new significant impact. This alternative would be environmentally similar to the proposed project (5 two-story single-family homes) and Lot 7 developed with active recreational uses in the future in the area of operational air quality, biological resources, cultural resources, greenhouse gas emissions, fire hazards, hydrology and water quality, land use, operational noise, recreation, and traffic.

7.3.3 No Project, Foreseeable Development Alternative

This alternative is required by CEQA. Pursuant to CEQA Guidelines section 15126.6(e)(2), this alternative describes what would reasonably be expected to occur in the foreseeable future if the proposed project were not approved, based on current land use plans and consistent with available infrastructure and community services. This alternative assumes the project site will be developed pursuant to the Malibu General Plan, which designates the project site Planned Development (PD) and the City of Malibu Local Coastal Program (LCP). The Malibu Municipal Code Zoning Map and the LCP Land Use Zoning Map designate the project site as PD. The project site is the only property designated PD in the Malibu General Pan and the Malibu LCP. The LCP PD zoning designation "is intended to provide for a mix of residential and recreational development of the Crummer Trust property [proposed project site] located east of Malibu Bluffs State Park and south of Pacific Coast Highway…. Any planned development in such commercial areas would require an amendment to the Malibu LCP in order to specify the permitted type, density, and intensity of development."

This alternative assumes that the project site would be fully developed based on a site plan previously considered under a development agreement by the City and by the California Coastal Commission at the time of the Malibu LCP was being developed. Therefore, it is a reasonable foreseeable alternative that a subsequent developer may apply for similar development which includes eight homes and recreational facilities. As shown on Figure 7-15, *No Project, Foreseeable Development Alternative Site Plan,* the alternative would consist of eight single-family homes, each on a minimum two-acre lot. The western portion of the project site would be developed with a basketball court, a baseball field, and a 100-space parking lot for the recreational facilities. The site, under this alternative, would be graded to minimize impact to current landform on the relatively flat portions of the site. Therefore, earth would need to be imported to fill the canyons. It is assumed that approximately 65,000 cubic yards of cut, 100,000 cubic yards of fill, and 35,000 cubic yards of import would be required. The length of construction activities would be approximately 44 months, longer than the 38-month estimate for the proposed project. In addition, construction phasing and duration is only an estimate and could exceed the 44-month assumption given current market conditions.

Aesthetics

This alternative would result in the construction of eight residences on the site, including three along the prominent western bluff of the site. It would result in a denser development, similar to development along the southern side of Malibu Road, which is out of character with residential developments visible from PCH. The proposed project would result in a less dense development and would place only two structures on the western bluff. This alternative would be environmentally inferior to the proposed project with regard to aesthetics.

Air Quality

The No Project, Foreseeable Development Alternative would construct eight homes instead of five. This would result in more construction-related impacts. For the operational phase, three additional single-family homes and a basketball court would result in an additional 89 (3 AM and 64 PM peak hour) trips per day compared to the proposed project. In addition, the alternative would result in 151 daily trips on Saturday, with 15 peak hour trips. Consequently, mobile source emissions and stationary source emissions would be increased in comparison to the proposed project. This alternative would require more grading and soil import. Consequently, it would result in more soil haul trips. As with the proposed project, construction activities associated with the No Project, Foreseeable Development Alternative would generate short-term emissions in exceedance of SCAQMD's threshold criteria for NO_X and would therefore contribute to the ozone (O_3) and particulate matter (PM_{10} and $PM_{2.5}$) nonattainment designations of the South Coast Air Basin (SoCAB). There would also be more operational air quality impacts because of the additional residents and cars. Compared to the proposed project, there would be greater impacts but they would remain less than significant.

Biological Impacts

This alternative would cluster six out of eight homes on the eastern portion of the site. The proposed project would result in similar biological impacts along the eastern site boundary. However, the creation of Lots 1 and 2 (see Figure 7-15) would require additional disturbance along the southern, western, and northern slopes of the project site. Compared to the proposed project, this alternative would reduce separation between building areas and significant environmental resources. Due to denser development, the creation of more building pads, landscaping, and other improvements, the fuel modification zones would be extended, and thinning activities could disturb additional native grasslands and would move the development footprint closer to the plant community located within the Environmentally Sensitive Habitat Areas (ESHA) to the southwest. In addition, this alternative would build a road over the drainage channels which remain largely undisturbed with the proposed project. This alternative would therefore be environmentally inferior to the proposed project with regard to biological impacts.

Cultural

This alternative would involve ground-disturbing activities throughout more of the site, which would have a greater likelihood of impacting archaeological or paleontological resources than the proposed project. The creation of Lots 1 and 2 would require additional cut and fill to stabilize the slope along the southwestern project boundary. As a result, this alternative would be more likely to disturb undiscovered cultural resources. Impacts are likely to remain less than significant, and the No Project, Foreseeable Development Alternative would therefore be equal to, or slightly inferior to the proposed project with regard to cultural resources.

Geology and Soils

The No Project, Foreseeable Development Alternative would create more recreational facilities (basketball court) and three additional residences compared to the proposed project. With additional uses, this alternative would require more cut and fill to address the steep slopes, as well as more mitigation to ensure that the slopes are stable, particularly for Lots 1 and 2. The site, under this alternative, would be graded to minimize impact to current landform on the relatively flat portions of the site. Therefore, earth would need to be imported to fill the canyons. Even with mitigation, this alternative would result in additional grading volumes and a larger footprint than the proposed project. This alternative would also require the installation of a wastewater treatment system capable of treating a greater amount of wastewater. This would result in a greater potential impact to site soils. With a larger footprint, this alternative would be environmentally inferior to the proposed project with regard to geology and soils.

Greenhouse Gas Emissions

This alternative, like the proposed project, would generate a nominal increase in GHG emissions onsite and would not exceed the South Coast Air Quality Management District's (SCAQMD) proposed GHG screening threshold. The three additional homes would result in increased operational GHG impacts. However, impacts would remain less than significant. Therefore, this alternative has no impact on GHG impacts.

Hazards and Hazardous Materials

This alternative would create eight residences at the project site, a baseball field and a basketball court. This alternative would therefore result in a more intense use of the project site and would increase the number of occupants and users of the site. The project site, and all of Malibu, is considered a Very High Fire Hazard Severity Zone (VHFHSZ) and has been impacted by wildfires in the past. This alternative would expose a greater number of people to wildfire hazards than would the proposed project. In addition, the larger footprint would require additional room for fuel modification. This alternative is therefore environmentally inferior to the proposed project with regard to hazards and hazardous materials.

Hydrology and Water Quality

This alternative would create eight residences at the project site, as well as a basketball court. As a result, this alternative would create a greater amount of impermeable surfaces than the proposed project. By comparison, the proposed project would minimize the amount of new impervious areas, which would reduce sheet flow runoff, provide larger open space areas for infiltration, and allow for greater flexibility in treating runoff. As a result, reduced sheet flow runoff would be easier to control, direct and detain, thereby reducing runoff from the property. As with the proposed project, new infrastructure, such as curbs, gutters, and drains, would minimize runoff. This alternative would require the installation of a wastewater treatment system capable of treating a greater amount of wastewater. As a result, this alternative has a greater potential to result in water quality impacts. This alternative would therefore be environmentally inferior to the proposed project with regard to hydrology and water quality.

Land Use

As noted, the property is specifically mentioned in both Malibu's Land Use Plan (LUP) and Local Implementation Plan (LIP). The LIP and its zoning maps designate the Property as PD, which allows for a mix of residential and recreational uses. The project site is the only property designated PD in the Malibu General Pan and the Malibu LCP. The PD zone currently has no design standards. Therefore, a local coastal program amendment (LCPA) and corollary zoning text amendment would be required for the proposed project and for the No Project, Foreseeable Development Alternative—including language that specifies the type, density, and intensity of development permitted in the PD zoning designation. The LIP provides that "the uses and structures permitted and conditionally permitted in the PD District shall be as indicated in the associated approved Planned Development." The definition of the PD District further provides that "in addition to the regulations contained in this Chapter, all uses in the PD District shall be subject to the applicable standards located in the Malibu LIP, unless indicated otherwise in the approved Planned Development." The LCP contemplated that the PD District could deviate from the Malibu Development Standards. Therefore, land use impacts would be equal to those associated with the proposed project.

Noise

This alternative would extend the overall duration of construction activities because it would require more grading. While construction noise impacts could be slightly extended, impacts related to noise are expected to remain less than significant. During the operational phase, this alternative would result in 89 additional trips compared to the proposed project. Consequently, this alternative would slightly increase mobile and stationary source impacts compared to the proposed project.

Recreation

This alternative would construct three additional residential units and introduce new population to the area compared to the proposed project. As with the proposed project, this alternative would require contribution to park fees to fund future neighborhood parks and other recreational amenities. Overall, this alternative would not impact recreational resources.

Transportation and Traffic

This alternative would create a greater number of residences and recreational facilities than the proposed project (5 two-story single-family homes) and Lot 7 developed with active recreational uses in the future. Eight single-family homes would result in 29 additional daily weekday vehicle (3 AM peak hour and 4 PM peak hour) and 31 additional Saturday peak hour trips compared to the proposed project. The addition of a basketball court would result in 12 trips per game (one trip per player). Assuming five games per day on weekdays and ten on Saturdays, that could result in 60 daily weekday and 120 Saturday peak hour trips. This alternative would result in a total of 151 additional trips in the Saturday peak hour and 89 additional weekday trips (3 AM peak hour and 64 PM peak hour) compared to the proposed project. It would therefore result in a greater generation of traffic trips to and from the site than the proposed project during weekdays and weekends.

Based on the Future Year 2030 plus Project LOS analysis for the proposed project and the significance criteria of the City, the proposed project ~~with~~ and dedicated Lot 7 developed as a baseball field in the future option would create a significant impact at Malibu Canyon Road/PCH because this intersection is forecast to continue to operate at LOS E (0.973 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F). With mitigation, this impact is less than significant. The No Project, Foreseeable Development Alternative would contribute to this cumulative impact with the addition of 89 weekday and 120 Saturday peak hour

trips. This alternative would increase cumulative operational traffic compared to the proposed project. The alternative may result in a new significant cumulative impact.

Up to 250 people use the existing Malibu Bluffs Park at any given time, which results in a parking demand of 125 vehicles. With the proposed project (with baseball field), a peak demand of 217 spaces could occur under maximum usage of the Malibu Bluffs Park and the new (third) baseball field (125 existing demand plus 92 new demand during overlapping games on Saturday). This would result in an overall park parking shortfall of 42 spaces (217 spaces minus 175 spaces). The impacts would not be particularly problematic on weekdays when Malibu Bluffs Park operates at typical conditions, because the deficiency of 42 parking spaces would have a short duration and could be accommodated at other locations within the park. The increase in parking demand associated with the baseball field would, however, aggravate a situation that is already impacted during special events at the park and during times of peak park utilization. Likewise, this alternative's addition of a basketball court and baseball field would increase the parking demand and exacerbate the impacted parking situation. The alternative may result in a new significant parking impact. This alternative would therefore be environmentally inferior with regard to transportation and traffic.

Conclusion

Avoid or Substantially Lessen Project Impacts

This alternative would not lessen any of the environmental effects of the proposed project.

Attainment of Project Objectives

While the project would meet many of the project objectives, it would not meet the following project objectives:

- Preserve view sheds, maximize open space, and maintain the area's rural character.
- Maintain residential privacy.
- Maximize separation of building areas from significant environmental resources.
- Preserve public bluewater ocean views.

Comparative Merits

This alternative would increase all impacts compared to the proposed project (5 two-story single-family homes) and Lot 7 developed with active recreational uses in the future, with the exception of land use and recreational impacts, which remain equal. This alternative would not lessen any of the environmental effects of the proposed project, and it could potentially lead to new significant traffic impacts. During the operational phase, this alternative is forecast to generate 89 more daily trips than the proposed project on a weekday and 151 daily trips on a weekend. As a result, air pollutant emissions (criteria and GHG emissions) and traffic generated by this alternative would be greater, compared to the proposed project. It would not reduce impacts to noise, and would in fact increase operational noise impacts associated with peak weekend noise levels. This alternative would be less compatible with the surrounding neighborhood. This alternative would achieve some of the objectives established for the project, but not to the same extent at the proposed project.

7.3.4 Reduced Project Alternative

This alternative was requested during the public review period for the Draft EIR. As discussed in Chapter 5.1, *Aesthetics*, the proposed project would not obstruct existing public scenic views or otherwise substantially impact scenic views or resources. Impacts would be less than significant without mitigation. However, the proposed residential buildings would appear very prominent when viewed from the low-lying portions of the City to the east. In addition,

when viewed from higher-elevation residential areas of Malibu Country Estates to the north of the site, the proposed project would alter the horizon of the bluff, and would create buildings visible from these vantage points where no buildings currently exist. As requested by the public, the Reduced Project Alternative analyzes the impact of the proposed project when targeted reductions in height, massing, and visual bulk are applied to the five proposed homes.

The Reduced Project Alternative assumes that the project site is developed with five single-family homes and a skate park or baseball field. This alternative would reduce overall floor area of the proposed homes by approximately 11 percent. This reduction would be accomplished by the following modifications to homes on Lots 1–5:

- Lot 1: Reduction of the square footage on the second floor from 3,344 square feet to 1,619 square feet and the total square footage of the residence from 11,081 square feet to 10,052 square feet
- Lot 2: Reduction of the height of the entire residence not to exceed 18 feet and the square footage of the home from 11,068 square feet to 9,642 square feet
- Lot 3: Reduction of the square footage of the residence from 11,009 square feet to 8,999 square feet
- Lot 4: Reduction of the square footage on the second floor from 3,409 square feet to 3,152 square feet and the total square footage of the residence from 11,157 square feet to 9,536 square feet
- Lot 5: Relocation of the pool cabana from the western side of the pool to the eastern side; relocation of the residence further north and approximately 6 ½ feet to the east; and a 4 feet, 4 inch reduction of the height of approximately 26 linear feet of roof on the southwestern portion of the house by changing the roof from flat to pitched

This alternative also involves modifications to the proposed landscape plan, as follows:

Common Area:

- Seven (7) Heteromeles arbutifolia trees were removed from both the north and south sides of the street between the gatehouse and the driveway of Lot 5 to create view corridors from Rancho Malibu.
- Three (3) trees were removed from both the north and south sides of the street to the west of the driveways to Lots 1 and 4 to open a larger view corridor from Rancho Malibu.

Lot 1:

- Replaced four (4) Sambucus Mexicana with 5 Arbutus marinas on the north side of driveway.
- Added seven (7) Arbutus marinas along the northern property line to be consistent with the change in location of the house and new footprint.
- Relocated three (3) Chitalpa tashkentensis to the west of the house to be consistent with the change in location of the house and new footprint.
- Removed palms in front of the house.
- Removed two (2) Brahea armata Palms, one (1) Arbutus unedo, and two (2) Chamerops humilis Palms in the rear yard and along south side of the house to coordinate with changes in the location of the house and new footprint.

Lot 2:

- Four (4) Cupressus macrocarpa on east side of house were replaced with Quercus agrifolia, and locations adjusted. One (1) Quercus agrifolia removed from the north side of the house and replaced with two (2) Cupressus macrocarpa.

- Removed eight (8) Cycas revoluta and adjusted locations of six (6) Arbutus unedo trees to coordinate with changes in the location of the house and new footprint.

Lot 3:

- Adjusted trees around updated entry water feature in site plan as a result of removal of the guest house.

Lot 4:

- Removed five (5) Olea europa trees along entry drive to widen the view corridor from Rancho Malibu property.
- Removed two (2) Taxodium mucronatum and adjusted the location of a third on the east side of the house. This adjustment aligns with the removed street trees and Olea eurpoa to create a continuous view corridor down the draw to the ocean.
- Adjusted the location of the remaining Olea europas along the driveway to better screen the house.
- Added two (2) Arbutus marina in front of the house to be consistent with the change in location of the house and new footprint of the house and new footprint.
- Adjusted location of various trees on the east side of the house to coordinate with the revised architecture.

Lot 5:

- Added one (1) Erythrina caffra and adjusted the location of another on the west side of the house to be consistent with the change in location of the house and new footprint.
- Relocated Stenocarpus sinuatus trees on west side of the house to coordinate with changes in the location of the house and revised architecture.
- Adjusted location of Quercus agrifolia to west of the house in area between Bluffs Park ball field and driveway to coordinate with changes in the location of the house and revised architecture.
- Removed four (4) Heteromeles arbutifolia along the south side of the driveway to open views to the ocean.

These modifications were designed with the intention of reducing impacts of the proposed project on visual resources.

This alternative would require slightly less, but generally a similar amount of, soil export and import. As discussed in Draft EIR Section 3.3.4, *Proposed Land Uses*, the proposed project entails two-story homes on Lots 1 through 5. As discussed, air quality, noise, and construction traffic impacts for the proposed project are less than significant. These impacts would remain less than significant under the Reduced Project Alternative. The length of construction activities would be similar to that under the proposed project. However, construction phasing and duration is only an estimate and could exceed the 39-month assumption given current market conditions.

Aesthetics

Under this alternative, the five homes proposed under the proposed project would be reduced in size and bulk. By reducing the heights, floor areas and massing at portions of the homes that substantially contribute to their impact on bluewater views, the Reduced Project Alternative attempts to lessen the aesthetic impacts of the project. In addition, this alternative includes a modified landscaping scheme that reduces the visual bulk of the overall project site when it is viewed from afar. As a result, this alternative would preserve more bluewater views for the surrounding community, including from the proposed Rancho Malibu hotel site adjacent and the higher-elevation residential areas of Malibu Country Estates to north of the site. View simulations comparing the visual impacts of this alternative's one-and two-story homes to the proposed project's larger all-two-story homes are presented as Figures 7-16 to 7-29. Each figure contains two images. The first image simulates the mass and height of the alternative's reduced-size homes while the

second image presents the simulation of the proposed project's 2-story homes. An aerial image with plotted photograph locations is provided as Figure 7a, *Photo Location Map*. Additional view simulations of this alternative (and the proposed project) are provided in Appendix A.

Figures 7-16 to 7-18 show how the project site would appear from the site of the proposed Rancho Malibu hotel, adjacent to the project site. Figure 7-16 is a panorama view from the Rancho Malibu hotel site looking south to southeast across PCH to the project site. This is the proposed site of a gazebo and focal point for landscaping in the proposed Rancho Malibu hotel project. Figure 7-17 is a standard view from the Rancho Malibu hotel site (future casita/secondary hotel building placement, 2nd floor) looking south across PCH to the project site. Figure 7-18 is another standard view from the Rancho Malibu site (future casita/secondary hotel building placement, 2nd floor) looking southeast across PCH to the project site.

Figures 7-19 and 7-20 illustrate the proposed project as viewed from higher elevation residential areas (Malibu Country Estates). Figures 7-21 to 7-23 illustrate the proposed project from areas east of the site. Figure 7-21 is a standard view from PCH and Cross Creek Road looking west toward the project site. This view also approximates the view from an automobile moving along or across PCH. Figure 7-22 is a standard view from the beach looking west toward the project site and approximates the view one would have walking west along the beach. Figure 7-23 is a standard view from Malibu Legacy Park looking west toward the project site.

Figure7-24 is a view from PCH and Webb Way looking west toward the project site, and it approximates the view from an automobile moving along or across PCH.

Figure 7-25 is a panorama view from Malibu Canyon Road looking south toward the project site. This view also approximates the view from an automobile traveling toward the ocean on Malibu Canyon Road.

Figures 7-27 and 7-28 illustrate the proposed project from areas south of the site. Figure 7-27 is a standard view from Malibu Road looking northeast toward the project site. Figure 7-28 is a standard view from Bluffs Park (Santa Monica Mountains Conservancy) looking east toward the project site. Finally, Figure 7-29 is a panorama view from an adjacent baseball outfield looking east toward the project site and approximates the view one would have standing in center field of the existing baseball field at Bluffs Park.

As discussed in Chapter 5.1, *Aesthetics*, the proposed project would alter the horizon/skyline of the bluff and create buildings visible from various vantage points where no buildings currently exist. However, as shown in Figures 7-15 to 7-29, due to the distance of the project site from all public and most private views, there is little discernible difference between the amount of ocean view obscured by the Reduced Project Alternative and the proposed project. Compared to the proposed project, the Reduced Project Alternative would not significantly preserve a noticeable portion of the ocean view and would not otherwise significantly improve the view from the Rancho Malibu hotel, residential areas, or Legacy Park. Views of the project site from PCH are slightly improved with this alternative, but any development on the bluff would be prominent because of the project site's topography. The only views that would be noticeably improved by this alternative are those from the beach, as shown in Figures 7-22.

The Malibu Knolls neighborhood is more than 1,000 feet away and the proposed project, while visible, would not block any primary views of the ocean. A condominium development is located approximately 160 feet northeast of the project site. Due to both the condominium development's and project site's existing topography, there are no ocean views and thus no "primary views" as that term is defined by Malibu Municipal Code (M.M.C.) Section 17.40.040(A)(17). Some views of the skyline from the condominium development would be obscured by the proposed project. The Reduced Project Alternative would preserve more skyline compared to the proposed project. However,

sky views are not protected. Therefore, as with the proposed project, impacts of this alternative would remain less than significant.

As with the proposed project, this alternative would not obstruct existing public scenic views or otherwise substantially impact scenic views or resources. As a result, this alternative would be slightly less impact than the proposed project with regard to aesthetic impacts.

Air Quality

The Reduced Project Alternative would construct five homes and donate Lot 7 for recreational purposes. Therefore, compared to the proposed project, this alternative would result in similar grading and construction-related impacts related to hauling soil offsite. The proposed project requests two-story homes on Lots 1 through 5. However, as discussed in Draft EIR Section 3.3.4, *Proposed Land Uses*, a conservative approach was taken and the project's impacts are based upon five single-story homes. As with the proposed project, construction activities associated with the Reduced Project Alternative would generate short-term emissions in exceedance of SCAQMD's threshold criteria for NO_X and would therefore contribute to the ozone (O_3) and particulate matter (PM_{10} and $PM_{2.5}$) nonattainment designations of the SoCAB. Compared to the proposed project, there would be slightly reduced short-term construction related impacts due to slightly reduced grading volumes. Impacts would remain less than significant with mitigation. This alternative would be environmentally equal to the proposed project with regard to air quality impacts.

Biological Impacts

Compared to the proposed project, the building square footages in this alternative would be reduced. The reduced size and bulk of homes in this alternative would represent a more compact building zone, which would result in less building mass and allow for more landscaping and open area on each of the five lots. As a result, there would be additional space between the homes/building areas and significant environmental resources. Fire fuel modification zones are measured from the edge of any combustible structure. Due to less dense development and reduced landscaping, the required fuel modification zones could be smaller, and thinning activities would disturb less native grasslands. Despite this slight reduction in potential impacts, this alternative would be environmentally similar to the proposed project with regard to biological impacts disclosed.

Cultural

This alternative would involve ground-disturbing activities throughout a slightly reduced portion of the site, which would have a reduced likelihood of impacting archaeological or paleontological resources than the proposed project. As a result, this alternative would be slightly less likely to disturb undiscovered cultural resources. Impacts are likely to remain less than significant, and the impacts of the Reduced Project Alternative would be similar to those of the proposed project.

Geology and Soils

The Reduced Project Alternative's homes have smaller footprints than those in the proposed project. As a result, this alternative would require less grading and soil export. Smaller footprints would reduce the need for retaining walls, grading, and similar landform alteration. As discussed previously, impacts for the proposed project were modeled upon the largest overall grading volumes, those of 5 one-story homes on Lots 1 through 5 and Skate Park on Lot 7. Those impacts were found to be less than significant. With reduced building footprints and slightly less grading required, geology and soils impacts for the Reduced Project Alternative would be slightly less than, but generally similar to, those of the proposed project. Impacts would remain less than significant.

Greenhouse Gas Emissions

This alternative, like the proposed project, would generate a nominal increase in greenhouse (GHG) emissions onsite and would not exceed the SCAQMD's proposed GHG screening threshold. Impacts would remain less than significant. Therefore, this alternative has no impact on GHG impacts.

Hazards and Hazardous Materials

The project site, and all of Malibu, is considered a Very High Fire Hazard Severity Zone (VHFHSZ) and has been impacted by wildfires in the past. This alternative would create smaller building footprints, and fuel modification zones are measured from the edge of any combustible structure. Therefore, the smaller structures and building footprints would require less room for fuel modification. As with the proposed project, impacts related to fire hazards would remain less than significant with mitigation. The Reduced Project Alternative is therefore environmentally similar to the proposed project with regard to hazards and hazardous materials.

Hydrology and Water Quality

This alternative would create smaller building footprints. The smaller structures and building footprints would create less impervious areas. Therefore, this alternative would reduce sheet flow runoff, provide larger open space areas for infiltration, and allow for greater flexibility in treating runoff. As a result, reduced sheet flow runoff would be easier to control, direct and detain, thereby reducing runoff from the property. As with the proposed project, new infrastructure, such as curbs, gutters, and drains, would minimize runoff.

The construction and operation of the Reduced Project Alternative would be similar to the proposed project and therefore the impacts to hydrology and water quality would be the same. As with the proposed project, neither the construction nor the operation of the Reduced Project Alternative would result in a significant degradation of water quality, or in a violation of any water quality standards. Likewise, neither the construction nor the operation of this alternative would significantly reduce, degrade, or otherwise impact groundwater.

Therefore, the hydrology and water quality impacts of this alternative would be similar to those of the proposed project.

Land Use

As noted, the property is specifically mentioned in both Malibu's Land Use Plan (LUP) and Local Implementation Plan (LIP). The LIP and its zoning maps designate the property as PD, which allows for a mix of residential and recreational uses. The project site is the only property designated PD in the Malibu General Pan and the Malibu LCP. The PD zone currently has no design standards. Therefore, a local coastal program amendment (LCPA) and corollary zoning text amendment would be required for both the proposed project and the Reduced Project Alternative—including language that specifies the type, density, and intensity of development permitted in the PD zoning designation. The LIP provides that "[t]he uses and structures permitted and conditionally permitted in the PD District shall be as indicated in the associated approved Planned Development." (Section 3.4(Q)(2)). The definition of the PD District further provides that "[i]n addition to the regulations contained in this Chapter, all uses in the PD District shall be subject to the applicable standards located in the Malibu LIP, unless indicated otherwise in the approved Planned Development." (Id. at (Q)(3)). The LCP contemplated that the PD District could deviate from the Malibu Development Standards.

Neither the proposed project nor the Reduced Project Alternative exceeds the City's established limits on height allowed pursuant to site plan review, bulk, impervious area, and square footage. In fact, the homes in this alternative would have less bulk, impervious area, and square footage than those in the proposed project. Homes of the size

proposed in this alternative are consistent with other developments in the vicinity of the property. Land use impacts would be similar to those associated with the proposed project.

Noise

This alternative would require slightly less grading than the proposed project. However, the overall duration of construction activities in the two scenarios would likely be similar. During the operational phase, this alternative would be equal to the proposed project. Consequently, this alternative may slightly reduce construction-related noise impacts compared to the proposed project; however, impacts related to noise for the Reduced Project Alternative are expected to remain less than significant.

Recreation

This alternative would have no additional impact on recreation facilities since no additional residential units would be constructed and no new population would be introduced to the area compared to the proposed project. As with the proposed project, this alternative would require contribution to park fees to fund future neighborhood parks and other recreational amenities. Overall, this alternative would not impact recreational resources.

Transportation and Traffic

This alternative would have no impact on transportation or traffic since no additional residential units would be constructed and no new population would be introduced to the area compared to the proposed project. This alternative would therefore be environmentally similar to the proposed project with regard to transportation and traffic.

Conclusion

Avoid or Substantially Lessen Project Impacts

Although not significant, this alternative would reduce aesthetic impacts.

Attainment of Project Objectives

Similar to the proposed project, this alternative would meet all the project objectives.

Comparative Merits

This alternative would slightly reduce impacts in a variety of environmental categories, including visual resources, construction air quality, biological resources, cultural resources, geotechnical, and construction noise. However, these impacts would be substantially similar to those under the proposed project and they would remain less than significant. This alternative would also be environmentally similar to the proposed project in the area of operational air quality, cultural resources, greenhouse gas emissions, fire hazards, hydrology and water quality, land use, operational noise, recreation, and traffic.

7.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires a lead agency to identify the "environmentally superior alternative," and in cases where the "No Project" Alternative is environmentally superior to the proposed project, the environmentally superior development alternative must be identified. One alternative has been identified as "environmentally superior" to the proposed project:

- Two-Story Homes with Skate Park Only Alternative

The Two-Story Homes with Skate Park Only Alternative has been identified as the environmentally superior alternative. This alternative would eliminate the project's only significant and unavoidable impact associated with traffic and transportation. The remaining impacts remain less than significant and are generally the same as the proposed project.

Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts (Guidelines Sec. 15126.6(c)).

Table 7-2 compares the levels of significance of the proposed project impacts with the impacts of the two project alternatives. Table 7-3 compares the proposed project's ability to meet the project objectives against the project alternatives. CEQA does not require the City to choose the environmentally superior alternative. Instead, CEQA requires the City to consider environmentally superior alternatives, explain the considerations that led it to conclude that those alternatives were infeasible from a policy standpoint, weigh those considerations against the environmental impacts of the proposed project, and make findings that the benefits of those considerations outweighed the harm.



Table 7-2
Summary of Impacts of Alternatives Compared to the Proposed Project

Topic	Proposed Project	One-Story Homes with Skate Park or Baseball Field Alternative	No Project, Foreseeable Development	Two-Story Homes with Skate Park Only Alternative	Reduced Project Alternative
Aesthetics	Less Than Significant	(=)/(–)	(+)	(=)	(–)
Air Quality					
Short-term	Less Than Significant with Mitigation	(=)/(+)	(+)	(=)	(=)
Long-term	Less Than Significant	(=)	(+)	(=)	(=)
7Biological Resources	Less Than Significant with Mitigation	(=)	(+)	(=)	(=)
Cultural Resources	Less Than Significant with Mitigation	(=)	(=)/(+)	(=)	(=)
Geology and Soils	Less Than Significant with Mitigation	(=)/(+)	(+)	(=)	(=)
Greenhouse Gas Emissions	Less Than Significant	(=)	(=)/(+)	(=)	(=)
Hazards (Fire)	Less Than Significant with Mitigation	(=)	(+)	(=)	(=)
Hydrology and Water Quality	Less Than Significant with Mitigation	(=)	(+)	(=)	(=)
Land Use	Less Than Significant	(=)	(=)	(=)	(=)
Noise					
Short-term	Less Than Significant	(=)/(+)	(=)/(+)	(=)	(=)
Long-term	Less Than Significant	(=)	(=)/(+)	(=)/(-)	(=)
Recreation	Less Than Significant	(=)	(=)	(=)	(=)
Traffic					
ADT and LOS	Less Than Significant	(=)	(+)/(2)	(–)	(=)
Parking	Less Than Significant	(=)	(+)/(2)	(–)	(=)

(-) The alternative would result in less impacts than the proposed project.
(+) The alternative would result in greater impacts than the proposed project.
(=) The alternative would result in the same/similar impacts as the proposed project.
(1) Eliminates a significant impact.
(2) Introduces a new significant impact.

Table 7-3
Proposed Project and Alternatives Abilities to Meet Project Objectives

Project Objectives	Proposed Project	One-Story Homes with Skate Park or Baseball Field Alternative	No Project, Foreseeable Development	Two-Story Homes with Skate Park Only Alternative	Reduced Project Alternative
Contribute to the range of housing choices in the City of Malibu.	Yes	Yes	Yes	Yes	Yes
Dedicate land sufficient for the City of Malibu to expand Bluffs Park and design a recreational facility that meets the community's needs for active recreation.	Yes	Yes	Yes	Yes	Yes
Provide additional public parking for the Malibu Bluffs Park.	Yes	Yes	Yes	Yes	Yes
Preserve view sheds, maximize open space, and maintain the area's rural character.	Yes	Yes, but to lesser degree	No	Yes	Yes
Maintain residential privacy.	Yes	Yes, but to lesser degree	No	Yes	Yes
Maximize separation of building areas from significant environmental resources.	Yes	No	No	Yes	Yes
Preserve habitat connectivity and wildlife corridors.	Yes	Yes	Yes	Yes	Yes
Develop a project consistent with codes, regulations, and consistent with the City's General Plan and Local Coastal Program.	Yes	Yes	Yes	Yes	Yes
Preserve public bluewater ocean views.	Yes	Yes	No	Yes	Yes
Provide an onsite wastewater treatment system that will treat wastewater from the proposed project development, addressing environmental concerns regarding wastewater discharges.	Yes	Yes	Yes	Yes	Yes

Photo Location Map



Site Boundary

Photo Location and Direction

0 1,000
Scale (Feet)

Source: Google Earth Pro 2012

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View 1



Simulated view from Rancho Malibu site looking south to southeast across Pacific Coast Highway to proposed 1-story project site alternative (Lots 1, 2, and 3).



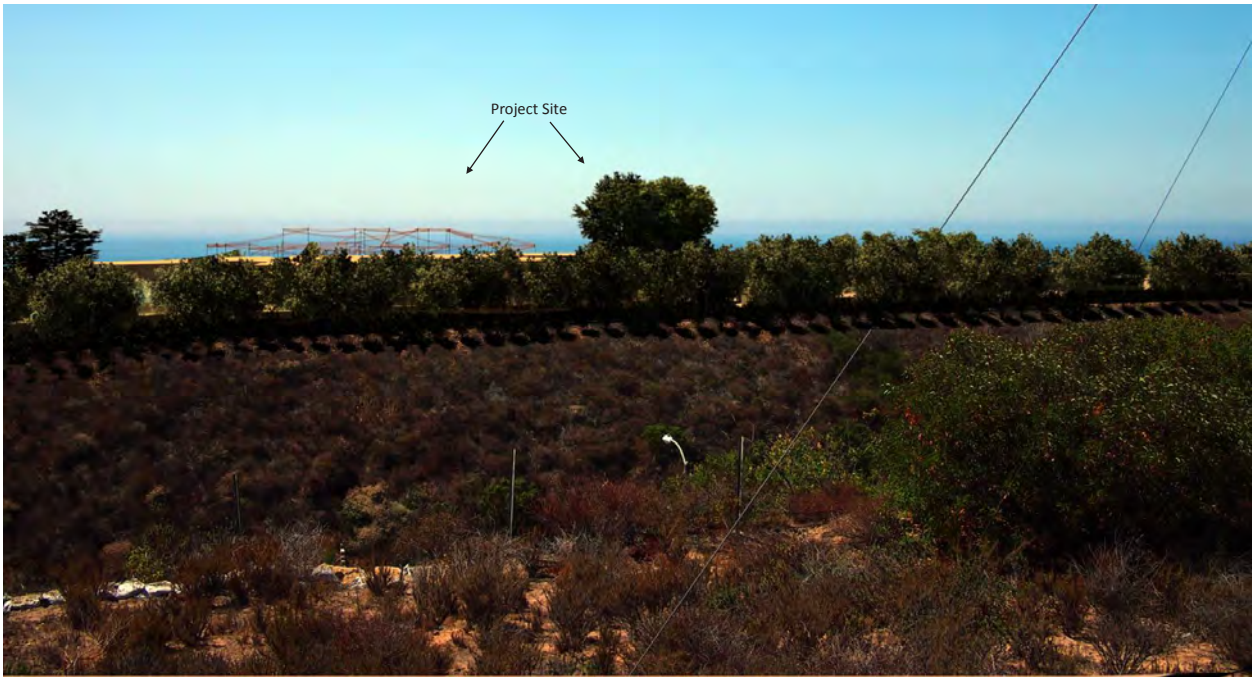
Simulated view from Rancho Malibu site looking south to southeast across Pacific Coast Highway to proposed 2-story project site (Lots 1, 2, and 3).

Source: S.A. Johnson, 2012

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View 2



Simulated view from Rancho Malibu site (future casita placement) looking south across Pacific Coast Highway towards proposed 1-story project site alternative (Lot 1).



Simulated view from Rancho Malibu site (future casita placement) looking south across Pacific Coast Highway towards proposed 2-story project site (Lot 1).

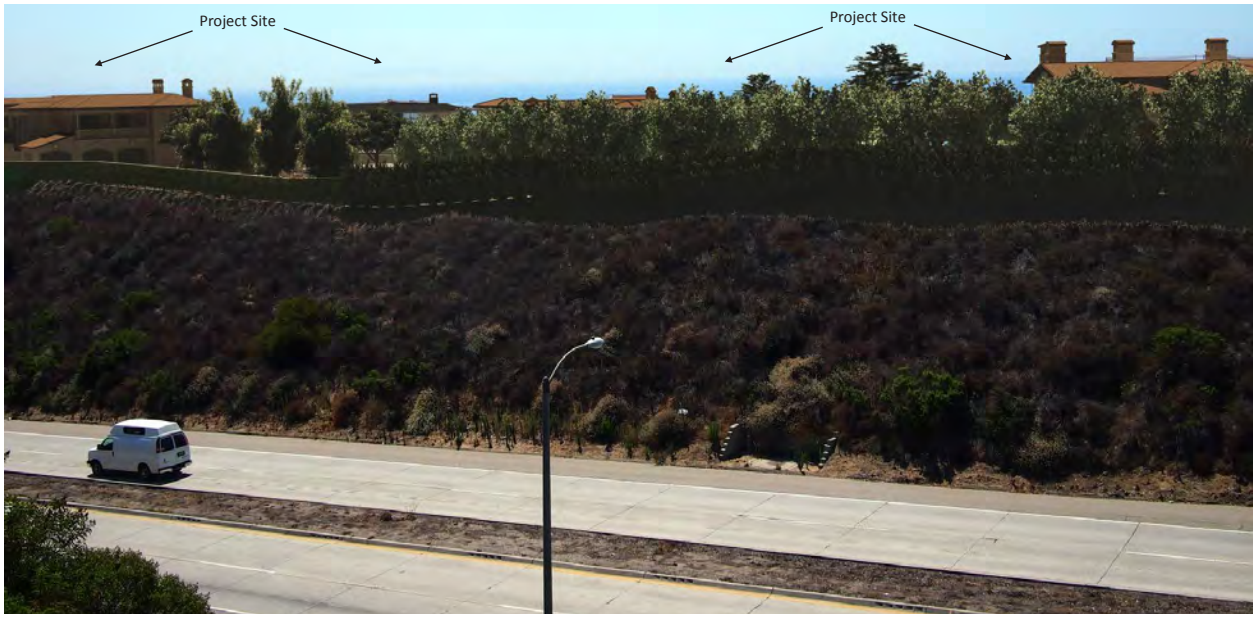
Source: S.A. Johnson, 2012

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View 3



Simulated view from Rancho Malibu (future casita placement, 2nd floor) looking southeast across Pacific Coast Highway towards proposed 1-story project site alternative (Lots 1, 2, 3, and 4).



Simulated view from Rancho Malibu (future casita placement, 2nd floor) looking southeast across Pacific Coast Highway towards proposed 2-story project site (Lots 1, 2, 3, and 4).

Source: S.A. Johnson, 2012

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View 4



Simulated view from Blue Dane Lane (Malibu Country Estates) looking southeast towards proposed 1-story project site alternative (Lots 1, 4, and 5).



Simulated view from Blue Dane Lane (Malibu Country Estates) looking southeast towards proposed 2-story project site (Lots 1, 4, and 5).

Source: S.A. Johnson, 2012

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View 5



Simulated view from Vantage Point Terrace (Malibu Country Estates) looking southeast towards proposed 1-story project site alternative (Lot 4).



Simulated view from Vantage Point Terrace (Malibu Country Estates) looking southeast towards proposed 2-story project site (Lot 4).

Source: S.A. Johnson, 2012

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View 6



Simulated view from Pacific Coast Highway and Cross Creek Road looking west towards proposed 1-story project site alternative (Lots 1 and 2).



Simulated view from Pacific Coast Highway and Cross Creek Road looking west towards proposed 2-story proposed project site (Lots 1 and 2).

Source: S.A. Johnson, 2012

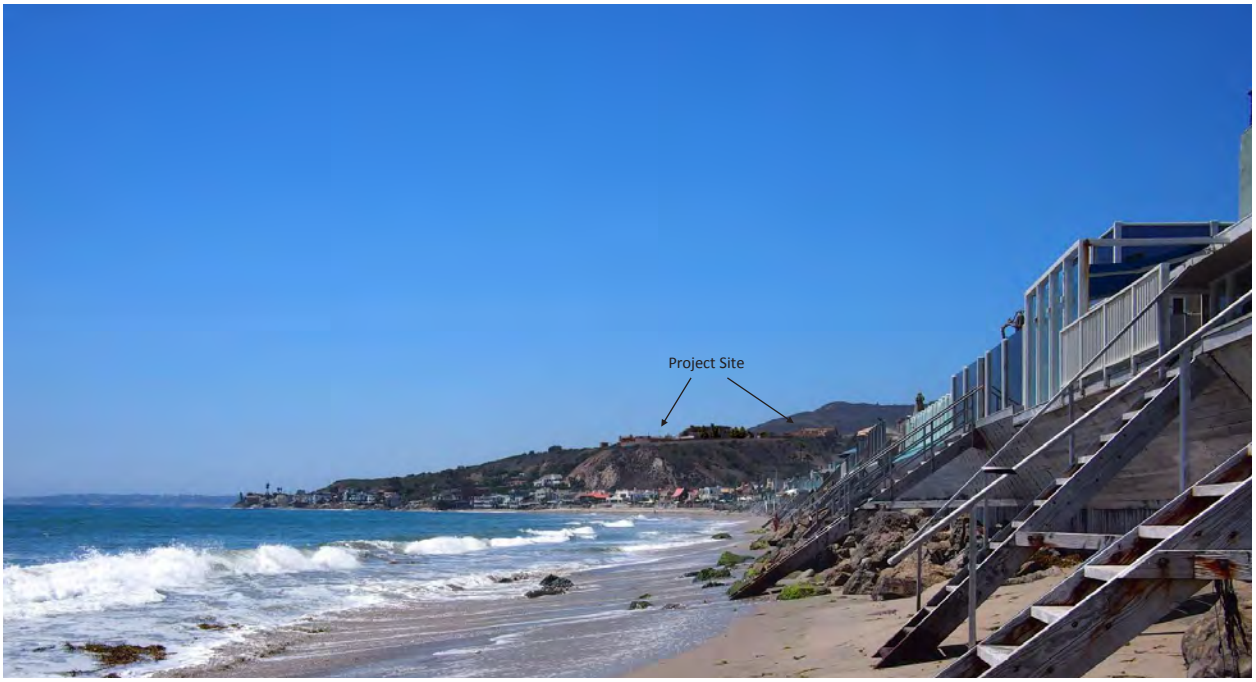
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View 7



Simulated view from beach looking west towards proposed 1-story project site alternative (Lots 1, 2, and 3).



Simulated view from beach looking west towards proposed 2-story project site (Lots 1, 2, and 3).

Source: S.A. Johnson, 2012

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View 8



Simulated view from Malibu Luna Park looking west towards proposed 1-story project site alternative (Lots 1 and 2).



Simulated view existing view from Malibu Luna Park looking west towards proposed 2-story project site (Lots 1 and 2).

Source: S.A. Johnson, 2012

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View 9



Simulated view from Pacific Coast Highway and Webb Way looking west towards proposed 1-story project site alternative (Lots 1 and 2).



Simulated view from Pacific Coast Highway and Webb Way looking west towards proposed 2-story project site (Lots 1 and 2).

Source: S.A. Johnson, 2012

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View 10



Simulated view from Coast View Drive (Malibu Knolls) looking south towards proposed 1-story project site alternative (Lots 1, 2, and 4).



Simulated view from Coast View Drive (Malibu Knolls) looking south towards proposed 2-story project site (Lots 1, 2, and 4).

Source: S.A. Johnson, 2012

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View 11



Simulated view from Malibu Canyon Road looking south towards proposed 1-story project site alternative (Lots 1, 2, and 4).



Simulated view from Malibu Canyon Road looking south towards proposed 2-story project site (Lots 1, 2, and 4).

Source: S.A. Johnson, 2012

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View 12



Simulated view from Malibu Road looking northeast towards proposed 1-story project site alternative (Lots 2 and 5).



Simulated view from Malibu Road looking northeast towards proposed 2-story project site (Lots 2 and 5).

Source: S.A. Johnson, 2012

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View 13



Simulated view from Bluff's Park (Santa Monica Mountains Conservancy) looking east towards proposed 1-story project site alternative (Lots 4 and 5).



Simulated view from Bluff's Park (Santa Monica Mountains Conservancy) looking east towards proposed 2-story project site (Lots 4 and 5).

Source: S.A. Johnson, 2012

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View 14



Simulated view from adjacent baseball outfield looking towards proposed 1-story project site alternative (Lots 4 and 5).

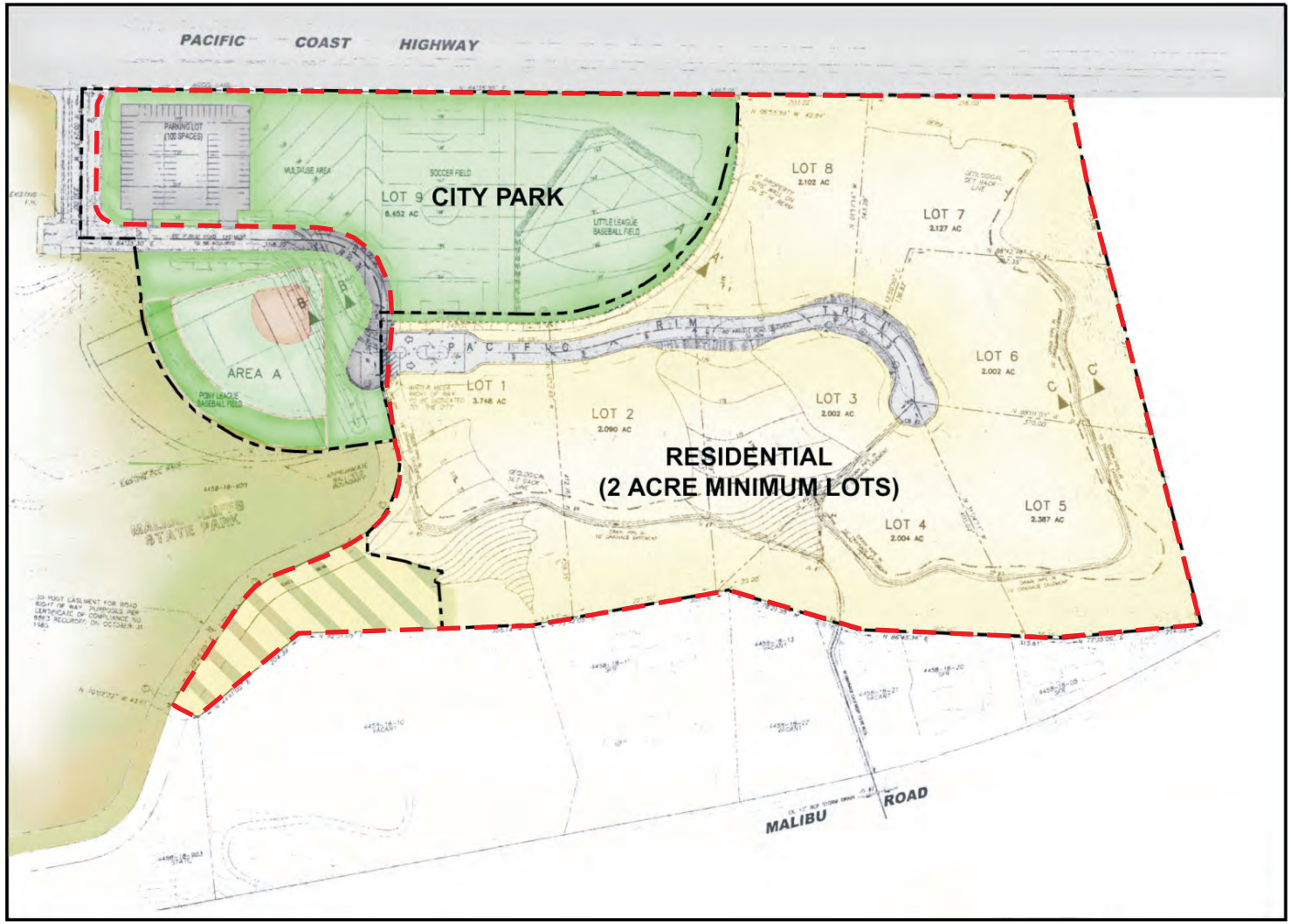


Simulated view from adjacent baseball outfield looking towards proposed 2-story project site (Lots 4 and 5).

Source: S.A. Johnson, 2012

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No Project/Foreseeable Development Alternative



Site Boundary

Source: Impact Sciences, Inc., January 2009

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View 1 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Rancho Malibu site looking south to southeast across Pacific Coast Highway to proposed reduced project alternative (Lots 1, 2, and 3).



Simulated view from Rancho Malibu site looking south to southeast across Pacific Coast Highway to proposed 2-story project (Lots 1, 2, and 3).

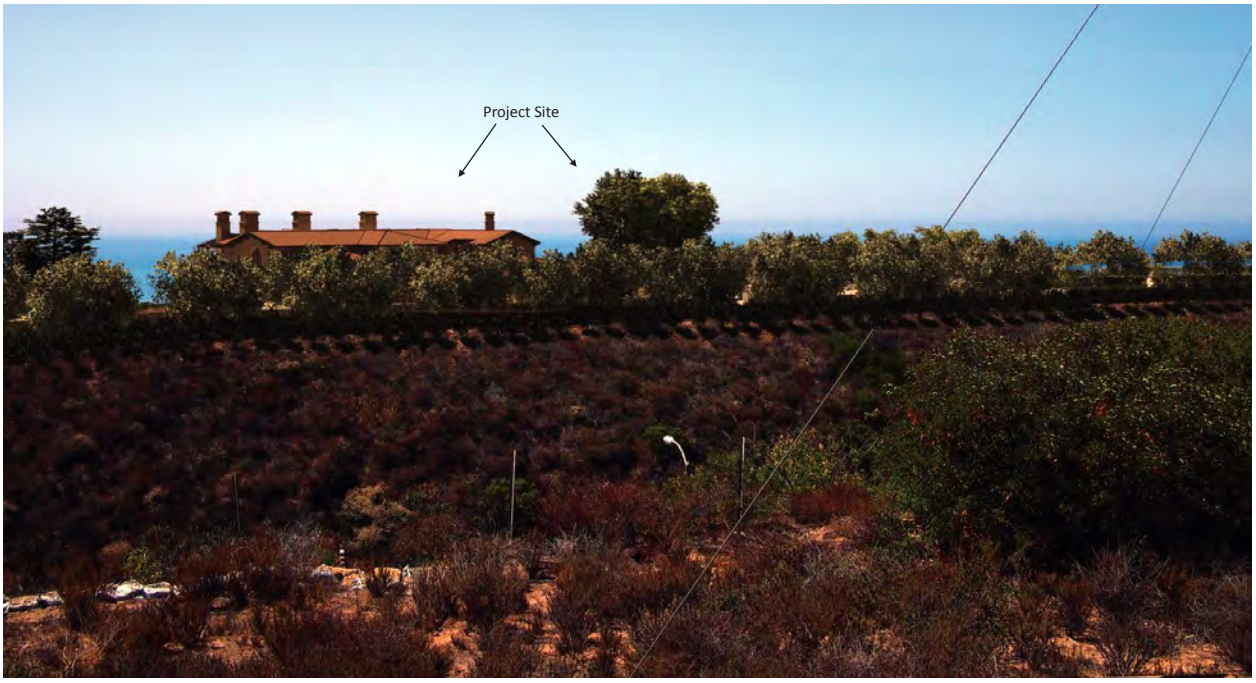
Source: S.A. Johnson, 2013

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View 2 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Rancho Malibu site (future secondary building placement) looking south across Pacific Coast Highway towards proposed reduced project alternative (Lot 1).



Simulated view from Rancho Malibu site (future secondary building placement) looking south across Pacific Coast Highway towards proposed 2-story project (Lot 1).

Source: S.A. Johnson, 2013

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View 3 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Rancho Malibu (future secondary building placement, 2nd floor) looking southeast across Pacific Coast Highway towards proposed reduced project alternative (Lots 1, 2, 3, and 4).



Simulated view from Rancho Malibu (future secondary building placement, 2nd floor) looking southeast across Pacific Coast Highway towards proposed 2-story project (Lots 1, 2, 3, and 4).

Source: S.A. Johnson, 2013

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View 4 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Blue Dane Lane (Malibu Country Estates) looking southeast towards proposed reduced project alternative (Lots 1, 4, and 5).



Simulated view from Blue Dane Lane (Malibu Country Estates) looking southeast towards proposed 2-story project (Lots 1, 4, and 5).

Source: S.A. Johnson, 2013

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View 5 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Vantage Point Terrace (Malibu Country Estates) looking southeast towards proposed reduced project alternative (Lot 4).



Simulated view from Vantage Point Terrace (Malibu Country Estates) looking southeast towards proposed 2-story project (Lot 4).

Source: S.A. Johnson, 2013

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View 6 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Pacific Coast Highway and Cross Creek Road looking west towards proposed reduced project alternative (Lots 1 and 2).



Simulated view from Pacific Coast Highway and Cross Creek Road looking west towards proposed 2-story proposed project (Lots 1 and 2).

Source: S.A. Johnson, 2013

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View 7 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from beach looking west towards proposed reduced project alternative (Lots 1, 2, and 3).



Simulated view from beach looking west towards proposed 2-story project (Lots 1, 2, and 3).

Source: S.A. Johnson, 2013

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View 8 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Malibu Luna Park looking west towards proposed reduced project alternative (Lots 1 and 2).



Simulated view existing view from Malibu Luna Park looking west towards proposed 2-story project (Lots 1 and 2).

Source: S.A. Johnson, 2013

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View 9 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Pacific Coast Highway and Webb Way looking west towards proposed reduced project alternative (Lots 1 and 2).



Simulated view from Pacific Coast Highway and Webb Way looking west towards proposed 2-story project (Lots 1 and 2).

Source: S.A. Johnson, 2013

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View 10 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Coast View Drive (Malibu Knolls) looking south towards proposed reduced project alternative (Lots 1, 2, and 4).



Simulated view from Coast View Drive (Malibu Knolls) looking south towards proposed 2-story project (Lots 1, 2, and 4).

Source: S.A. Johnson, 2013

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View 11 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Malibu Canyon Road looking south towards proposed reduced project alternative (Lots 1, 2, and 4).



Simulated view from Malibu Canyon Road looking south towards proposed 2-story project (Lots 1, 2, and 4).

Source: S.A. Johnson, 2013

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View 12 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Malibu Road looking northeast towards proposed reduced project alternative (Lots 2 and 5).



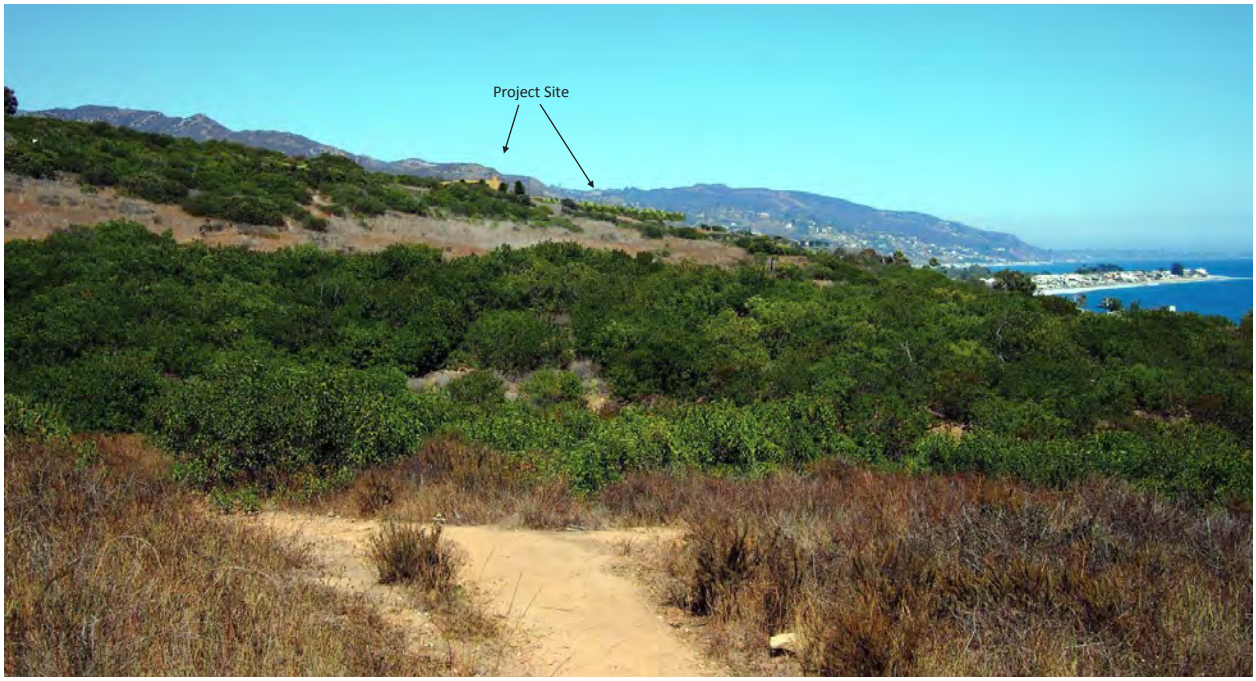
Simulated view from Malibu Road looking northeast towards proposed 2-story project (Lots 2 and 5).

Source: S.A. Johnson, 2013

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View 13 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Bluff's Park (Santa Monica Mountains Conservancy) looking east towards proposed reduced project alternative (Lots 4 and 5).



Simulated view from Bluff's Park (Santa Monica Mountains Conservancy) looking east towards proposed 2-story project (Lots 4 and 5).

Source: S.A. Johnson, 2013

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View 14 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from adjacent baseball outfield looking towards proposed reduced project alternative (Lots 4 and 5).



Simulated view from adjacent baseball outfield looking towards proposed 2-story project (Lots 4 and 5).

Source: S.A. Johnson, 2013

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View 1 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Rancho Malibu site looking south to southeast across Pacific Coast Highway to proposed reduced project alternative (Lots 1, 2, and 3).



Simulated view from Rancho Malibu site looking south to southeast across Pacific Coast Highway to proposed 2-story project (Lots 1, 2, and 3).

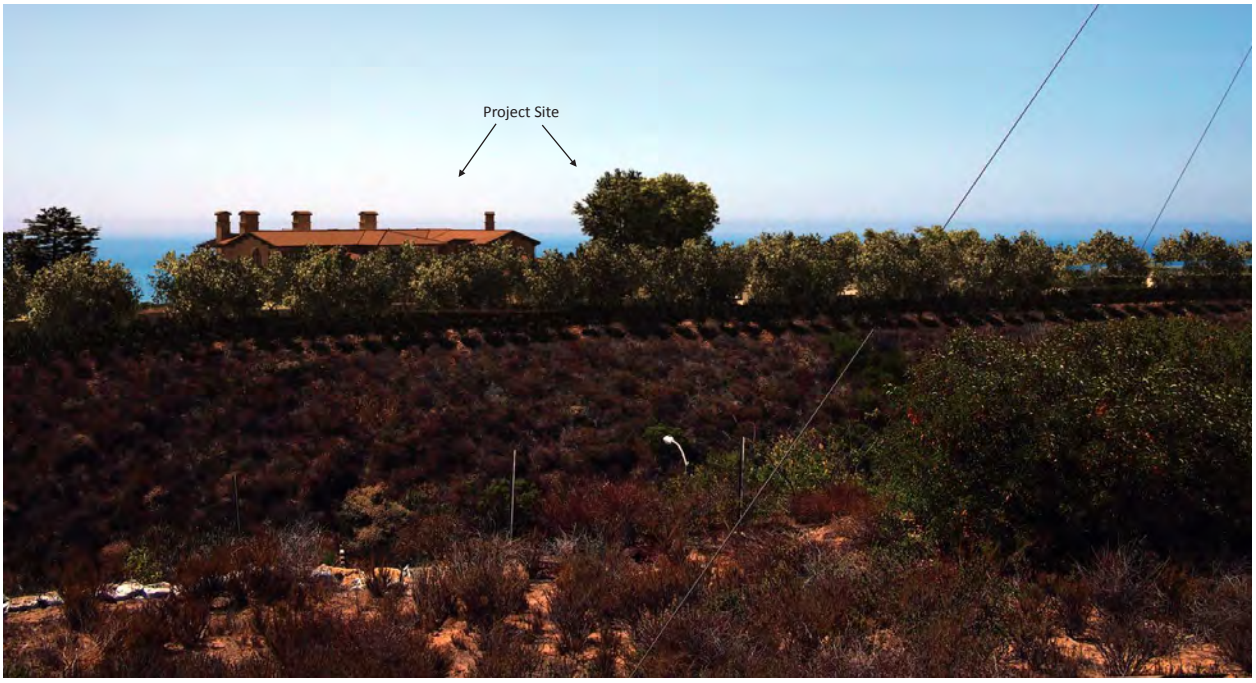
Source: S.A. Johnson, 2013

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View 2 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Rancho Malibu site (future secondary building placement) looking south across Pacific Coast Highway towards proposed reduced project alternative (Lot 1).



Simulated view from Rancho Malibu site (future secondary building placement) looking south across Pacific Coast Highway towards proposed 2-story project (Lot 1).

Source: S.A. Johnson, 2013

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View 3 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Rancho Malibu (future secondary building placement, 2nd floor) looking southeast across Pacific Coast Highway towards proposed reduced project alternative (Lots 1, 2, 3, and 4).



Simulated view from Rancho Malibu (future secondary building placement, 2nd floor) looking southeast across Pacific Coast Highway towards proposed 2-story project (Lots 1, 2, 3, and 4).

Source: S.A. Johnson, 2013

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View 4 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Blue Dane Lane (Malibu Country Estates) looking southeast towards proposed reduced project alternative (Lots 1, 4, and 5).



Simulated view from Blue Dane Lane (Malibu Country Estates) looking southeast towards proposed 2-story project (Lots 1, 4, and 5).

Source: S.A. Johnson, 2013

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View 5 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Vantage Point Terrace (Malibu Country Estates) looking southeast towards proposed reduced project alternative (Lot 4).



Simulated view from Vantage Point Terrace (Malibu Country Estates) looking southeast towards proposed 2-story project (Lot 4).

Source: S.A. Johnson, 2013

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View 6 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Pacific Coast Highway and Cross Creek Road looking west towards proposed reduced project alternative (Lots 1 and 2).



Simulated view from Pacific Coast Highway and Cross Creek Road looking west towards proposed 2-story proposed project (Lots 1 and 2).

Source: S.A. Johnson, 2013

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View 7 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from beach looking west towards proposed reduced project alternative (Lots 1, 2, and 3).



Simulated view from beach looking west towards proposed 2-story project (Lots 1, 2, and 3).

Source: S.A. Johnson, 2013

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View 8 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Malibu Luna Park looking west towards proposed reduced project alternative (Lots 1 and 2).



Simulated view existing view from Malibu Luna Park looking west towards proposed 2-story project (Lots 1 and 2).

Source: S.A. Johnson, 2013

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View 9 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Pacific Coast Highway and Webb Way looking west towards proposed reduced project alternative (Lots 1 and 2).



Simulated view from Pacific Coast Highway and Webb Way looking west towards proposed 2-story project (Lots 1 and 2).

Source: S.A. Johnson, 2013

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View 10 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Coast View Drive (Malibu Knolls) looking south towards proposed reduced project alternative (Lots 1, 2, and 4).



Simulated view from Coast View Drive (Malibu Knolls) looking south towards proposed 2-story project (Lots 1, 2, and 4).

Source: S.A. Johnson, 2013

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View 11 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Malibu Canyon Road looking south towards proposed reduced project alternative (Lots 1, 2, and 4).



Simulated view from Malibu Canyon Road looking south towards proposed 2-story project (Lots 1, 2, and 4).

Source: S.A. Johnson, 2013

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View 12 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Malibu Road looking northeast towards proposed reduced project alternative (Lots 2 and 5).



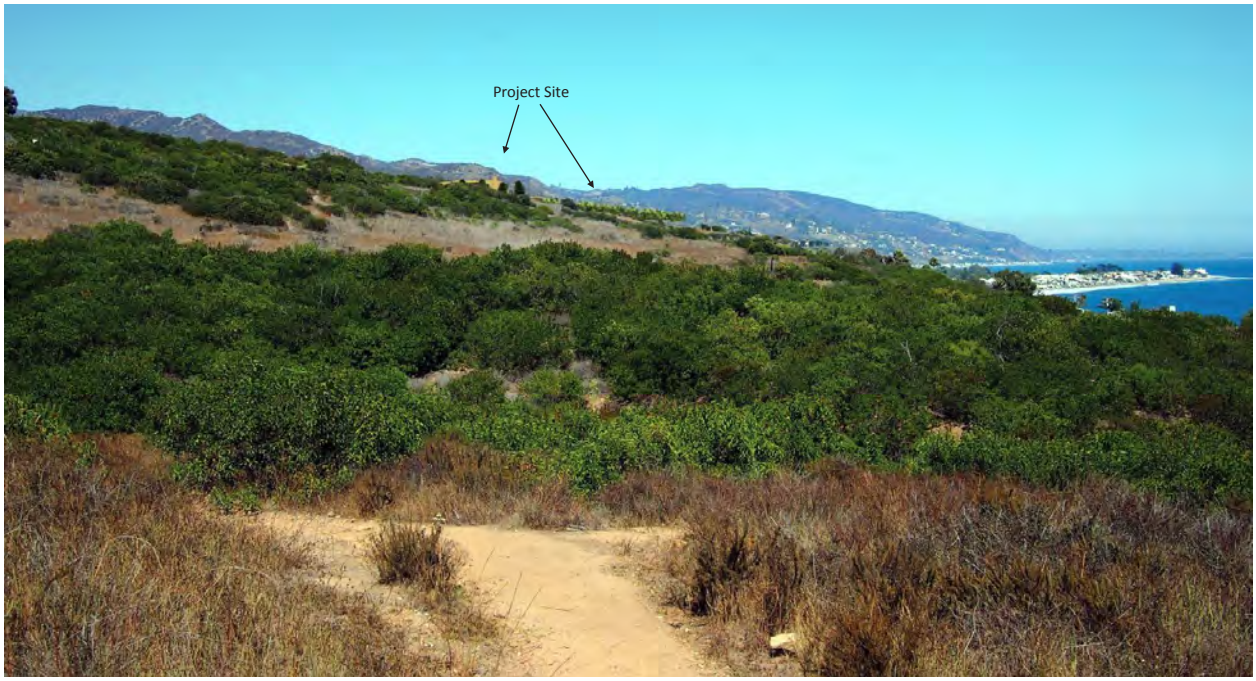
Simulated view from Malibu Road looking northeast towards proposed 2-story project (Lots 2 and 5).

Source: S.A. Johnson, 2013

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View 13 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from Bluff's Park (Santa Monica Mountains Conservancy) looking east towards proposed reduced project alternative (Lots 4 and 5).



Simulated view from Bluff's Park (Santa Monica Mountains Conservancy) looking east towards proposed 2-story project (Lots 4 and 5).

Source: S.A. Johnson, 2013

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View 14 – Comparison of Reduced Project Alternative to Proposed Project



Simulated view from adjacent baseball outfield looking towards proposed reduced project alternative (Lots 4 and 5).



Simulated view from adjacent baseball outfield looking towards proposed 2-story project (Lots 4 and 5).

Source: S.A. Johnson, 2013

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City of Malibu

23825 Stuart Ranch Road · Malibu, California · 90265-4861
(310) 456-2489 · fax (310) 456-7650
www.malibucity.org

July 10, 2012*

To: Interested Parties

Reference: Crummer Site Subdivision – Planned Development

On June 7, 2012, the City held a scoping meeting regarding the Crummer Site Subdivision. The project site is zoned Planned Developed (PD). A PD zone is a zone that allows a property owner to create development standards that are unique to the project proposed on the site. These development standards provide for design flexibility and allow a group of parcels to be developed in a coordinated and comprehensive manner. The proposed project includes a Local Coastal Program Amendment (LCPA) and Zoning Text Amendment (ZTA) to establish the PD development standards that would be applicable to the proposed project. The LCPA and ZTA will be reviewed by Planning Commission and the City Council. If approved, the LCPA will be forwarded to the California Coastal Commission for certification prior to it being incorporated in the Malibu Local Coastal Program (LCP).

At the scoping meeting, an interested party requested staff to conduct an analysis of the project's conformance to development standards that apply to most residential properties in the City. Staff has completed a conformance review of the project with non-beachfront development standards provided in Malibu LCP, Local Implementation Plan (LIP), Section 3.6 (Residential Development Standards).

Please note this analysis is based on plans submitted March 16, 2012 and includes Lots 1 -5 (proposed to be developed with a single-family residence and accessory structures) and does not address Lot 6 (guardhouse, access road, onsite wastewater treatment system) and Lot 7 (dedication of 1.74 acres for public recreation).

CONFORMANCE REVIEW			
	REQUIRED	**PROPOSED**	**COMMENTS**
SETBACKS			
Front Yard	20% of lot depth, up to 65 ft max.	65 feet or greater	Complies
Rear Yard	15% of lot depth	15% or greater	Complies
Side Yard (cumulative)	25% of lot width	25% or greater	Complies
Side Yard (minimum)	10% of lot width	10% or greater	Complies

* Updated April 2013 to reflect that the Planned Development will include a development standard that allows height up to 24 feet flat roof and 28 feet pitched roof.

BLUFF SETBACKS			
Bluff setback (structures w/ foundation)	100 ft, may be reduced to 50ft if 1.5 factor of safety can be demonstrated	Currently under review by City Geologist.	Currently under review by City Geologist
Bluff setback (Structures without foundations)	15 feet	15 feet or more	Complies
PARKING	2 enclosed 2 guest parking 1 space for guest house/second unit	2 or more enclosed 2 or more guest parking 1 space for guest house/second unit	Complies
TOTAL DEVELOPMENT SQUARE FOOTAGE (TDSF)	**Lot 1: 10,052 sq. ft.**	**Lot 1: 11,082 sq. ft.**	**Planned Development**
	Lot 2: 9,642 sq. ft.	**Lot 2: 11,069 sq. ft.**	
	Lot 3: 8,999 sq. ft.	**Lot 3: 11,009 sq. ft.**	
	Lot 4: 9,536 sq. ft.	**Lot 4: 11,158 sq. ft.**	
	Lot 5: 11,172 sq. ft.	**Lot 5: 11,023 sq. ft.**	
2/3 RULE	The sq.ft. of area above 18 feet shall be less than the area below 18 feet	The sq. ft. of area above 18 feet is less than the area below 18 feet	Complies
HEIGHT	**18 ft**	**24 ft flat roof** **28 ft pitched roof**	**Planned Development**
IMPERMEABLE COVERAGE	25,000 sq.ft. max.	Less than 25,000 sq. ft. of impermeable coverage	Complies
NON-EXEMPT GRADING	**1,000 c.y. or less**	**1,000 c.y. of grading or more**	**Planned Development**
Basement	**Basement may not daylight more than 3 feet**	**Basement daylights more than 3 feet**	**Planned Development**
STRUCTURES ON SLOPES	3: 1 or flatter	3:1 or flatter	Complies
FENCE/WALL HEIGHT			
Front	42" solid, up to six feet visually permeable	42" solid + 30" wrought iron (6' max)	Complies
Sides	6 ft solid	42" solid + 30" wrought iron (6' max)	Complies
Rear	6 ft solid	6' wrought iron	Complies
Retaining Walls	6 ft single wall 12 ft combo wall	6 ft or less single wall	Complies
Vehicle Entry Gate	42" solid, up to six feet visually permeable	42" solid, up to six feet visually permeable	Complies

* Updated April 2013 to reflect that the Planned Development will include a development standard that allows height up to 24 feet flat roof and 28 feet pitched roof.

REVISED

TRAFFIC IMPACT ANALYSIS



CRUMMER SITE SUBDIVISION

City of Malibu, CA

arch beach

CONSULTING

September 17, 2013

REVISED TRAFFIC IMPACT ANALYSIS

CRUMMER SITE SUBDIVISION

City of Malibu, California

Prepared by

arch beach
CONSULTING

Project No. 12-005
September 17, 2013
1st submittal May 17, 2012
2nd submittal October 10, 2012
3rd submittal December 7, 2012

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TABLE OF CONTENTS

1.0 INTRODUCTION 4
Purpose and Objectives of the Traffic Study 4
Site Location and Study Area 5
Methodology 5
Significance Criteria 7
Traffic Analysis Scenarios 9

2.0 PROJECT DESCRIPTION AND TRAFFIC GENERATION 11
Project Description 11
Trip Distribution and Assignment 14

3.0 EXISTING CONDITIONS ANALYSIS 21
Existing plus Project 25

4.0 OPENING YEAR 2017 TRAFFIC CONDITIONS 29
Opening Year 2017 Baseline Condition 29
Opening Year 2017 plus Project 40

5.0 FUTURE YEAR 2030 TRAFFIC CONDITIONS 51
Future Year 2030 Baseline Condition 51
Future Year 2030 plus Project 54

6.0 PROJECT ACCESS, CIRCULATION AND PARKING 66
Project Access and Circulation 66
Parking 66

7.0 CONCLUSIONS AND MITIGATION MEASURES 70
Project Trip Generation 70
Existing plus Project 70
Opening Year 2017 plus Project 71
Future Year 2030 plus Project 72
Project Access, Circulation and Parking 73

8.0 REFERENCES 75

LIST OF TABLES

Table A – Level of Service Definitions 5
Table B – Level of Service Descriptions 7
Table C – City of Malibu Significance Criteria 7
Table D – Weekday Project Trip Generation Estimates 13
Table E – Saturday Project Trip Generation Estimates 14
Table F – Existing Condition Intersection Level of Service Summary 24
Table G – Existing Condition Roadway Segment Level of Service Summary 24
Table H – Existing plus Project Intersection Level of Service Summary 26
Table I – Existing plus Project Roadway Segment Level of Service Summary 27
Table J – Cumulative Projects Weekday Trip Generation Estimates 30
Table K – Cumulative Projects Saturday Trip Generation Estimates 32
Table L – Opening Year 2017 Baseline Intersection Level of Service Summary 39
Table M – Opening Year 2017 Baseline Roadway Segment Level of Service Summary 39
Table N – Opening Year 2017 plus Project Intersection Level of Service Summary 47
Table O – Opening Year 2017 plus Project Roadway Segment Level of Service Summary 50
Table P – Future Year 2030 Baseline Intersection Level of Service Summary 54
Table Q – Future Year 2030 Baseline Roadway Segment Level of Service Summary 54
Table R – Future Year 2030 plus Project Intersection Level of Service Summary 62
Table S – Future Year 2030 plus Project Roadway Segment Level of Service Summary 65

LIST OF FIGURES

Figure 1 – Project Site Location, Study Area and Intersection Controls and Geometrics 6
Figure 2 – Project Site Plan 12
Figure 3 – Project Weekday AM and PM Peak Hour Trip Distribution and Assignment 15
Figure 4 – Project Saturday Midday Peak Hour Trip Distribution and Assignment 16
Figure 5 – Project with Lot 7 Use – Baseball Field Weekday AM and PM Peak Hour Trip Distribution and Assignment 17
Figure 6 – Project with Lot 7 Use – Baseball Field Saturday Midday Peak Hour Trip Distribution and Assignment 18
Figure 7 – Project with Lot 7 Use – Skate Park Weekday AM and PM Peak Hour Trip Distribution and Assignment 19
Figure 8 – Project with Lot 7 Use – Skate Park Saturday Midday Peak Hour Trip Distribution and Assignment 20
Figure 9 – Existing Weekday AM and PM Peak Hour Traffic Volumes 22
Figure 10 – Existing Saturday Midday Peak Hour Traffic Volumes 23
Figure 11 – Cumulative Projects Location Map 34
Figure 12 – Cumulative Projects Weekday AM and PM Peak Hour Trip Assignment 35
Figure 13 – Cumulative Projects Saturday Midday Peak Hour Trip Assignment 36
Figure 14 – Opening Year 2017 Baseline Weekday AM and PM Peak Hour Traffic Volumes 37
Figure 15 – Opening Year 2017 Baseline Saturday Midday Peak Hour Traffic Volumes 38
Figure 16 – Opening Year 2017 plus Project Weekday AM and PM Peak Hour Traffic Volumes 41
Figure 17 – Opening Year 2017 plus Project Saturday Midday Peak Hour Traffic Volumes 42
Figure 18 – Opening Year 2017 plus Project with Lot 7 Use – Baseball Field Weekday AM and PM Peak Hour Traffic Volumes 43
Figure 19 – Opening Year 2017 plus Project with Lot 7 Use – Baseball Field Saturday Midday Peak Hour Traffic Volumes 44
Figure 20 – Opening Year 2017 plus Project with Lot 7 Use – Skate Park Weekday AM and PM Peak Hour Traffic Volumes 45
Figure 21 – Opening Year 2017 plus Project with Lot 7 Use – Skate Park Saturday Midday Peak Hour Traffic Volumes 46
Figure 22 – Conceptual Mitigation Measure T-1 49
Figure 23 – Future Year 2030 Baseline Weekday AM and PM Peak Hour Traffic Volumes 52
Figure 24 – Future Year 2030 Baseline Saturday Midday Peak Hour Traffic Volumes 53
Figure 25 – Future Year 2030 plus Project Weekday AM and PM Peak Hour Traffic Volumes 56
Figure 26 – Future Year 2030 plus Project Saturday Midday Peak Hour Traffic Volumes 57
Figure 27 – Future Year 2030 plus Project with Lot 7 Use – Baseball Field Weekday AM and PM Peak Hour Traffic Volumes 58
Figure 29 – Future Year 2030 plus Project with Lot 7 Use – Skate Park Weekday AM and PM Peak Hour Traffic Volumes 60
Figure 30 – Future Year 2030 plus Project with Lot 7 Use – Skate Park Saturday Midday Peak Hour Traffic Volumes 61
Figure 31 – Conceptual Mitigation Measure T-2 64

APPENDICES

Appendix A – Raw Traffic Volume Count Sheets
Appendix B – Intersection Level of Service Worksheets
Appendix C – Roadway Segment Analysis Worksheet
Appendix D – Cumulative Projects List and Trip Assignments

1.0 INTRODUCTION

The following presents the traffic impact analysis (TIA) prepared by Arch Beach Consulting for the proposed Crummer Site Subdivision located at the southeast corner of Malibu Canyon Road/Pacific Coast Highway – State Route 1 (PCH – SR 1), adjacent to the Michael Landon Community Center, in the City of Malibu (City).

The proposed project would allow for the development of five single family homes. In addition, the TIA analyzes the development of five single family homes plus a public baseball field on Lot 7; and, the development of five single family homes plus a public skate park on Lot 7. The baseball field and skate park would be available for use by the public. Access to the residential units would be provided by a private street that would intersect with Winter Mesa Drive. The southern leg of Malibu Canyon Road would terminate at Winter Mesa Drive. This private street would be equipped with a security gate and kiosk. Access to the baseball field or skate park would be provided from Winter Mesa Drive.

Per the *Guidelines for CMP Transportation Impact Analysis*, which is Appendix B of the *Los Angeles County Congestion Management Program* (CMP), a traffic analysis shall address all CMP arterial monitoring intersections where the proposed project would add 50 or more trips during the weekday peak hour and any mainline freeway monitoring locations where the project would add 150 or more trips in either direction during the peak hour. The only CMP arterial roadway in the vicinity of the project site is PCH, which runs along the north edge of the project site. The proposed project would generate more than 50 peak hour trips to the intersection of Malibu Canyon Road/PCH. However, at all other CMP monitoring intersections, the proposed project would generate less than 50 peak hour trips; and, there are no freeways in the project area, therefore the proposed project would not add 150 or more trips to a freeway, and a CMP freeway analysis would not be required.

The following TIA has been prepared consistent with the requirements of the City of Malibu Public Works Department, the Los Angeles County CMP, and the California Environmental Quality Act (CEQA).

Purpose and Objectives of the Traffic Study

The purpose of this traffic study is to evaluate the traffic and circulation impacts of the proposed project. The study objectives of this traffic study include:

- Establish the existing baseline traffic conditions.
- Develop the projected future baseline conditions without the project by considering the cumulative effects of regional growth and traffic generated by other development projects in the study vicinity.
- Estimate the level of traffic that would be generated by the proposed development.
- Conduct a comparative analysis of traffic conditions with and without the project.
- Identify potential mitigation measures/roadway improvements.

The analysis is based on weekday morning (a.m.), weekday afternoon (p.m.), and Saturday midday peak hour traffic volumes on the roadways and intersections in the immediate project vicinity.

Site Location and Study Area

Figure 1 illustrates the project site location, study area, and intersection traffic control and geometrics. Local access to the project site is provided by Malibu Canyon Road – Winter Mesa Drive and PCH. Also shown on Figure 1 are the study area intersections. The study area intersections are as follows:

1. Malibu Canyon Road/Pacific Coast Highway – State Route 1 (PCH – SR 1)
2. Malibu Canyon Road/Seaver Drive – Civic Center Way

Methodology

Intersections

The signalized study area intersections were analyzed using the Intersection Capacity Utilization (ICU) methodology for weekday and Saturday peak hour levels of service (LOS). The ICU method determines the volume-to-capacity (V/C) ratio on a critical lane basis and determines LOS associated with each critical V/C ratio at the signalized intersection.

Roadway Segments

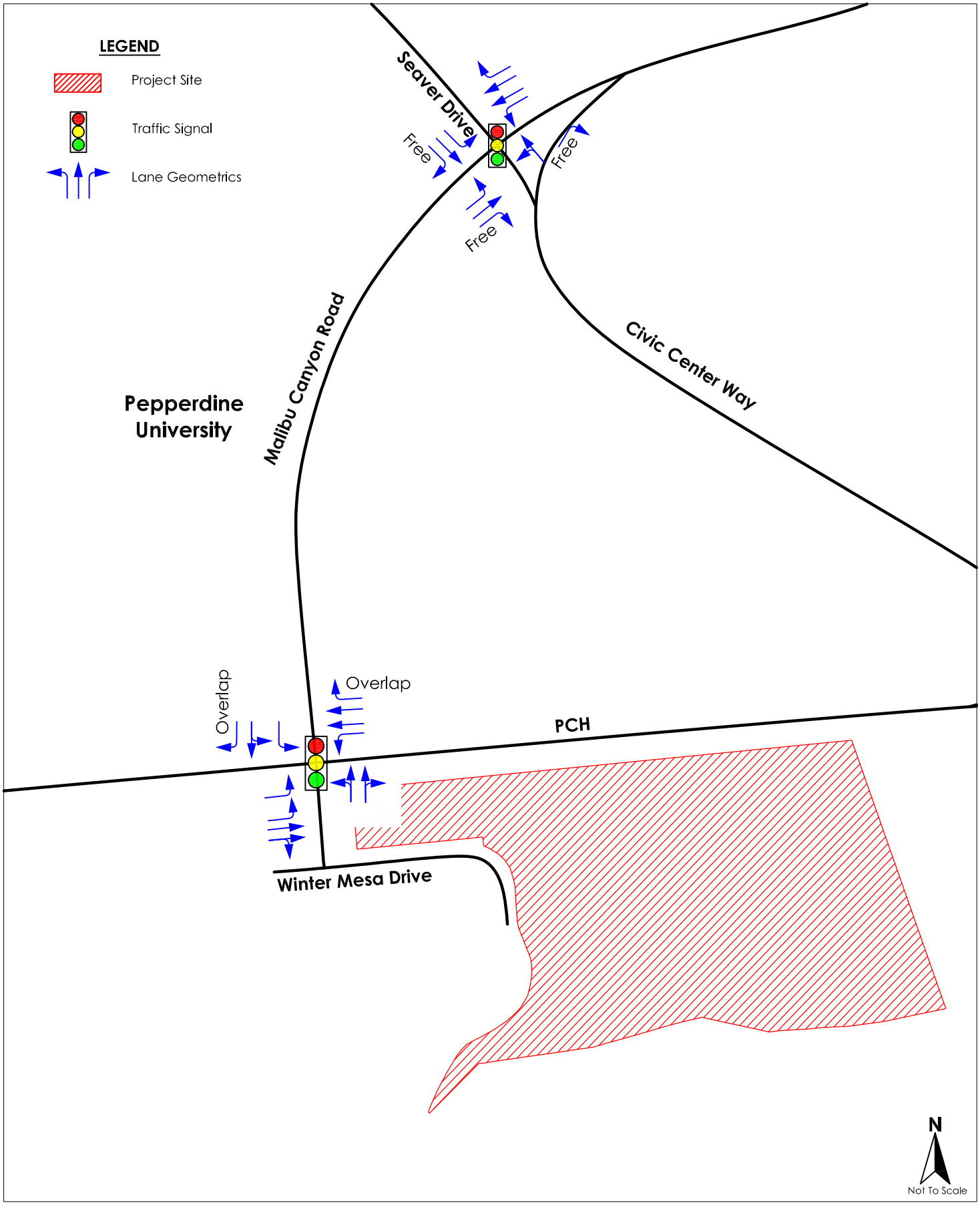
The study area roadway segments were analyzed using the *Highway Capacity Manual* (HCM) methodology as prescribed in the City's traffic study guidelines. The Highway Capacity Software (HCS) Multilane Highways module was used to calculate LOS values for each study area roadway segment. HCS calculates the density of the subject roadway segment in terms of passenger cars per lane per mile (pcplpm) and assigns a specific level of service (LOS A – F).

The degree of congestion at an intersection is described by the level of service, which ranges from LOS A to LOS F, with LOS A representing free-flow conditions with little delay and LOS F representing over-saturated traffic flow throughout the peak hour. A complete description of the meaning of level of service can be found in the Highway Research Board Special Report 209, *Highway Capacity Manual* (HCM 2000). Brief descriptions of the six levels of service for signalized intersections are shown in Table A.

Table A – Level of Service Definitions

Level of Service	V/C Ratio or ICU (signalized)	Control Delay in Seconds (unsignalized)
A	0.00 – 0.60	0.0 – 10.0 seconds
B	0.61 – 0.70	10.1 – 15.0 seconds
C	0.71 – 0.80	15.1 – 25.0 seconds
D	0.81 – 0.90	25.1 – 35.0 seconds
E	0.91 – 1.00	35.1 – 50.0 seconds
F	1.01 or greater	50.1 seconds or greater

Table B below provides detailed descriptions of each level of service.



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Figure 1
Project Site Location, Study Area, and Geometrics

Table B – Level of Service Descriptions

LOS	Description
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

Significance Criteria

The City of Malibu has established specific thresholds for project related increases in the V/C of study intersections and roadways. Table C illustrates the V/C ratio increases that are considered to be significant impacts.

Table C – City of Malibu Significance Criteria

Level of Service (LOS)	Pre-Project V/C[1]	Project Related V/C increase
C	> 0.70 – 0.80	equal to or greater than 0.040
D	> 0.80 – 0.90	equal to or greater than 0.020
E, F	> 0.90 or more	equal to or greater than 0.010

Regulatory Setting

The roadway network in the study area that would serve as an access system for the project site is within the jurisdiction of three public agencies: Caltrans, Los Angeles County, and the City of Malibu. These agencies are responsible for the operation and maintenance of the study area roadways. The implementation of any proposed mitigation measures regarding the roadway network would, therefore, be subject to approval by the responsible public agency. With regard to the roadways that were addressed in this analysis, PCH (SR 1) is a Caltrans facility, Malibu Canyon Road is partially a City of Malibu facility and partially a Los Angeles County facility, and Civic Center Way and Winter Mesa Drive are City of Malibu facilities. Any modifications to the operation of a roadway by the project applicant and/or a contractor would require the issuance of an encroachment permit by the responsible agency prior to the proposed action.

Congestion Management Program Standards

According to the *Guidelines for CMP Transportation Impact Analysis*, which is Appendix B of the Los Angeles County *Congestion Management Program* (CMP), a traffic analysis shall address all CMP arterial monitoring intersections where the proposed project would add 50 or more trips during the weekday peak hour and any mainline freeway monitoring locations where the project would add 150 or more trips in either direction during the peak hour. The only CMP arterial roadway in the vicinity of the project site is PCH (SR 1), which runs along the north edge of the project site.

As the intersection of Malibu Canyon Road/PCH is a CMP arterial monitoring location, this intersection was evaluated in the traffic impact analysis. According to the CMP criteria for determining a significant impact, a CMP intersection would be significantly impacted by a project if the project would result in an increase in the V/C ratio of 0.02 or greater at an intersection that is projected to operate at LOS F.

Other CMP intersections in the project vicinity are PCH at Decker Canyon Road, Kanan Dune Road, and Las Flores Canyon Road. Based on the assumed distribution of project-generated traffic, a maximum of 50 percent of the project traffic would travel through any of these intersections, which equates to less than 50 trips during the peak hours. As the resulting project trip assignment would be below the CMP threshold of 50 peak hour trips, a CMP traffic analysis was not required for these other arterial monitoring intersections. With regard to freeways, there are no freeways in the project area. The project would not, therefore, add 150 or more trips to a freeway and a CMP freeway analysis would not be required.

Design Safety

The proposed project would use the same access and circulation features that are already in place at the project site, which were designed in conformance with the City of Malibu, Los Angeles County, and Caltrans standards. The project would require a new intersection on Winter Mesa Drive south of PCH, which would be designed in conformance with the City of Malibu's standards. This east leg (westbound approach) of this intersection would be a new primary access driveway for the proposed five single-family homes. This intersection would be stop-controlled with a stop sign on the westbound approach, giving right-of-way to the north-south movements on Winter Mesa Drive.

Traffic Analysis Scenarios

This traffic study analyzed the following traffic scenarios:

Existing Condition

Existing weekday peak hour traffic volumes were collected by the City on July 12, 2012 at both study area intersections. Saturday peak hour counts for both intersections were also collected by the City on July 14, 2012. The existing traffic scenario constitutes the environmental setting in accordance with the CEQA analysis at the time that the hearing body reviews the proposed project.

Existing plus Project Condition

The Existing plus Project Condition traffic was developed by adding the proposed project traffic to the Existing Baseline Condition. This scenario is the basis for determining project-specific impacts and mitigation measures. The following are the Existing plus Project conditions analyzed in this TIA:

1. Existing plus Project (five single family homes)
2. Existing plus Project with Lot 7 use – Baseball Field
3. Existing plus Project with Lot 7 use – Skate Park

Opening Year 2017 Baseline Condition

The proposed project is anticipated to be built and fully operational by year 2017. Opening year traffic in this scenario was forecast for 2017 by applying an ambient growth rate to the existing traffic volumes. In addition to the ambient growth rate, traffic from approved and pending projects (i.e. cumulative projects) in the project's vicinity has been added. Data for the cumulative projects (location and land use) were obtained from the City, and trip generation, distribution, and assignment estimates were determined for each cumulative project in the study area.

Opening Year 2017 plus Project Condition

The Opening Year 2017 plus Project Condition traffic was developed by adding the proposed project traffic to the Opening Year Baseline Condition. This scenario is also the basis for determining project-specific impacts and mitigation measures. The following are the Opening Year 2017 plus Project conditions analyzed in this TIA:

1. Opening Year 2017 plus Project (five single family homes)
2. Opening Year 2017 Project with Lot 7 use – Baseball Field
3. Opening Year 2017 plus Project with Lot 7 use – Skate Park

Future Year 2030 Baseline Condition

A General Plan buildout year of 2030 was analyzed in this TIA. Traffic for the Future Year 2030 Baseline condition was forecast by applying an ambient growth rate to the existing traffic volumes. In addition to the ambient growth rate, traffic from approved and pending projects (i.e. cumulative projects) in the project's vicinity has been added. Data for the cumulative projects (location and land use) were obtained from the City, and trip generation, distribution, and assignment estimates were determined for each cumulative project in the study area.

Future Year 2030 plus Project Condition

The Future Year 2030 plus Project Condition traffic was developed by adding the proposed project traffic to the Future Year Baseline Condition. This scenario is also the basis for determining project-specific impacts and mitigation measures. The following are the Future Year 2030 plus Project conditions analyzed in this TIA:

1. Future Year 2030 plus Project (five single family homes)
2. Future Year 2030 plus Project with Lot 7 use – Baseball Field
3. Future Year 2030 plus Project with Lot 7 use – Skate Park

2.0 PROJECT DESCRIPTION AND TRAFFIC GENERATION

The following section provides information on the permanent operation of the proposed project relative to the local and regional circulation network.

Project Description

Figure 2 illustrates the site plan of the proposed project. The proposed Crummer Site Subdivision (proposed project) is located at the southeast corner of Malibu Canyon Road/PCH (SR 1), adjacent to the Michael Landon Community Center, in the Central Malibu area.

The proposed project would allow for the development of five single family homes. In addition, two separate analyses are provided for the development of the proposed project (five single family homes) with Lot 7 as a baseball field or a skate park. The baseball field or skate park would be available for use by the public. Access to the residential units would be provided by a private street that would intersect with Winter Mesa Drive, which is a continuation of Malibu Canyon Road south of PCH. This private street would be equipped with a security gate and kiosk. Access to the baseball field or skate park would be provided from Winter Mesa Drive.

Project Traffic

This section describes the trip generation, distribution, and assignment of the proposed project's traffic volumes on the study area transportation network facilities.

Trip Generation

Proposed Project (five single family homes)

Weekday daily, a.m. and p.m. peak hour; and, Saturday daily and midday peak hour, trip generation estimates for the proposed project (five single family homes) were developed using trip rates provided in the Institute of Transportation Engineers (ITE) *Trip Generation, 8th Edition.*

Baseball Field

There are no ITE trip rates for a baseball field recreational land use. Therefore, the trip generation estimates for the baseball field were determined using an "operational trip generation analysis" based on the assumptions outlined below. The patronage estimates for the baseball field were obtained from the City.

- Two (2) games per day on weekdays, and 10 games per day on Saturdays.
- Up to 14 players per team at a little league game.
- A game would generate an average of one vehicle per player.
- Two teams at 14 players per team would generate 28 vehicle trips (one-way).
- For weekdays and Saturdays, two additional trips (one-way) were assumed for officials and miscellaneous spectators.
- No games or practice during the weekday morning peak hour.
- For weekends only, 16 additional trips (one-way) were assumed for 32 additional spectators with a 2.0 average vehicle occupancy.
- Total weekday trip generation of 60 trips (30 inbound and 30 outbound per game).
- Total Saturday trip generation of 92 trips (46 inbound and 46 outbound per game).



Not To Scale

Source: PSOMAS, 2009.

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Figure 2
Project Site Plan

Skate Park

There are no ITE trip rates for a skate park recreational land use. Therefore, the trip generation estimates for the skate park were determined using an "operational trip generation analysis" based on the assumptions outlined below. The patronage estimates for the skate park were obtained from the City.

- 30 people per day on weekdays, 60 people per day on weekends.
- 10 people during the afternoon peak hour on weekdays, 20 people during the peak hour on weekends, and negligible usage during the weekday morning peak hour.
- One vehicle for every two participants.
- Five vehicles arriving, five vehicles departing during the weekday peak hours.
- 10 vehicles arriving, 10 vehicles departing during the weekend mid-day peak hour.

Summaries of the trip generation rates and resulting vehicle trips for the proposed project are presented in Table D for the weekday and Table E for a Saturday.

Table D – Weekday Project Trip Generation Estimates

Land Use	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
TRIP RATES								
Single-Family Detached (ITE 210)[1]	per DU	9.57	0.19	0.56	0.75	0.64	0.37	1.01
Baseball Field[2]	per game	60	0	0	0	15	15	30
Skate Park[2]	per park	30	0	0	0	5	5	10
TRIP GENERATION								
PROPOSED PROJECT								
Single-Family Detached	5 DUs	48	**1**	**3**	**4**	**3**	**2**	**5**
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD								
Single-Family Detached	5 DUs	48	1	3	4	3	2	5
Baseball Field	2 games	120	0	0	0	30	30	60
TOTAL TRIP GENERATION		**168**	**1**	**3**	**4**	**33**	**32**	**65**
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK								
Single-Family Detached	5 DUs	48	1	3	4	3	2	5
Skate Park	1 park	30	0	0	0	5	5	10
TOTAL TRIP GENERATION		**78**	**1**	**3**	**4**	**8**	**7**	**15**

Notes: [1] Trip rates for Single-Family Detached homes are from Trip Generation, 8th Edition, Institute of Transportation Engineers, 2008. DU = dwelling unit

[2] Trip generation for Baseball Field and Skate Park based on operational data provided by City of Malibu staff.

According to the table, during the weekdays, the proposed project (five single family homes) would generate approximately 48 daily trips, four (4) a.m. peak hour trips (one inbound and three outbound), and five (5) p.m. peak hour trips (three inbound and two outbound). The proposed project with Lot 7 used as a baseball field would generate 168 daily trips, four (4) a.m. peak hour trips (one inbound and three outbound), and 65 p.m. peak hour trips (33 inbound and 32 outbound). The proposed project with Lot 7 used as a skate park would generate 78 daily trips, four (4) a.m. peak hour trips (one inbound and three outbound), and 15 p.m. peak hour trips (eight inbound and seven outbound).

Table E – Saturday Project Trip Generation Estimates

Land Use	Size/Units	Daily	Midday Peak Hour		
			In	Out	Total
TRIP RATES					
Single-Family Detached (ITE 210) [1]	per DU	10.08	0.49	0.44	0.93
Baseball Field [2]	per game	92	4.60	4.60	9.20
Skate Park [2]	per park	60	10	10	20
TRIP GENERATION					
PROPOSED PROJECT					
Single-Family Detached	5 DUs	**50**	**3**	**2**	**5**
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD					
Single-Family Detached	5 DUs	50	3	2	5
Baseball Field	10 games	920	46	46	92
TOTAL TRIP GENERATION		**970**	**49**	**48**	**97**
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK					
Single-Family Detached	5 DUs	50	3	2	5
Skate Park	per park	60	10	10	20
TOTAL TRIP GENERATION		**110**	**13**	**12**	**25**

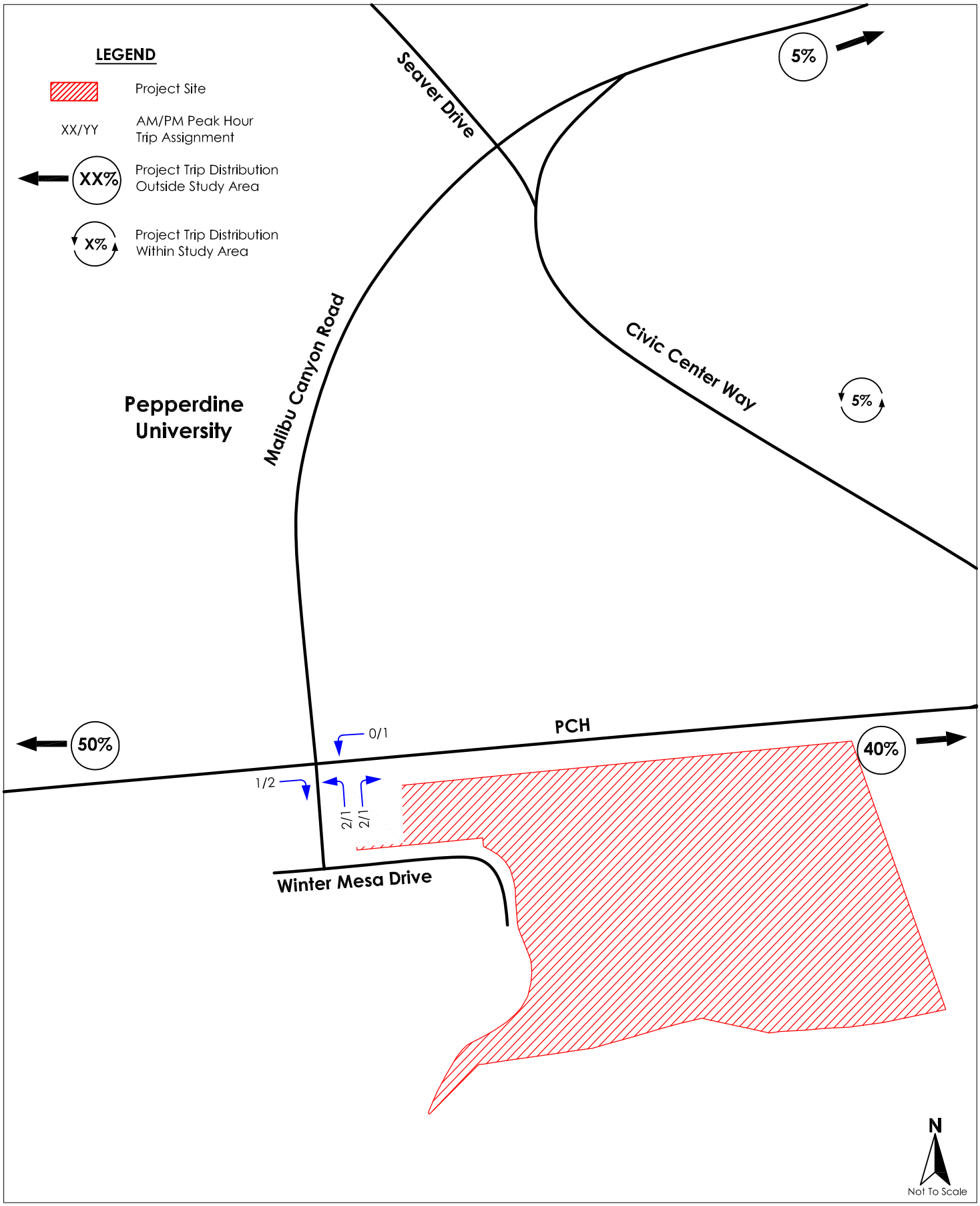
Notes: [1] Trip rates for Single-Family Detached homes are from *Trip Generation, 8th Edition*, Institute of Transportation Engineers, 2008. DU = dwelling unit.

[2] Trip generation for Baseball Field and Skate Park based on operational data provided by City of Malibu staff.

According to the table, during Saturdays, the proposed project would generate approximately 50 daily trips, and five (5) midday peak hour trips (three inbound and two outbound). The proposed project with Lot 7 used as a baseball field would generate 970 daily trips, and 97 midday peak hour trips (49 inbound and 48 outbound). The proposed project with Lot 7 used as a skate park would generate approximately 110 daily trips, and 25 midday peak hour trips (13 inbound and 12 outbound).

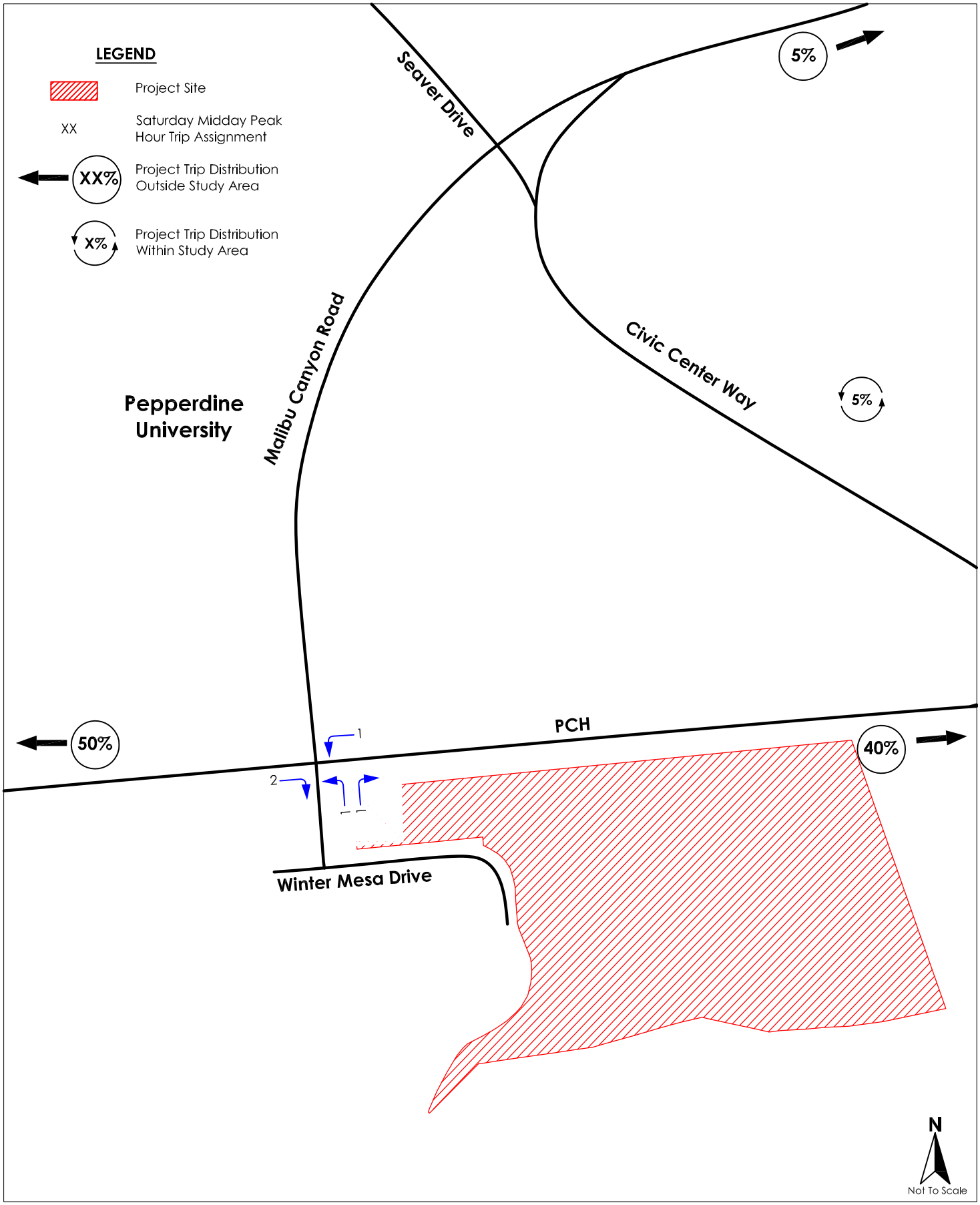
Trip Distribution and Assignment

Local trip distribution percentages for the proposed project were provided by the City's Traffic Engineer and were based on observed peak hour travel patterns in the study area. The trip distribution percentages at each intersection were applied to the proposed project's weekday and Saturday peak hour trip generation estimates to calculate the project trip assignment (i.e., turn movement volumes that the project would generate at each study area intersection). Figures 3 and 4 illustrate the weekday and Saturday, respectively, trip distribution and assignment for the proposed project. Figures 5 and 6 illustrate the weekday and Saturday, respectively, trip distribution and assignment for the proposed project with Lot 7 used as a baseball field. Figures 7 and 8 illustrate the weekday and Saturday, respectively, trip distribution and assignment for the proposed project with Lot 7 used as a skate park.



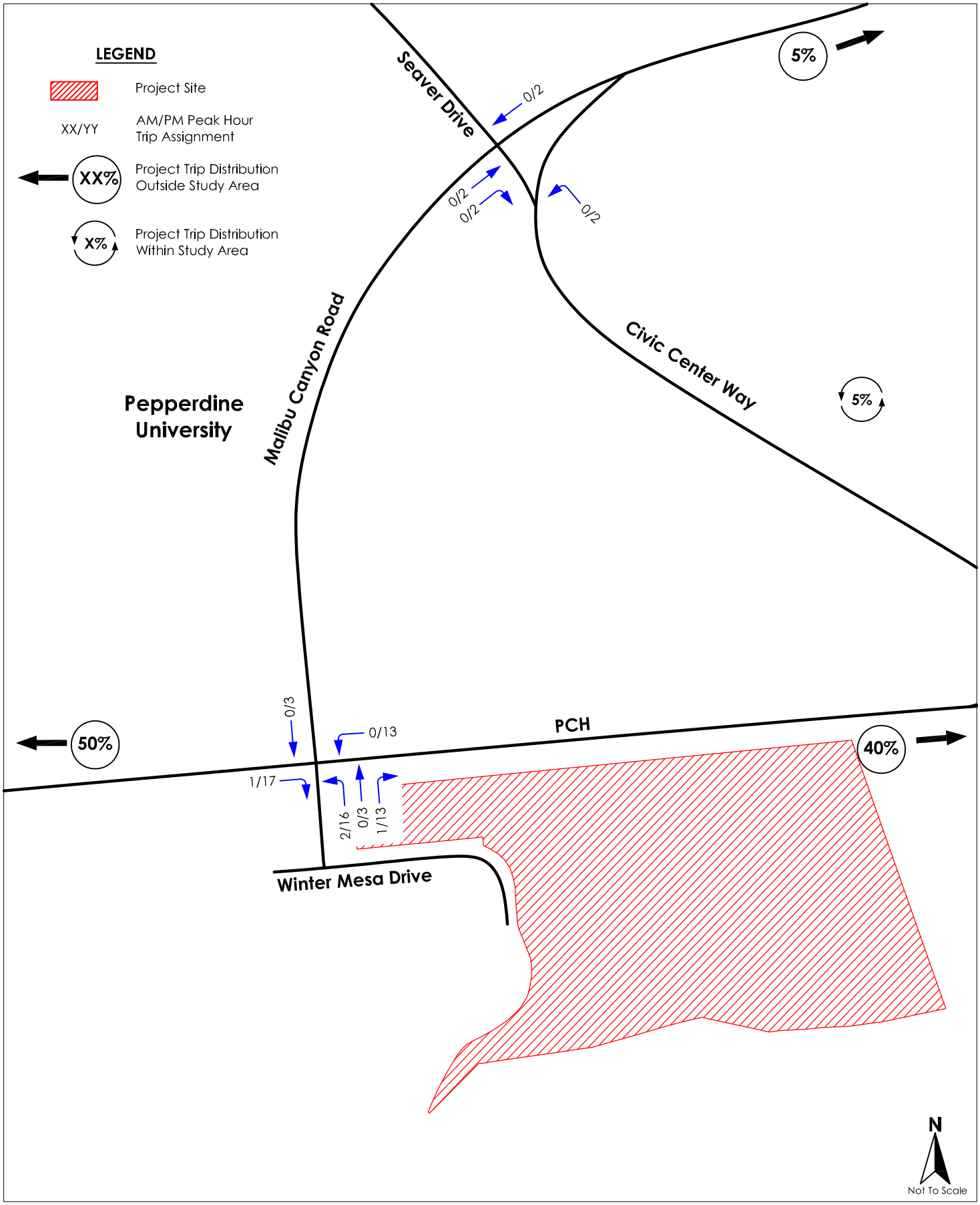
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Figure 3
Project Weekday AM and PM
Peak Hour Trip Distribution and Assignment



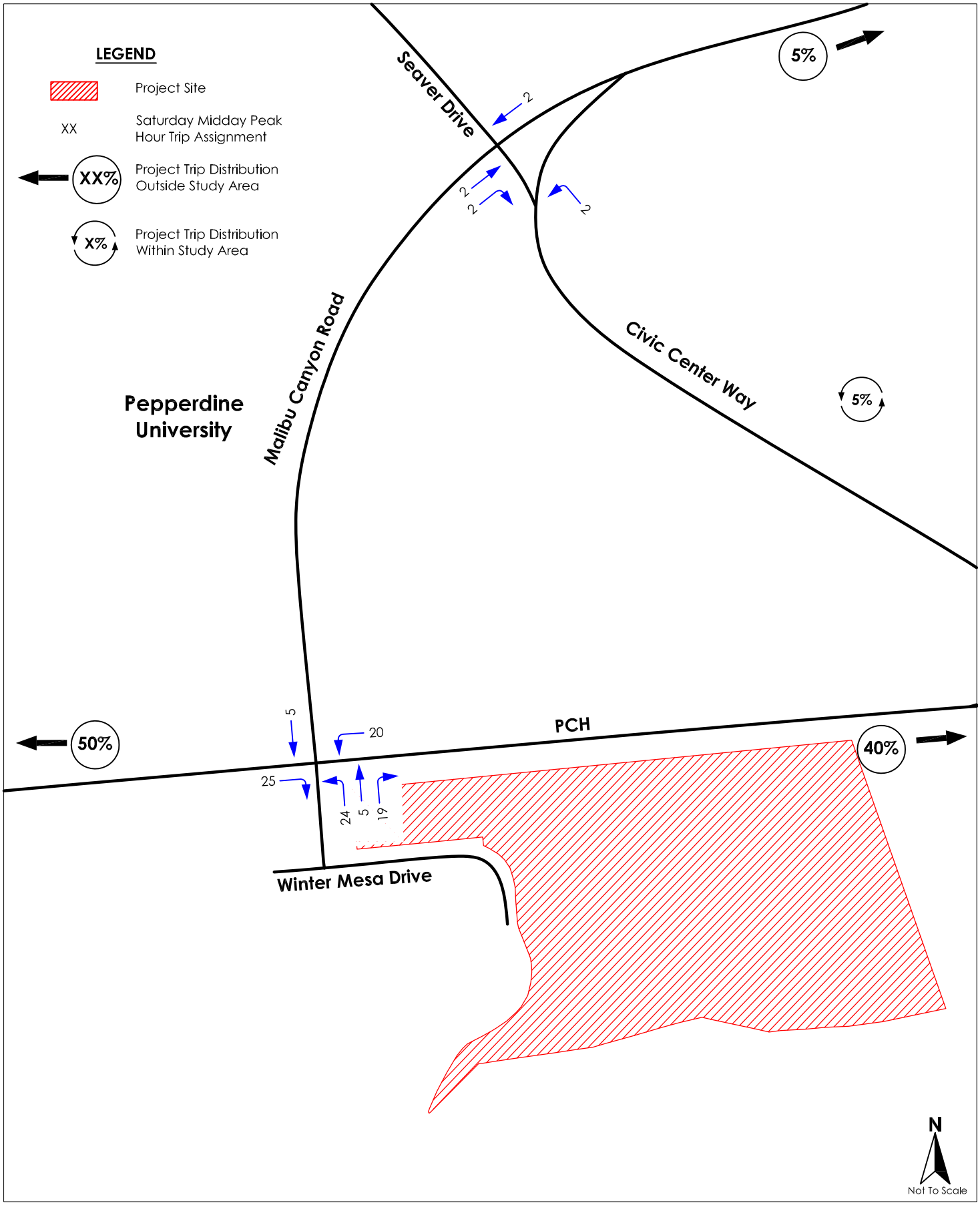
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Figure 4
Project Saturday Midday
Peak Hour Trip Distribution and Assignment



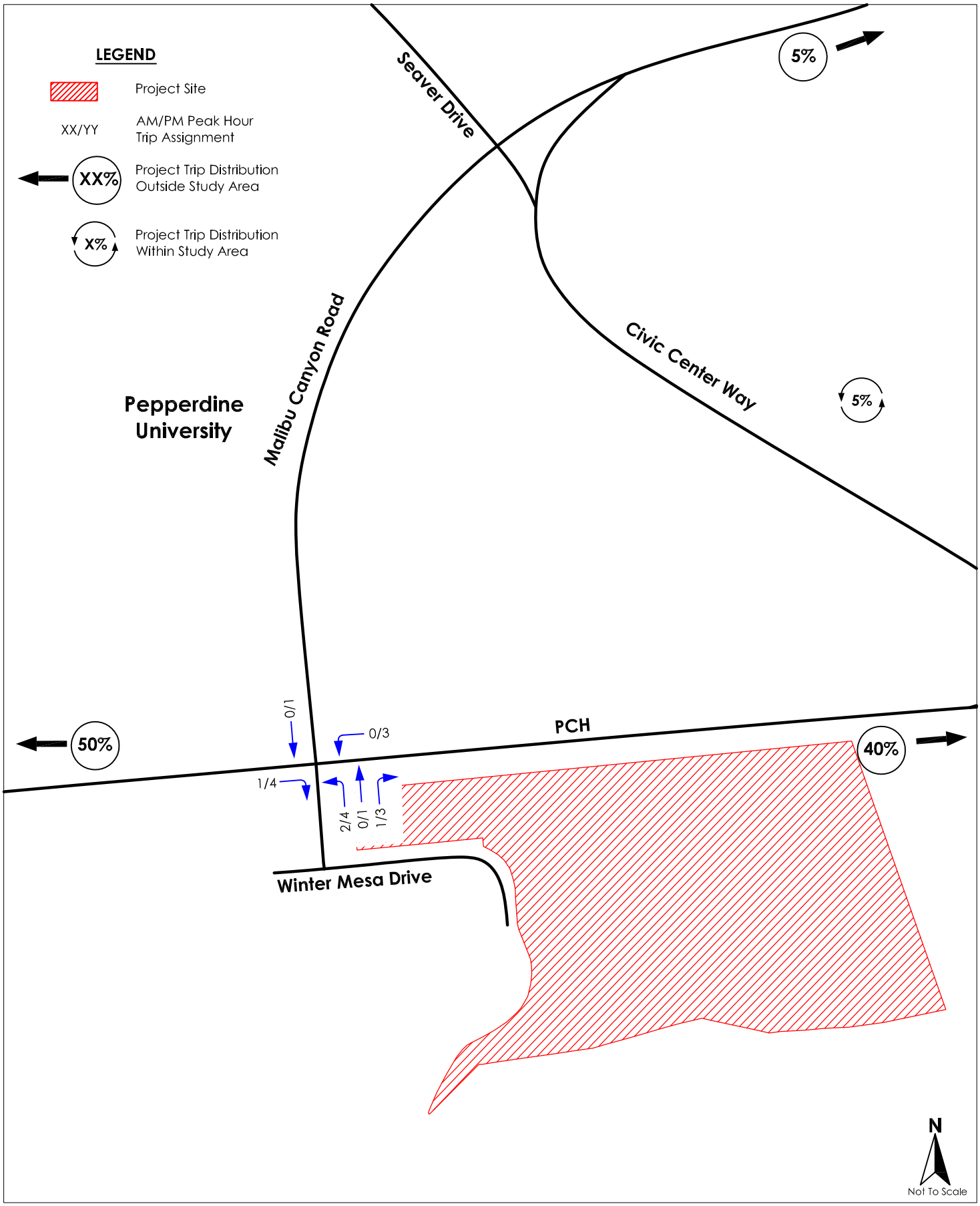
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Figure 5
Project with Lot 7 Use - Baseball Field Weekday
AM and PM Peak Hour Trip Distribution and Assignment



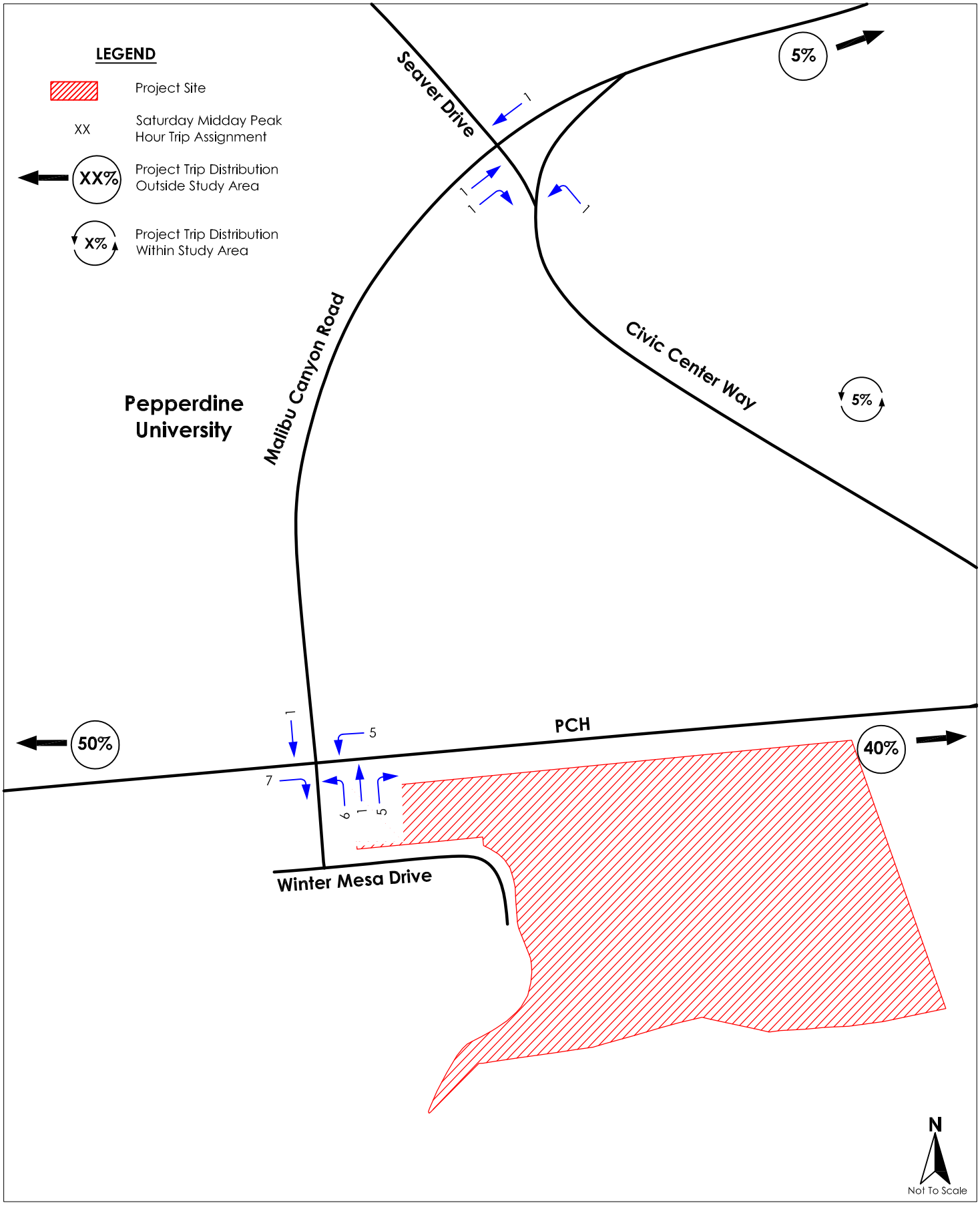
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Figure 6
Project with Lot 7 Use - Baseball Field Saturday Midday Peak Hour Trip Distribution and Assignment



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Figure 7
Project with Lot 7 Use - Skate Park Weekday
AM and PM Peak Hour Trip Distribution and Assignment



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Figure 8
Project with Lot 7 Use - Skate Park Saturday Midday Peak Hour Trip Distribution and Assignment

3.0 EXISTING CONDITIONS ANALYSIS

The following section describes the existing traffic conditions in the project study area. Existing weekday peak hour traffic volumes were collected by the City on July 12, 2012 at both study area intersections. Saturday peak hour counts for both intersections were also collected by the City on July 14, 2012.

Roadways

The following describes the roadways in the study area:

Pacific Coast Highway

Pacific Coast Highway (PCH), or State Route 1 (SR 1), is a four lane east-west roadway that abuts the north side of the project site. It is designated as a Modified Major Arterial in the Circulation Element of the City of Malibu General Plan and as an Eligible Scenic Highway by Caltrans.

Malibu Canyon Road

Malibu Canyon Road is a north-south roadway that intersects with PCH at the northwest corner of the project site. It has four travel lanes between PCH and Civic Center Way and two travel lanes north of Civic Center Way. Malibu Canyon Road is classified as a Major Arterial in the Circulation Element.

Civic Center Way

Civic Center Way is a two lane east-west roadway that intersects with Malibu Canyon Road approximately one-quarter mile north of the project site. The continuation of Civic Center Way west of Malibu Canyon Road on the Pepperdine University campus is called Seaver Drive. Civic Center Way is classified as a Collector in the Circulation Element.

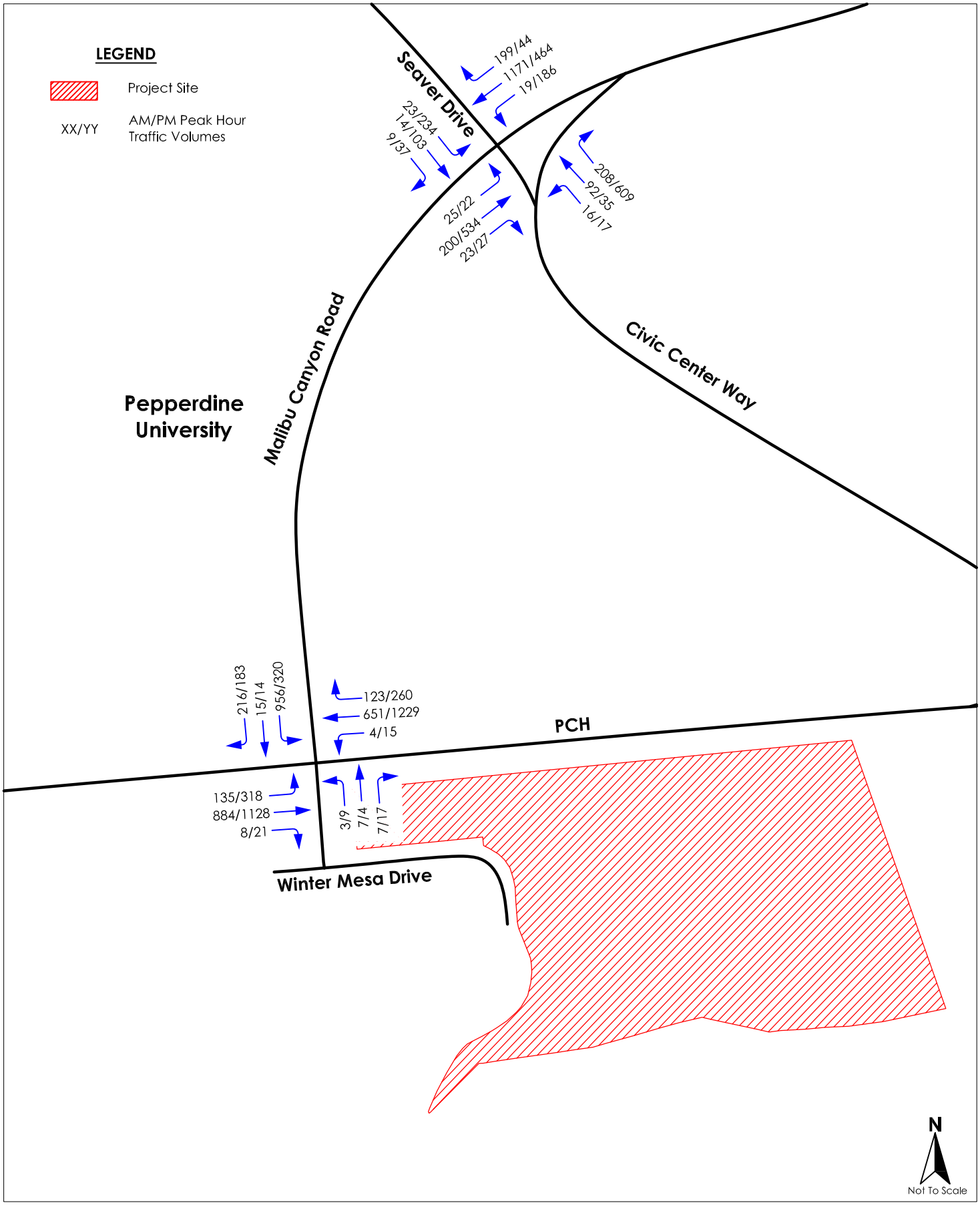
Winter Mesa Drive

Malibu Canyon Road terminates at its intersection with Winter Mesa Drive, south of PCH. Winter Mesa Drive is a two lane, east-west roadway that curves to the south and runs along the south and west edge of the proposed baseball field/skate park site. Access to the project site would be provided from Winter Mesa Drive.

Intersection Geometrics and Traffic Volumes

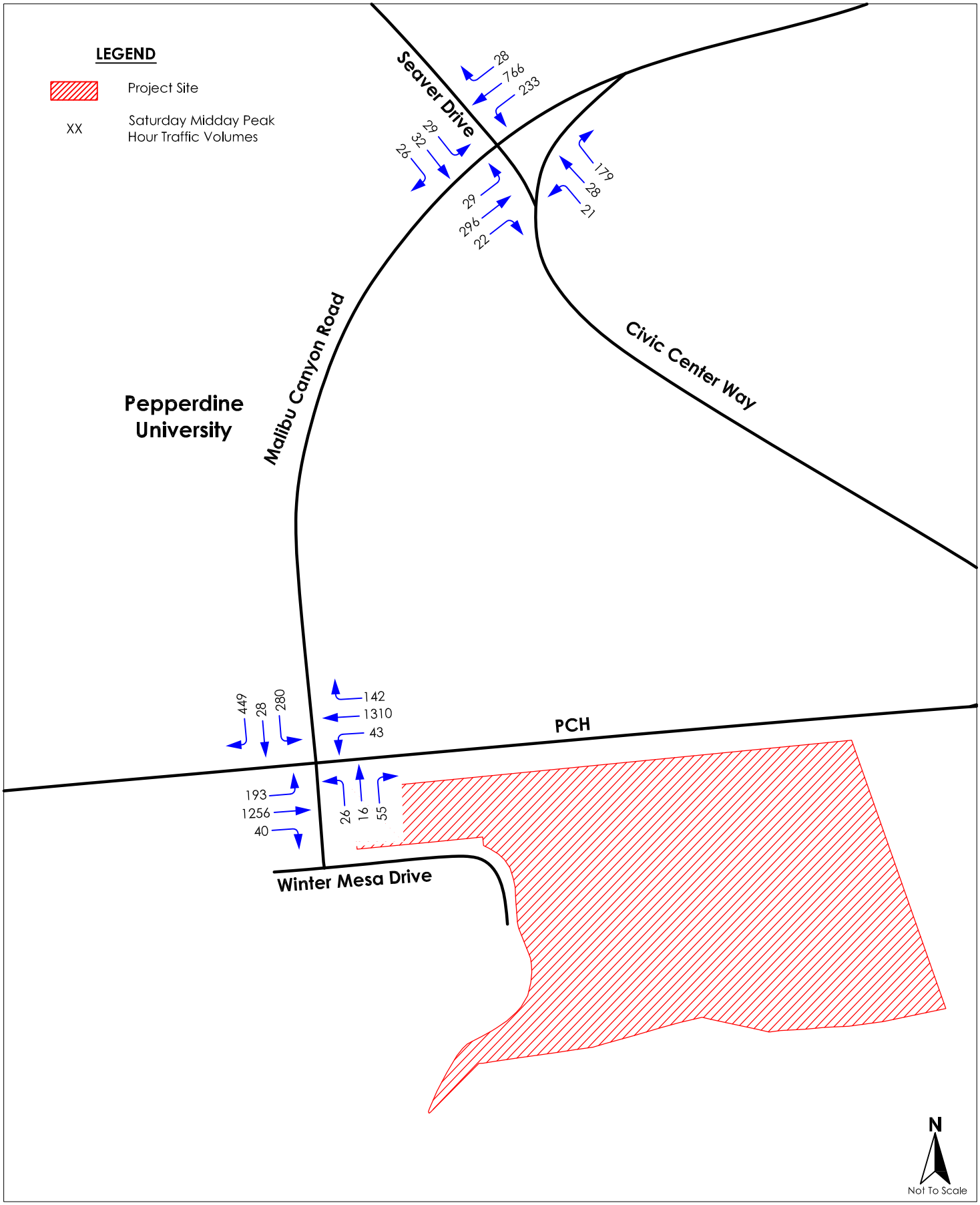
Figure 1 illustrates the existing traffic controls and lane geometrics at the study area intersections. Existing weekday peak hour traffic volumes were collected by the City on July 12, 2012 at both study area intersections. Saturday peak hour counts for both intersections were also collected by the City on July 14, 2012. The weekday traffic counts were taken between the hours of 7:00 and 9:00 a.m., and between 4:00 and 6:00 p.m. The weekend traffic counts were taken between the hours of 12:00 and 3:00 p.m. on a Saturday. The highest one-hour interval of traffic flow was then identified for each of the time periods to quantify the peak hour traffic volumes.

Figure 9 shows the existing weekday a.m. and p.m. peak hour traffic volumes at the study intersections, while Figure 10 shows the Saturday midday peak hour volumes. The raw traffic volume count sheets are provided in Appendix A.



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Figure 9
Existing Weekday AM and PM Peak Hour Traffic Volumes



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Figure 10
Existing Saturday Midday
Peak Hour Traffic Volumes

Levels of Service

Intersections

Based on the analysis methodology described in Section 1.0, the existing weekday a.m. and p.m. peak hour, and Saturday midday peak hour traffic volumes were input into the *Traffix* LOS software to determine the existing intersection V/C ratios and resulting LOS values. Table F presents the results of the existing intersection LOS analysis, while the LOS calculation sheets are provided in Appendix B.

Table F – Existing Condition Intersection Level of Service Summary

Intersection	Control	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		V/C	LOS	V/C	LOS	V/C	LOS
1. Malibu Canyon Road/PCH	signal	0.785	C	0.738	C	0.824	D
2. Malibu Canyon Rd/Civic Center Way	signal	0.563	A	0.729	C	0.481	A

Note: LOS determined using ICU method.

Based on the existing LOS analysis, Malibu Canyon Road/PCH currently operates at LOS C in both weekday peak hours, and LOS D during the Saturday peak hour. Malibu Canyon Road/Civic Center Way currently operates at LOS A, C, and A during the weekday a.m. and p.m. peak hours, and Saturday midday peak hour, respectively.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table G presents the results of the existing roadway segment LOS analysis, while the LOS calculation sheets are provided in Appendix C.

Table G – Existing Condition Roadway Segment Level of Service Summary

Intersection	# lanes and median	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS
1. PCH, John Tyler Dr to Malibu Cyn Rd							
- eastbound	2D	9.6	A	13.7	B	13.9	B
- westbound	2D	8.1	A	13.2	B	16.6	B
2. PCH, Malibu Cyn Rd to Webb Way							
- eastbound	2D	17.3	B	13.7	B	14.9	B
- westbound	2D	7.5	A	14.5	B	14.4	B
3. Malibu Cyn Rd, PCH to Civic Center							
- northbound	2U	3.1	A	6.7	A	4.0	A
- southbound	2U	13.7	B	6.0	A	8.7	A

Note: LOS determined using HCM Multilane Highways Operations method.
# lanes and median: 2D = two lanes divided with median; and, 2U = two lanes undivided
pcplpm = Roadway segment density expressed in passenger cars per lane per mile.

Based on the existing LOS analysis, all three study area roadway segments currently operate with satisfactory LOS at LOS B or better during the weekday and Saturday peak hours.

Existing plus Project

Traffic generated by the proposed project was added to the Existing Baseline scenario and the project impacts on the circulation system were analyzed. This scenario would determine project-specific impacts and mitigation measures (if required).

Traffic Volumes

The weekday and Saturday peak hour trip assignments for the proposed project, proposed project with Lot 7 as a baseball field, and proposed project with Lot 7 as a skate park, noted in Figures 3, 4, 5, 6, 7, and 8, respectively, were added to the Existing Baseline weekday and Saturday peak hour traffic volumes in Figures 9 and 10, respectively, which resulted in the Existing plus Project traffic volumes.

Levels of Service

Intersections

Based on the analysis methodology described in Section 1.0, the Existing plus Project weekday and Saturday peak hour traffic volumes were input into the *Traffix* LOS software to determine the intersection ICU and LOS values. Table H presents the results of the Existing plus Project intersection LOS analysis, while the LOS calculation sheets are provided in Appendix B.

Proposed Project (five single family homes)

Based on the Existing plus Project LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Existing plus Project with Lot 7 Use – Baseball Field LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Skate Park

Based on the Existing plus Project with Lot 7 Use – Skate Park LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table I presents the results of the Existing plus Project roadway segment LOS analysis, while the LOS calculation sheets are provided in Appendix C.

Table H – Existing plus Project Intersection Level of Service Summary

Intersection	Existing Baseline						Existing plus Project						V/C Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	Midday
PROPOSED PROJECT (five single family homes)															
1. Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.739	C	0.825	D	+0.001	+0.001	+0.001
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.481	A	0.000	0.000	0.000
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD															
1. Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.747	C	0.836	D	+0.001	+0.009	+0.012
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.731	C	0.484	A	0.000	+0.002	+0.003
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK															
1. Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.740	C	0.827	D	+0.001	+0.002	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.483	A	0.000	0.000	+0.002

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Table I – Existing plus Project Roadway Segment Level of Service Summary

Intersection		Existing Baseline						Existing plus Project						Density Increase		
		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	AM	PM	Midday
PROPOSED PROJECT (five single family homes)																
1. PCH, John Tyler to Malibu Cnyn	EB	9.6	A	13.7	B	13.9	B	9.6	A	13.7	B	13.9	B	0.0	0.0	0.0
	WB	8.1	A	13.2	B	16.6	B	8.1	A	13.3	B	16.6	B	0.0	+0.1	0.0
2. PCH, Malibu Cnyn to Webb Wy	EB	17.2	B	13.6	B	14.8	B	17.2	B	13.6	B	14.8	B	0.0	0.0	0.0
	WB	7.3	A	14.1	B	14.0	B	7.3	A	14.1	B	14.0	B	0.0	0.0	+0.1
3. Malibu Cnyn, PCH to Civic Cntr	NB	3.0	A	6.5	A	3.9	A	3.0	A	6.5	A	3.9	A	0.0	0.0	0.0
	SB	13.3	B	5.8	A	8.5	A	13.3	B	5.8	A	8.5	A	0.0	0.0	0.0
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD																
1. PCH, John Tyler to Malibu Cnyn	EB	9.6	A	13.7	B	13.9	B	9.6	A	13.8	B	14.1	B	0.0	+0.1	+0.2
	WB	8.1	A	13.2	B	16.6	B	8.1	A	13.4	B	16.9	B	0.0	+0.2	+0.3
2. PCH, Malibu Cnyn to Webb Wy	EB	17.2	B	13.6	B	14.8	B	17.2	B	13.8	B	15.0	B	0.0	+0.2	+0.2
	WB	7.3	A	14.1	B	14.0	B	7.3	A	14.2	B	14.2	B	0.0	+0.1	+0.2
3. Malibu Cnyn, PCH to Civic Cntr	NB	3.0	A	6.5	A	3.9	A	3.0	A	6.5	A	4.0	A	0.0	0.0	+0.1
	SB	13.3	B	5.8	A	8.5	A	13.3	B	5.8	A	8.5	A	0.0	0.0	+0.1
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK																
1. PCH, John Tyler to Malibu Cnyn	EB	9.6	A	13.7	B	13.9	B	9.6	A	13.7	B	13.9	B	0.0	0.0	0.0
	WB	8.1	A	13.2	B	16.6	B	8.1	A	13.3	B	16.7	B	0.0	+0.1	+0.1
2. PCH, Malibu Cnyn to Webb Wy	EB	17.2	B	13.6	B	14.8	B	17.2	B	13.6	B	14.9	B	0.0	0.0	+0.1
	WB	7.3	A	14.1	B	14.0	B	7.3	A	14.1	B	14.0	B	0.0	+0.1	0.0
3. Malibu Cnyn, PCH to Civic Cntr	NB	3.0	A	6.5	A	3.9	A	3.0	A	6.5	A	3.9	A	0.0	0.0	0.0
	SB	13.3	B	5.8	A	8.5	A	13.3	B	5.8	A	8.5	A	0.0	0.0	0.0

Proposed Project (five single family homes)

Based on the Existing plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Existing plus Project with Lot 7 Use – Baseball Field LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Skate Park

Based on the Existing plus Project with Lot 7 Use – Skate Park LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

4.0 OPENING YEAR 2017 TRAFFIC CONDITIONS

This section describes the future traffic conditions related to the following traffic scenarios:

- Opening Year 2017 Baseline
- Opening Year 2017 plus Project

Opening Year 2017 Baseline Condition

This scenario is comprised of existing traffic conditions, plus ambient traffic growth (2012 to 2017), plus traffic from cumulative (approved and/or pending) developments in the study area. These cumulative projects are located in the project study area, and have not yet been constructed, but have been approved or are pending approval, through a discretionary action or building permit issuance.

Traffic Controls and Intersection Geometrics

Per the City, there no improvements planned for the study area roadways and intersections in their current *Capital Improvement Program*. Therefore, the existing intersection traffic controls and geometrics were assumed for those intersections in the 2017 level of service analysis.

Traffic Volumes

The Opening Year 2017 baseline traffic in this scenario was forecast by applying an ambient growth rate of 1.5 percent per year over five years to the existing traffic volumes at both study area intersections. This growth rate was provided by City staff.

In addition, traffic from cumulative (approved and/or pending) developments in the study area was added to this scenario. These cumulative projects are located in the project study area, and have not yet been constructed, but have been approved or are pending approval, through a discretionary action or building permit issuance. Tables J and K present the list of cumulative projects in the study area, as well as their estimated trip generation for the weekday and Saturday peak hours, respectively. Both tables show trip generation estimates for the Opening Year 2017 and Future Year 2030 (buildout) conditions, as some of the projects may not be active by 2017 (construction or fully operational), or may just be under construction in 2017. The Future Year 2030 trip generation estimates assume that all projects would be constructed and in operation.

According to the tables, the cumulative projects would have a total weekday trip generation of 13,148 daily trips, 617 a.m. peak hour trips (407 inbound and 210 outbound), and 1,133 p.m. peak hour trips (570 inbound and 563 outbound). The total Saturday trip generation for the cumulative projects is 14,172 daily trips, and 1,386 midday peak hour trips (739 inbound and 648 outbound). Figure 11 shows the locations of the cumulative projects. Figures 12 and 13 illustrate the cumulative projects' total trip assignment at the study area intersections for the weekday and Saturday peak hours, respectively. The list of cumulative projects currently being processed in the City, and their trip assignments, are located in Appendix D.

The ambient growth rate and trips from cumulative projects were applied to the existing traffic volumes to derive the Opening Year 2017 Baseline traffic volumes. Figures 14 and 15 illustrate the resulting Opening Year 2017 Baseline weekday a.m. and p.m. peak hour, and Saturday midday peak hour traffic volumes, respectively.

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Table J - Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 AM Peak Hour In	Out	Total	Opening Year 2017 PM Peak Hour In	Out	Total	Future Year 2030 Daily	Future Year 2030 AM Peak Hour In	Out	Total	Future Year 2030 PM Peak Hour In	Out	Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES [2]																
- Single-Family Detached Housing (210)	per DU	9.52	0.19	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per TSF	*ITE*	*ITE equation*			*ITE equation*			*ITE*	*ITE equation*			*ITE equation*			
- General Office Buildling (710)	per TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																
1. 5905 and 5909 Latigo Canyon Road																
Single-Family Detached Housing	2 Dus	10	0	0	0	0	0	0	19	0	1	2	1	1	2	Under construction in 2017; construction
Total		**10**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**1**	**2**	**1**	**1**	**2**	traffic would occur before both peak hours.
2. 27535 PCH																
Single-Family Detached Housing	1 DU	10	0	1	1	1	0	1	10	0	1	1	1	0	1	Asssumed to be built-out by 2017.
Total		**10**	**0**	**1**	**1**	**1**	**0**	**1**	**10**	**0**	**1**	**1**	**1**	**0**	**1**	
3. Hajian Office																
General Office	9.685 TSF	107	13	2	15	2	12	14	107	13	2	15	2	12	14	Asssumed to be built-out by 2017.
Total		**107**	**13**	**2**	**15**	**2**	**12**	**14**	**107**	**13**	**2**	**15**	**2**	**12**	**14**	
4. Towing Subdivision																
Single-Family Detached Housing	4 DUs	38	1	2	3	3	1	4	38	1	2	3	3	1	4	Asssumed to be built-out by 2017.
Total		**38**	**1**	**2**	**3**	**3**	**1**	**4**	**38**	**1**	**2**	**3**	**3**	**1**	**4**	
5. Rancho Malibu Hotel																
trip generation per April 2012 TIA prepared by Overland Consultants		2,182	63	44	107	101	84	185	2,182	63	44	107	101	84	185	Per TIA, project asssumed to be built-out by
Total		**2,182**	**63**	**44**	**107**	**101**	**84**	**185**	**2,182**	**63**	**44**	**107**	**101**	**84**	**185**	2016.
6. La Paz Shopping Center																
Shopping Center	77.110 TSF	5,735	81	52	133	247	257	503	5,735	81	52	133	247	257	503	Asssumed to be built-out by 2017.
General Office	34.948 TSF	385	48	7	55	9	43	52	385	48	7	55	9	43	52	
Junior/Community College	20.000 TSF	550	44	16	60	29	21	51	550	44	16	60	29	21	51	
- pass-by for Shopping Center (42%) [2]		*-2,414*	*-34*	*-22*	*-56*	*-104*	*-108*	*-212*	*-2,414*	*-34*	*-22*	*-56*	*-104*	*-108*	*-212*	
Total		**4,256**	**139**	**52**	**191**	**181**	**213**	**394**	**4,256**	**139**	**52**	**191**	**181**	**213**	**394**	
7. Whole Foods Shopping Center																
trip generation per May 2011 TIA prepared by Overland Consultants		2,296	61	42	103	79	77	156	2,296	61	42	103	79	77	156	Per TIA, project asssumed to be built-out by
Total		**2,296**	**61**	**42**	**103**	**79**	**77**	**156**	**2,296**	**61**	**42**	**103**	**79**	**77**	**156**	2015.
8. City of Malibu Civic Center Wastewater Treatment Facility																
Wastewater Treatment Facility		20	0	0	0	0	0	0	2	0	0	0	0	0	0	Asssumed to be under construction in 2017
Total		**20**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	with 1 truck and 9 workers per day with cons-
																truction traffic occurring before both peak
																hours; at build-out, only 1 truck per day.
9. Santa Monica College																
Junior/Community College	200 students	246	20	4	24	15	9	24	246	20	4	24	15	9	24	Project under construction; asssumed to be
Total		**246**	**20**	**4**	**24**	**15**	**9**	**24**	**246**	**20**	**4**	**24**	**15**	**9**	**24**	built-out by 2017.
10. Housing Element Update																
28455 PCH (apartments @ 20 DUs/acre)	102 DUs	0	0	0	0	0	0	0	681	10	42	52	41	22	63	Project under Planning review and no action
28401 PCH (apartments @ 20 DUs/acre)	65 DUs	0	0	0	0	0	0	0	432	7	27	33	26	14	40	is anticipated to occur by 2017.
3700 La Paz Lane (apartments @ 20 DUs/acre)	46 DUs	0	0	0	0	0	0	0	306	5	19	23	19	10	29	
		0	**0**	**0**	**0**	**0**	**0**	**0**	**1,419**	**22**	**87**	**109**	**86**	**46**	**132**	
11. Malibu Sycamore Village																
trip generation per August 2013 TIA prepared by Overland Consultants		3,083	120	70	190	128	141	269	3,083	120	70	190	128	141	269	Per TIA, project asssumed to be built-out by
Total		**3,083**	**120**	**70**	**190**	**128**	**141**	**269**	**3,083**	**120**	**70**	**190**	**128**	**141**	**269**	2015; assumed 0.20 FAR project.
12. Pepperdine Campus Life Project																
trip generation per September 3, 2010 TIA prepared by ATE																Phase I built-out by 2017; Phase II
Phase I		-477	-22	-22	-44	-16	-16	-32								built-out by 2030.
Phases I & II									-744	-34	-33	-67	-26	-26	-52	
Total		**-477**	**-22**	**-22**	**-44**	**-16**	**-16**	**-32**	**-744**	**-34**	**-33**	**-67**	**-26**	**-26**	**-52**	
13. Pierview Restaurant																
Quality Restaurant	7.100 TSF	639	3	3	6	36	18	53	639	3	3	6	36	18	53	Asssumed to be built-out by 2017.
Total		**639**	**3**	**3**	**6**	**36**	**18**	**53**	**639**	**3**	**3**	**6**	**36**	**18**	**53**	

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Table J - Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Future Year 2030 Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES [2]																
- Single-Family Detached Housing (210)	per DU	9.52	0.19	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per TSF	*ITE*		*ITE equation*			*ITE equation*		*ITE*		*ITE equation*			*ITE equation*		
- General Office Buildling (710)	per TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																
14. Windsail Restaurant																
Quality Restaurant	5.904 TSF	531	2	2	5	30	15	44	531	2	2	5	30	15	44	Asssumed to be built-out by 2017.
Total		**531**	**2**	**2**	**5**	**30**	**15**	**44**	**531**	**2**	**2**	**5**	**30**	**15**	**44**	
15. 22959 PCH Office																
Shopping Center	4.517 TSF	0	0	0	0	0	0	0	907	14	9	24	37	38	75	Project under Planning review and no action
General Office	2.630 TSF	0	0	0	0	0	0	0	29	4	0	4	1	3	4	is anticipated to occur by 2017.
- pass-by for Shopping Center (55%) [3]		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*-499*	*-8*	*-5*	*-13*	*-20*	*-21*	*-41*	
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**437**	**10**	**5**	**15**	**17**	**21**	**38**	
16. 22729 PCH Office																
General Office	2.499 TSF	28	3	0	4	1	3	4	28	3	0	4	1	3	4	Asssumed to be built-out by 2017.
Total		**28**	**3**	**0**	**4**	**1**	**3**	**4**	**28**	**3**	**0**	**4**	**1**	**3**	**4**	
17. Carbon Condominiums																
Residential Condominium/Townhouse	8 DUs	46	1	3	4	3	1	4	46	1	3	4	3	1	4	Asssumed to be built-out by 2017.
Total		**46**	**1**	**3**	**4**	**3**	**1**	**4**	**46**	**1**	**3**	**4**	**3**	**1**	**4**	
18. 18805, 18807 and 18809 PCH																
Single-Family Detached Housing	3 DUs	29	1	2	2	2	1	3	29	1	2	2	2	1	3	Asssumed to be built-out by 2017.
Total		**29**	**1**	**2**	**2**	**2**	**1**	**3**	**29**	**1**	**2**	**2**	**2**	**1**	**3**	
19. 22301, 22303, 22305 and 22309 PCH																
Single-Family Detached Housing	4 DUs	38	1	2	3	3	1	4	38	1	2	3	3	1	4	Asssumed to be built-out by 2017.
Total		**38**	**1**	**2**	**3**	**3**	**1**	**4**	**38**	**1**	**2**	**3**	**3**	**1**	**4**	
20. 21997 and 22003 PCH																
Single-Family Detached Housing	2 DUs	19	0	1	2	1	1	2	19	0	1	2	1	1	2	Asssumed to be built-out by 2017.
Total		**19**	**0**	**1**	**2**	**1**	**1**	**2**	**19**	**0**	**1**	**2**	**1**	**1**	**2**	
21. 3314 Serra Road Subdivision																
Single-Family Detached Housing	3 DUs	29	1	2	2	2	1	3	29	1	2	2	2	1	3	Asssumed to be built-out by 2017.
Total		**29**	**1**	**2**	**2**	**2**	**1**	**3**	**29**	**1**	**2**	**2**	**2**	**1**	**3**	
22. 20624 and 20630 PCH																
Single-Family Detached Housing	2 DUs	10	0	0	0	0	0	0	19	0	1	2	1	1	2	Under construction in 2017; construction
Total		**10**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**1**	**2**	**1**	**1**	**2**	traffic would occur before both peak hours.
23. Seaboard																
Single-Family Detached Housing	1 DU	10	0	0	0	0	0	0	10	0	1	1	1	0	1	Under construction in 2017; construction
Total		**10**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**1**	**1**	**1**	**0**	**1**	traffic would occur before both peak hours.
TOTAL CUMULATIVE PROJECTS TRIP GENERATION		**13,148**	**407**	**210**	**617**	**570**	**563**	**1,133**	**14,737**	**428**	**294**	**721**	**667**	**622**	**1,288**	

Notes: Trip rates based on Institute of Transportation Engineers (ITE) *Trip Generation, 9th Edition* , 2012 and *Trip Generation Handbook* , 2004.

[1] TSF = Thousand Square Feet

[2] Pass By Trip Reduction percentage based logrithmic equation for Shopping Center land use in ITE *Trip Generation Handbook* , 2004.

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Table K - Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 Midday Peak Hour In	Opening Year 2017 Midday Peak Hour Out	Opening Year 2017 Midday Peak Hour Total	Future Year 2030 Daily	Future Year 2030 Midday Peak Hour In	Future Year 2030 Midday Peak Hour Out	Future Year 2030 Midday Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES [2]										
- Single-Family Detached Housing (210)	per DU	9.91	0.50	0.43	0.93	9.91	0.50	0.43	0.93	
- Residential Condominium/Townhouse (230)	per DU	5.67	0.25	0.22	0.47	5.67	0.25	0.22	0.47	
- Apartment (220)	per DU	6.39	0.26	0.26	0.52	6.39	0.26	0.26	0.52	
- Shopping Center (820)	per TSF	*ITE*		*ITE equation*		*ITE*		*ITE equation*		
- General Office Buildling (710)	per TSF	2.46	0.23	0.20	0.43	2.46	0.23	0.20	0.43	
- Junior/Community College (540)	per TSF	11.23	0.81	0.61	1.42	11.23	0.81	0.61	1.42	
- Junior/Community College (540)	per student	0.42	0.03	0.02	0.05	0.42	0.03	0.02	0.05	
- Recrecational Community Center (495)	per TSF	9.10	0.58	0.49	1.07	9.10	0.58	0.49	1.07	
- Quality Restaurant (931)	per TSF	94.36	6.38	4.44	10.82	94.36	6.38	4.44	10.82	
TRIP GENERATION										
1. 5905 and 5909 Latigo Canyon Road										
Single-Family Detached Housing	2 Dus	10	0	0	0	20	1	1	2	Under construction in 2017; construction
Total		**10**	**0**	**0**	**0**	**20**	**1**	**1**	**2**	traffic would occur before midday peak hour.
2. 27535 PCH										
Single-Family Detached Housing	1 DU	10	1	0	1	10	1	0	1	Asssumed to be built-out by 2017.
Total		**10**	**1**	**0**	**1**	**10**	**1**	**0**	**1**	
3. Hajian Office										
General Office	9.685 TSF	24	2	2	4	24	2	2	4	Asssumed to be built-out by 2017.
Total		**24**	**2**	**2**	**4**	**24**	**2**	**2**	**4**	
4. Towing Subdivision										
Single-Family Detached Housing	4 DUs	40	2	2	4	40	2	2	4	Asssumed to be built-out by 2017.
Total		**40**	**2**	**2**	**4**	**40**	**2**	**2**	**4**	
5. Rancho Malibu Hotel										
trip generation per April 2012 TIA prepared by Overland Consultants		2,120	112	97	209	2,120	112	97	209	Per TIA, project asssumed to be built-out by
Total		**2,120**	**112**	**97**	**209**	**2,120**	**112**	**97**	**209**	2016.
6. La Paz Shopping Center										
Shopping Center	77.110 TSF	7,844	384	354	738	7,844	384	354	738	Asssumed to be built-out by 2017.
General Office	34.948 TSF	86	8	7	15	86	8	7	15	
Junior/Community College	20.000 TSF	225	16	12	28	225	16	12	28	
- pass-by for Shopping Center (42%) [2]		*-3,302*	*-162*	*-149*	*-311*	*-3,302*	*-162*	*-149*	*-311*	
Total		**4,853**	**247**	**224**	**471**	**4,853**	**247**	**224**	**471**	
7. Whole Foods Shopping Center										
trip generation per May 2011 TIA prepared by Overland Consultants		2,528	117	111	228	2,528	117	111	228	Per TIA, project asssumed to be built-out by
Total		**2,528**	**117**	**111**	**228**	**2,528**	**117**	**111**	**228**	2015.
8. City of Malibu Civic Center Wastewater Treatment Facility										
Wastewater Treatment Facility		20	0	0	0	2	0	0	0	Asssumed to be under construction in 2017
Total		**20**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	with 1 truck and 9 workers per day with cons-
										truction traffic occurring before the midday
										peak hour; at build-out, only 1 truck per day.
9. Santa Monica College										
Junior/Community College	200 students	84	6	4	10	84	6	4	10	Project under construction; asssumed to be
Total		**84**	**6**	**4**	**10**	**84**	**6**	**4**	**10**	built-out by 2017.
10. Housing Element Update										
28455 PCH (apartments @ 20 DUs/acre)	102 DUs	0	0	0	0	654	27	27	53	Project under Planning review and no action
28401 PCH (apartments @ 20 DUs/acre)	65 DUs	0	0	0	0	415	17	17	34	is anticipated to occur by 2017.
3700 La Paz Lane (apartments @ 20 DUs/acre)	46 DUs	0	0	0	0	294	12	12	24	
		0	**0**	**0**	**0**	**1,364**	**55**	**55**	**111**	
11. Malibu Sycamore Village										
trip generation per August 2013 TIA prepared by Overland Consultants		3,305	172	153	325	3,305	172	153	325	Per TIA, project asssumed to be built-out by
Total		**3,305**	**172**	**153**	**325**	**3,305**	**172**	**153**	**325**	2015; assumed 0.20 FAR project.
12. Pepperdine Campus Life Project										
trip generation per September 3, 2010 TIA prepared by ATE [3]										Phase I built-out by 2017; Phase II
Phase I		-239	-11	-11	-22					built-out by 2030.
Phases I & II						-372	-17	-17	-34	
Total		**-239**	**-11**	**-11**	**-22**	**-372**	**-17**	**-17**	**-34**	
13. Pierview Restaurant										
Quality Restaurant	7.100 TSF	670	45	31	77	670	45	31	77	Asssumed to be built-out by 2017.
Total		**670**	**45**	**31**	**77**	**670**	**45**	**31**	**77**	
14. Windsail Restaurant										
Quality Restaurant	5.904 TSF	557	38	26	64	557	38	26	64	Asssumed to be built-out by 2017.
Total		**557**	**38**	**26**	**64**	**557**	**38**	**26**	**64**	

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Table K - Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

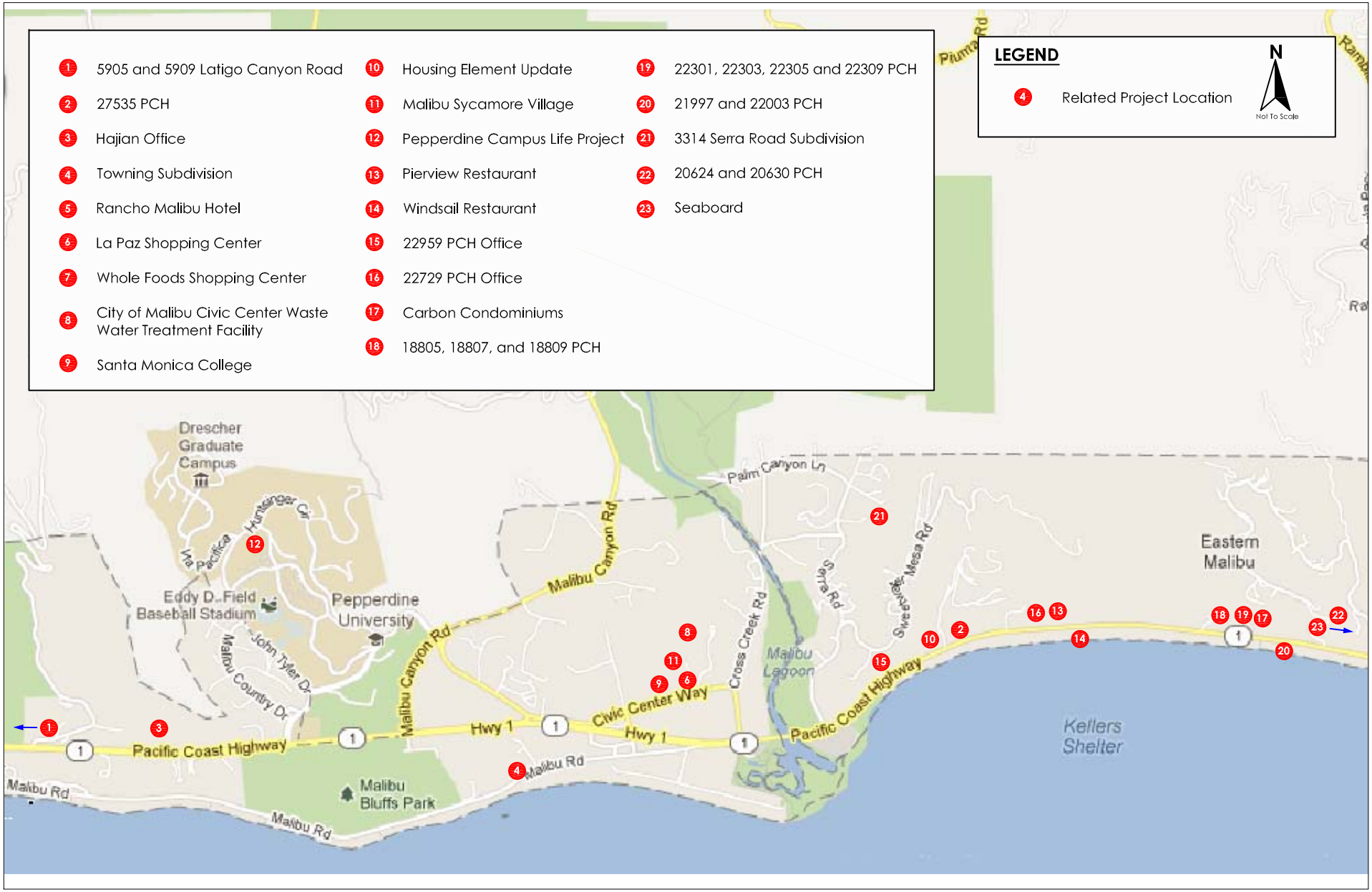
Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 Midday Peak Hour In	Opening Year 2017 Midday Peak Hour Out	Opening Year 2017 Midday Peak Hour Total	Future Year 2030 Daily	Future Year 2030 Midday Peak Hour In	Future Year 2030 Midday Peak Hour Out	Future Year 2030 Midday Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES [2]										
- Single-Family Detached Housing (210)	per DU	9.91	0.50	0.43	0.93	9.91	0.50	0.43	0.93	
- Residential Condominium/Townhouse (230)	per DU	5.67	0.25	0.22	0.47	5.67	0.25	0.22	0.47	
- Apartment (220)	per DU	6.39	0.26	0.26	0.52	6.39	0.26	0.26	0.52	
- Shopping Center (820)	per TSF	*ITE*		*ITE equation*		*ITE*		*ITE equation*		
- General Office Buildling (710)	per TSF	2.46	0.23	0.20	0.43	2.46	0.23	0.20	0.43	
- Junior/Community College (540)	per TSF	11.23	0.81	0.61	1.42	11.23	0.81	0.61	1.42	
- Junior/Community College (540)	per student	0.42	0.03	0.02	0.05	0.42	0.03	0.02	0.05	
- Recrecational Community Center (495)	per TSF	9.10	0.58	0.49	1.07	9.10	0.58	0.49	1.07	
- Quality Restaurant (931)	per TSF	94.36	6.38	4.44	10.82	94.36	6.38	4.44	10.82	
TRIP GENERATION										
15. 22959 PCH Office										
Shopping Center	4.517 TSF	0	0	0	0	1,313	61	56	117	Project under Planning review and no action
General Office	2.630 TSF	0	0	0	0	6	1	1	1	is anticipated to occur by 2017.
	- pass-by for Shopping Center (55%) [3]	*0*	*0*	*0*	*0*	*-722*	*-33*	*-31*	*-64*	
Total		**0**	**0**	**0**	**0**	**597**	**28**	**26**	**54**	
16. 22729 PCH Office										
General Office	2.499 TSF	6	1	0	1	6	1	0	1	Asssumed to be built-out by 2017.
Total		**6**	**1**	**0**	**1**	**6**	**1**	**0**	**1**	
17. Carbon Condominiums										
Residential Condominium/Townhouse	8 DUs	45	2	2	4	45	2	2	4	Asssumed to be built-out by 2017.
Total		**45**	**2**	**2**	**4**	**45**	**2**	**2**	**4**	
18. 18805, 18807 and 18809 PCH										
Single-Family Detached Housing	3 DUs	30	2	1	3	30	2	1	3	Asssumed to be built-out by 2017.
Total		**30**	**2**	**1**	**3**	**30**	**2**	**1**	**3**	
19. 22301, 22303, 22305 and 22309 PCH										
Single-Family Detached Housing	4 DUs	40	2	2	4	40	2	2	4	Asssumed to be built-out by 2017.
Total		**40**	**2**	**2**	**4**	**40**	**2**	**2**	**4**	
20. 21997 and 22003 PCH										
Single-Family Detached Housing	2 DUs	20	1	1	2	20	1	1	2	Asssumed to be built-out by 2017.
Total		**20**	**1**	**1**	**2**	**20**	**1**	**1**	**2**	
21. 3314 Serra Road Subdivision										
Single-Family Detached Housing	3 DUs	30	2	1	3	30	2	1	3	Asssumed to be built-out by 2017.
Total		**30**	**2**	**1**	**3**	**30**	**2**	**1**	**3**	
22. 20624 and 20630 PCH										
Single-Family Detached Housing	2 DUs	10	0	0	0	20	1	1	2	Under construction in 2017; construction
Total		**10**	**0**	**0**	**0**	**20**	**1**	**1**	**2**	traffic would occur before midday peak hour.
23. Seaboard										
Single-Family Detached Housing	1 DU	10	0	0	0	10	1	0	1	Under construction in 2017; construction
Total		**10**	**0**	**0**	**0**	**10**	**1**	**0**	**1**	traffic would occur before midday peak hour.
TOTAL CUMULATIVE PROJECTS TRIP GENERATION		**14,172**	**739**	**648**	**1,386**	**16,001**	**819**	**726**	**1,544**	

Notes: Trip rates based on Institute of Transportation Engineers (ITE) *Trip Generation, 9th Edition* , 2012 and *Trip Generation Handbook* , 2004.

[1] TSF = Thousand Square Feet

[2] Pass By Trip Reduction percentage based logrithmic equation for Shopping Center land use in ITE *Trip Generation Handbook* , 2004.

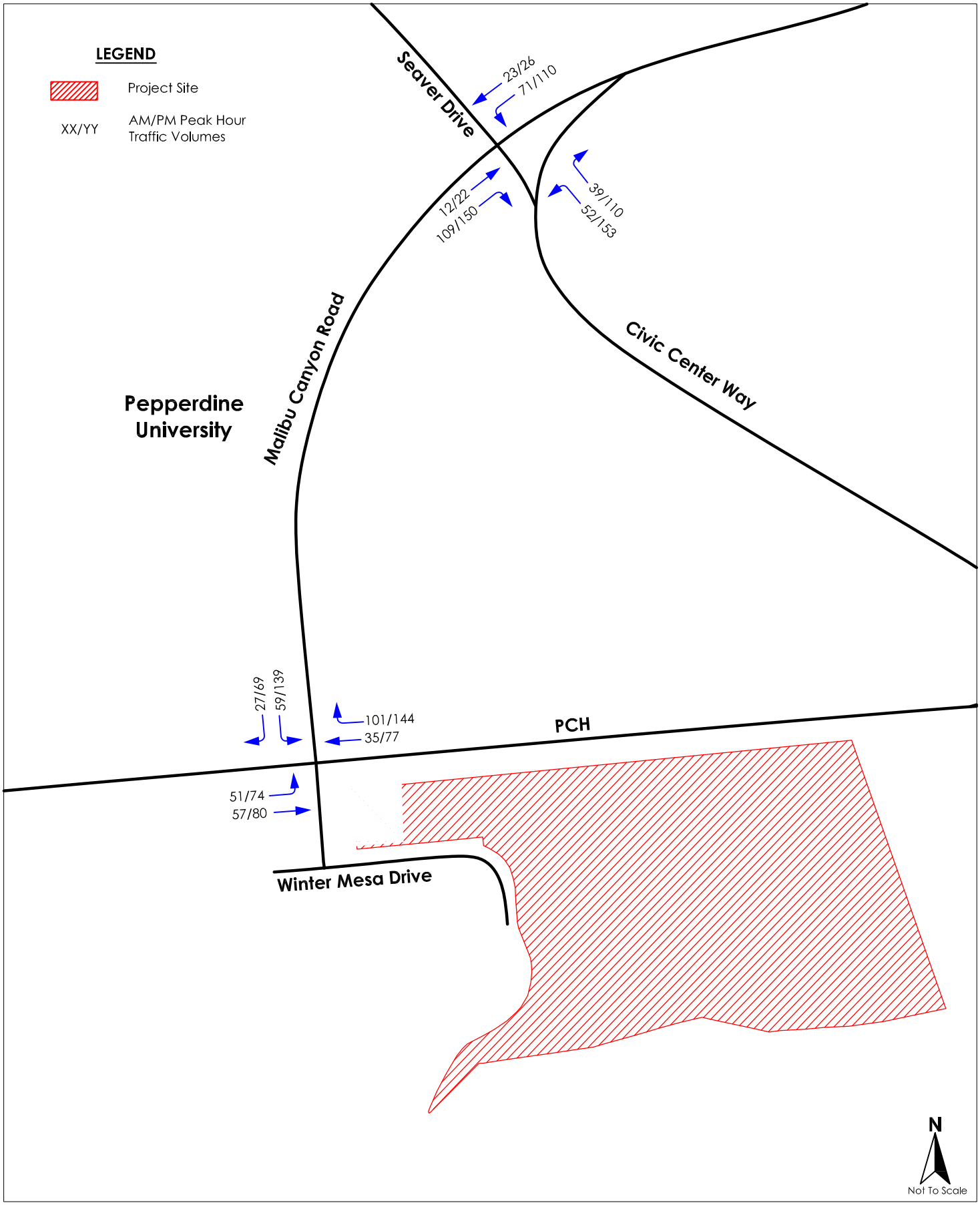
[3] No Saturday trip generation estimates were provided in the ATE traffic study, therefore generation was assumed to be half of the weekday trip generation as there is less student activity during the weekends.



Map Source: Google Maps, November 2012.

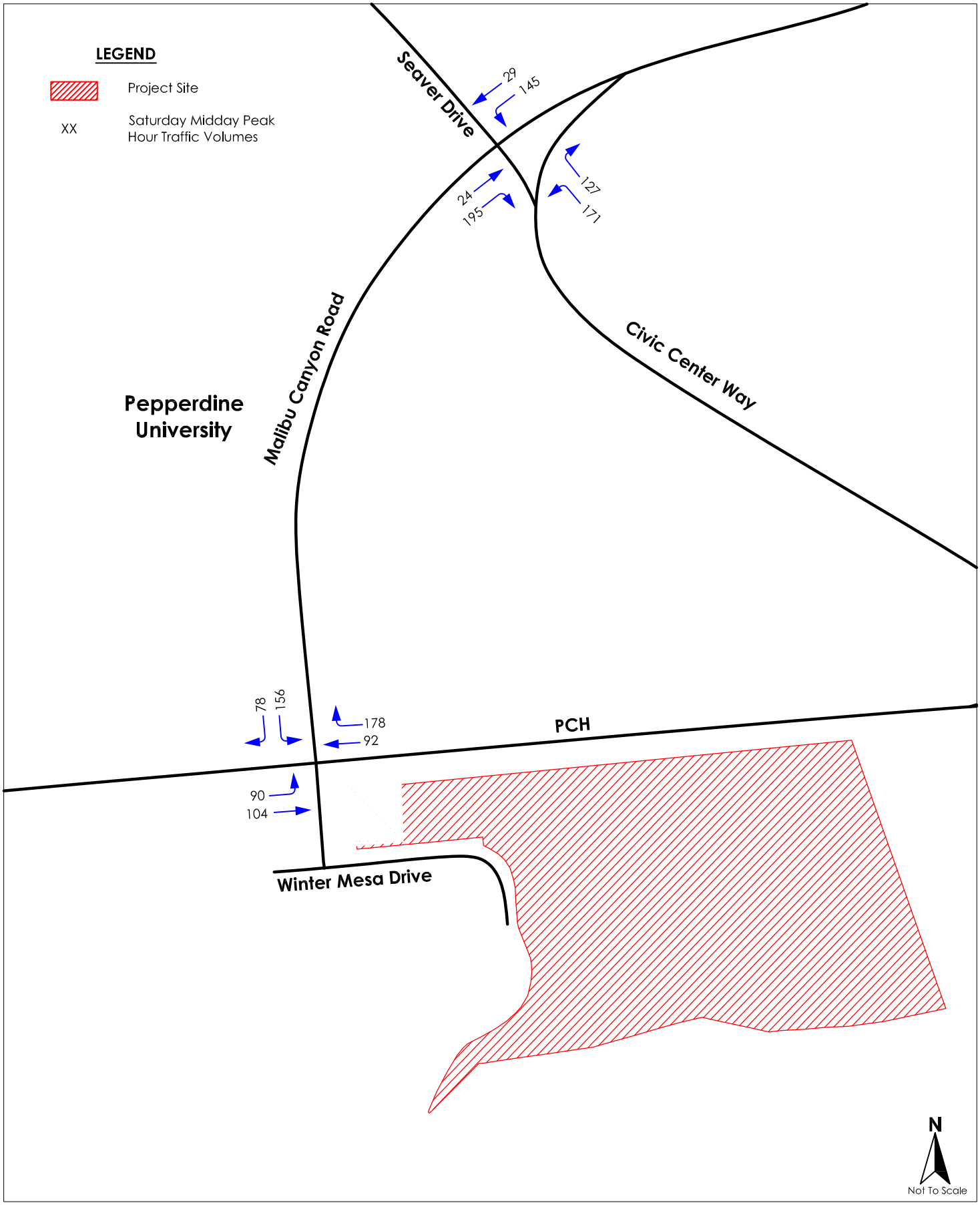
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Figure 11
Cumulative Projects Location Map



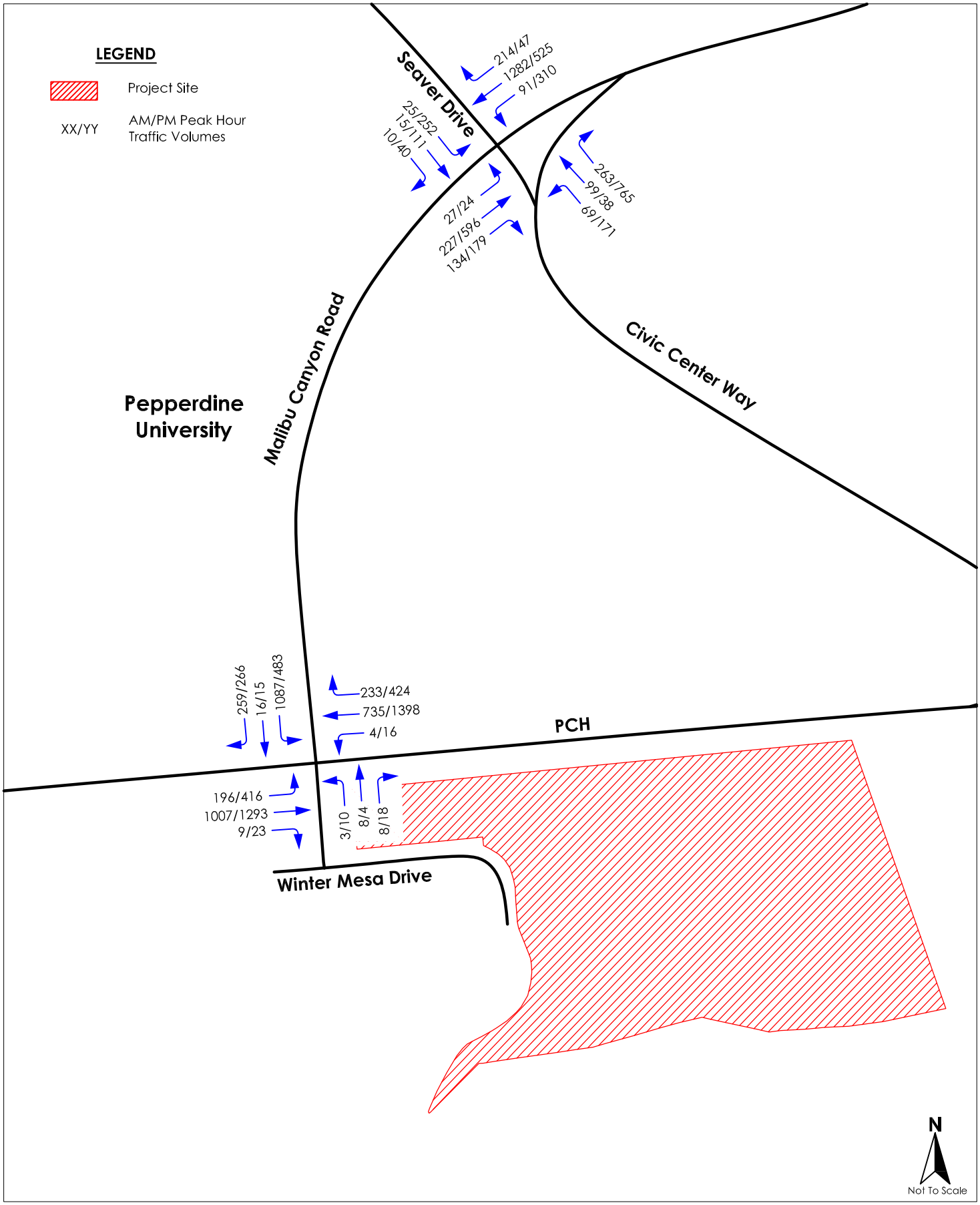
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Figure 12
Cumulative Projects Weekday
AM and PM Peak Hour Trip Assignment



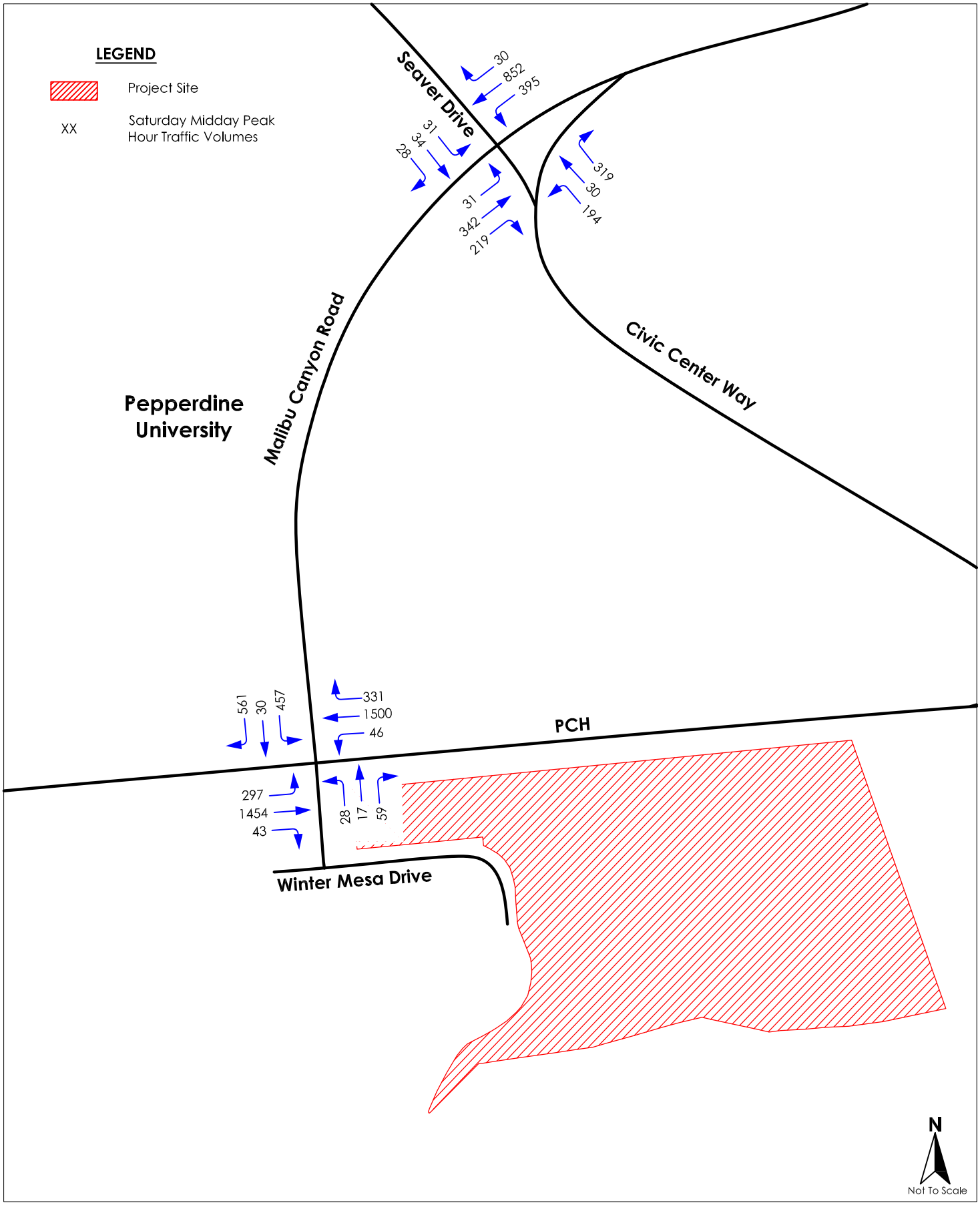
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Figure 13
Cumulative Projects Saturday Midday Peak Hour Trip Assignment



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Figure 14
Opening Year 2017 Baseline
AM and PM Peak Hour Traffic Volumes



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Figure 15
Opening Year 2017 Baseline Saturday Midday Peak Hour Traffic Volumes

Levels of Service

Intersections

The Opening Year 2017 Baseline weekday a.m. and p.m. peak hour, and Saturday midday peak hour traffic volumes were input into the *Traffix* LOS software to determine the ICU and resulting LOS values. Table L presents the results of the Opening Year 2017 Baseline intersection LOS analysis, while the LOS calculation sheets are provided in Appendix B.

Table L – Opening Year 2017 Baseline Intersection Level of Service Summary

Intersection	Control	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		V/C	LOS	V/C	LOS	V/C	LOS
1. Malibu Canyon Road/PCH	signal	0.879	D	0.880	D	0.956	E
2. Malibu Canyon Rd/Civic Center Way	signal	0.638	B	0.954	E	0.722	C

Note: LOS determined using ICU method.

Based on the Opening Year 2017 Baseline LOS analysis, Malibu Canyon Road/PCH is forecast to operate at LOS E during the Saturday midday peak hour. Malibu Canyon Road/Civic Center Way is forecast to operate at LOS E during the weekday p.m. peak hour.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table M presents the results of the Opening Year 2017 Baseline roadway segment LOS analysis, while the LOS calculation sheets are provided in Appendix C.

Table M – Opening Year 2017 Baseline Roadway Segment Level of Service Summary

Intersection	# lanes and median	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS
1. PCH, John Tyler Dr to Malibu Cyn Rd							
- eastbound	2D	11.2	B	16.0	B	16.8	B
- westbound	2D	9.1	A	15.6	B	19.5	C
2. PCH, Malibu Cyn Rd to Webb Way							
- eastbound	2D	19.4	C	16.9	B	18.7	C
- westbound	2D	9.2	A	17.7	B	18.1	C
3. Malibu Cyn Rd, PCH to Civic Center							
- northbound	2U	5.0	A	9.3	A	7.1	A
- southbound	2U	15.5	B	8.8	A	12.1	B

Note: LOS determined using HCM Multilane Highways Operations method.
# lanes and median: 2D = two lanes divided with median; and, 2U = two lanes undivided
pcplpm = Roadway segment density expressed in passenger cars per lane per mile.

Based on the existing LOS analysis, all three study area roadway segments are forecast to operate with satisfactory LOS at LOS C or better during the weekday and Saturday peak hours.

Opening Year 2017 plus Project

Traffic generated by the proposed project was added to the Opening Year 2017 Baseline scenario and the project impacts on the circulation system were analyzed. This scenario would determine project-specific impacts and mitigation measures (if required).

Traffic Volumes

The proposed project trip assignments for the weekday and Saturday peak hours, noted in Figures 3, 4, 5, 6, 7, and 8, respectively, were added to the Opening Year 2017 Baseline weekday and Saturday peak hour traffic volumes in Figures 14 and 15, respectively, which resulted in the Opening Year 2017 plus Project traffic volumes. Figures 16 and 17 illustrate the Opening Year 2017 plus Project weekday and Saturday peak hour traffic volumes, respectively. Figures 18 and 19 illustrate the Opening Year 2017 plus Project with Lot 7 Use – Baseball Field weekday and Saturday peak hour traffic volumes, respectively. Figures 20 and 21 illustrate the Opening Year 2017 plus Project with Lot 7 Use – Skate Park weekday and Saturday peak hour traffic volumes, respectively.

Levels of Service

Intersections

Based on the analysis methodology described in Section 1.0, the Opening Year 2017 plus Project weekday and Saturday peak hour traffic volumes were input into the *Traffix* LOS software to determine the intersection ICU and LOS values. Table N presents the results of the Opening Year 2017 plus Project intersection LOS analysis, while the LOS calculation sheets are provided in Appendix B.

Proposed Project (five single family homes)

Based on the Opening Year 2017 plus Project LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

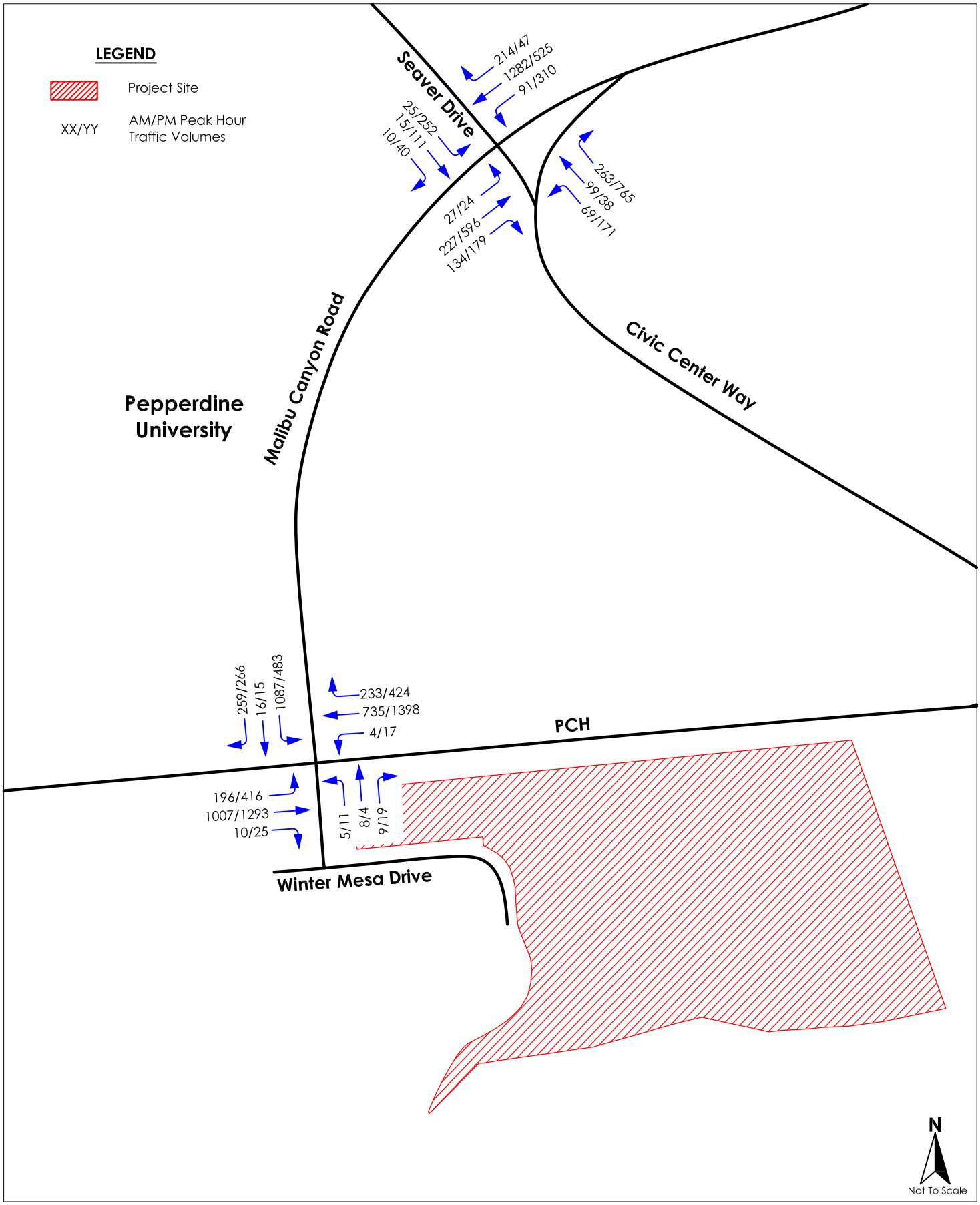
Proposed Project with Lot 7 Use – Baseball Field

Based on the Opening Year 2017 plus Project with Lot 7 Use – Baseball Field LOS analysis, and the significance criteria of the City, the proposed project would create a significant impact at Malibu Canyon Road/PCH during the Saturday midday peak hour as this intersection is forecast to continue to operate at LOS E (0.968 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F). The following mitigation measure would be required:

Mitigation Measure T-1: Prior to obtaining a Certificate of Occupancy, the Project Applicant(s) shall construct the following improvements:

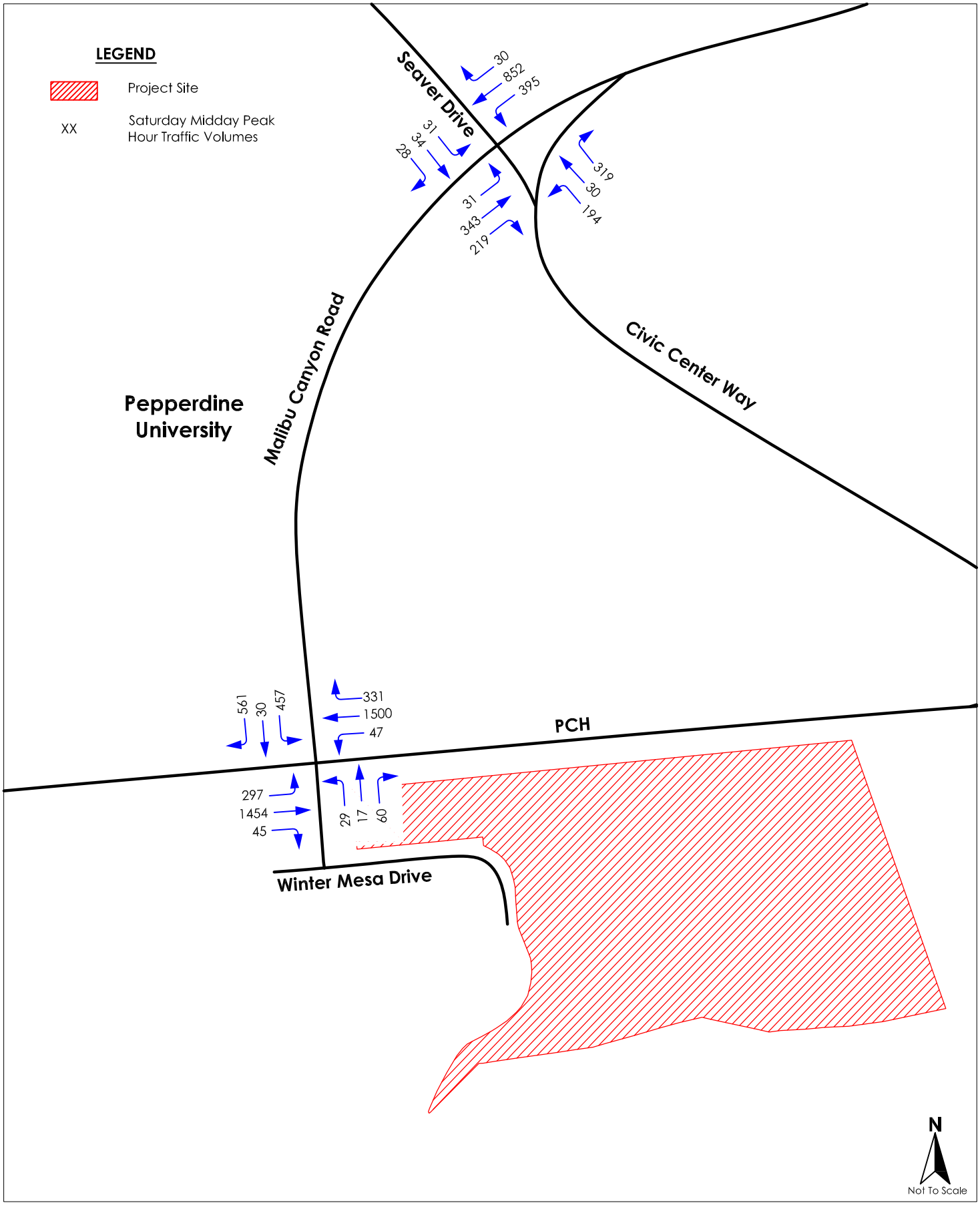
Malibu Canyon Road/PCH

- Re-stripe the existing southbound through plus left-turn lane to a through plus left- and right-turn lane.



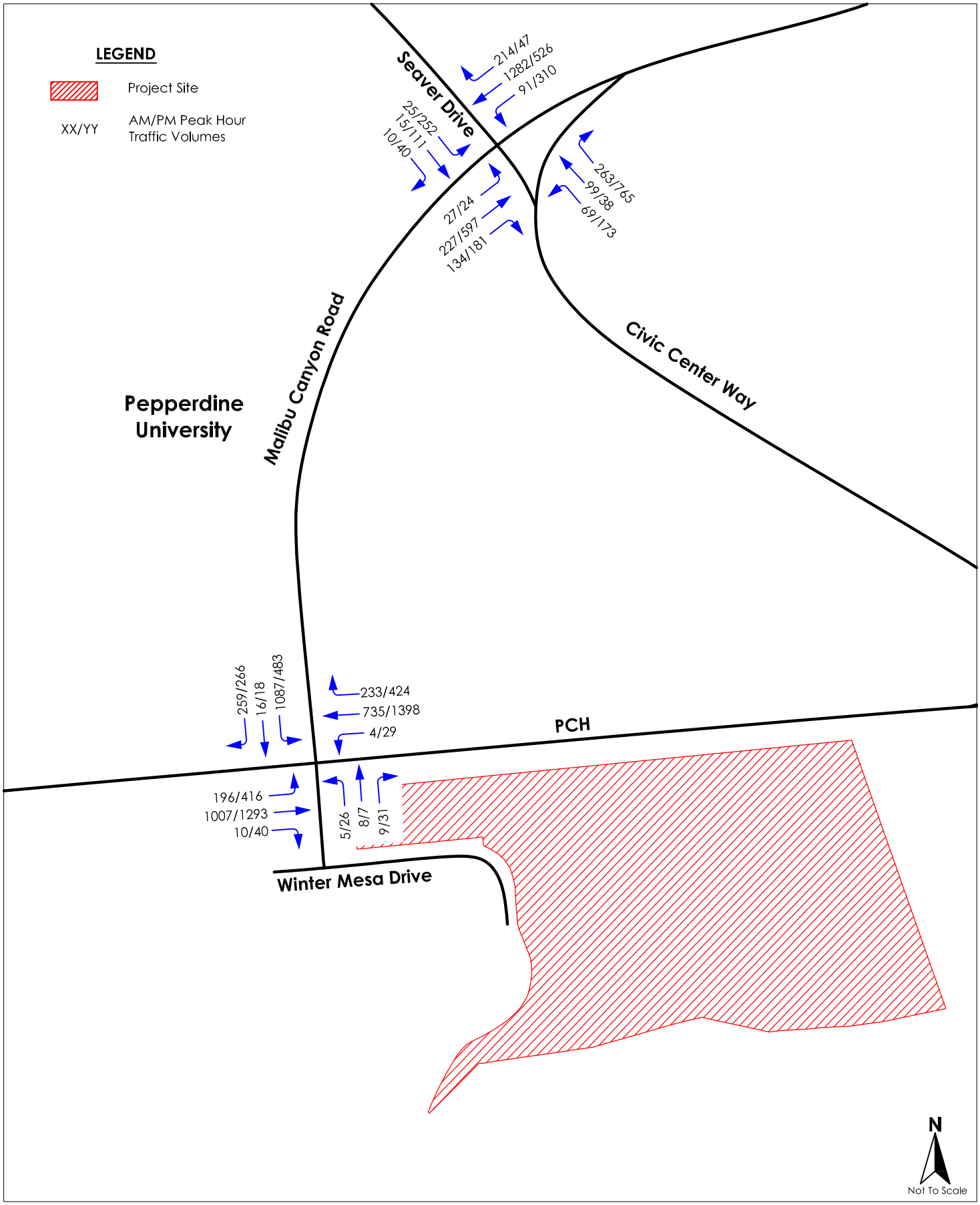
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Figure 16
Opening Year 2017 plus Project
AM and PM Peak Hour Traffic Volumes



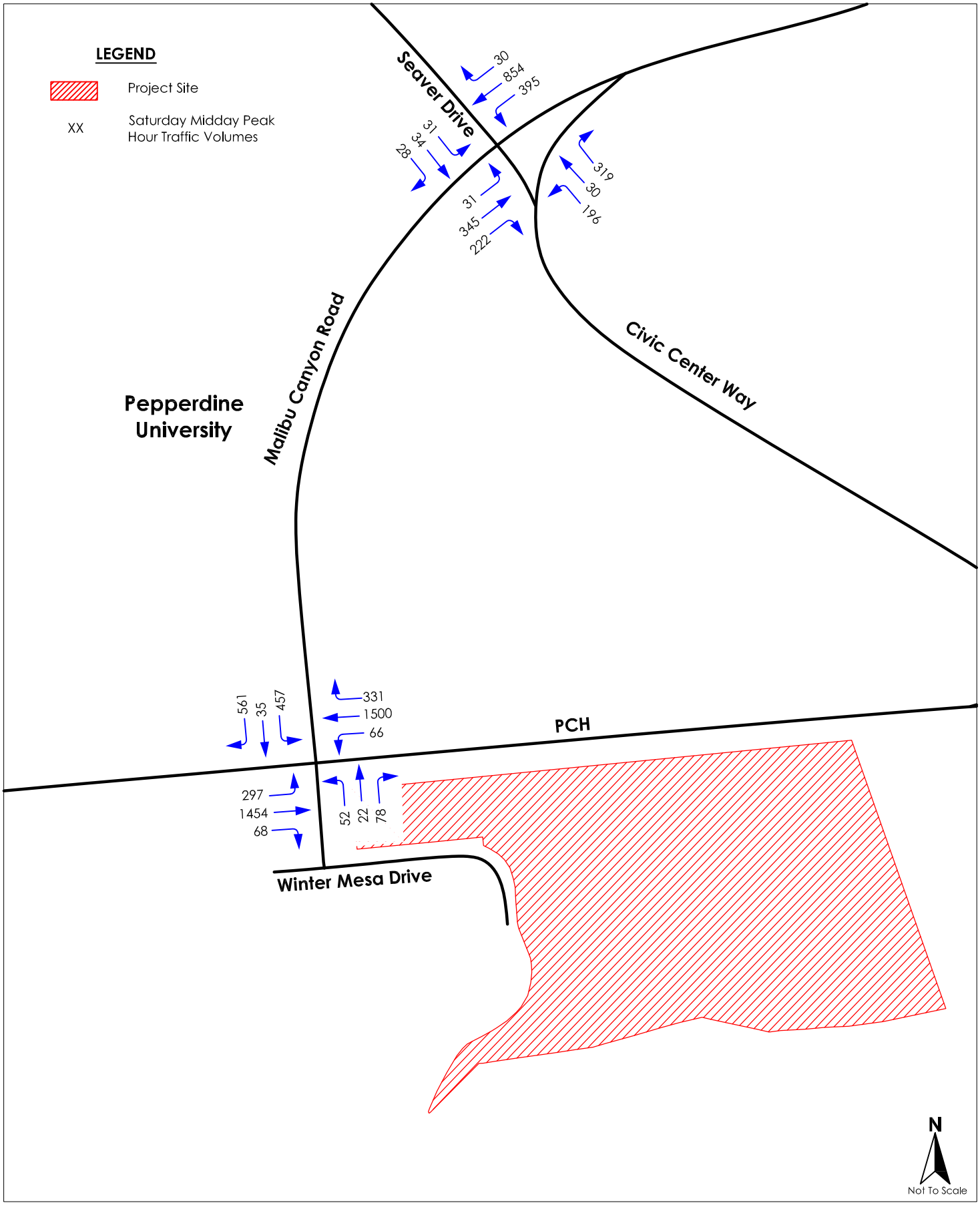
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Figure 17
Opening Year 2017 plus Project Saturday Midday Peak Hour Traffic Volumes



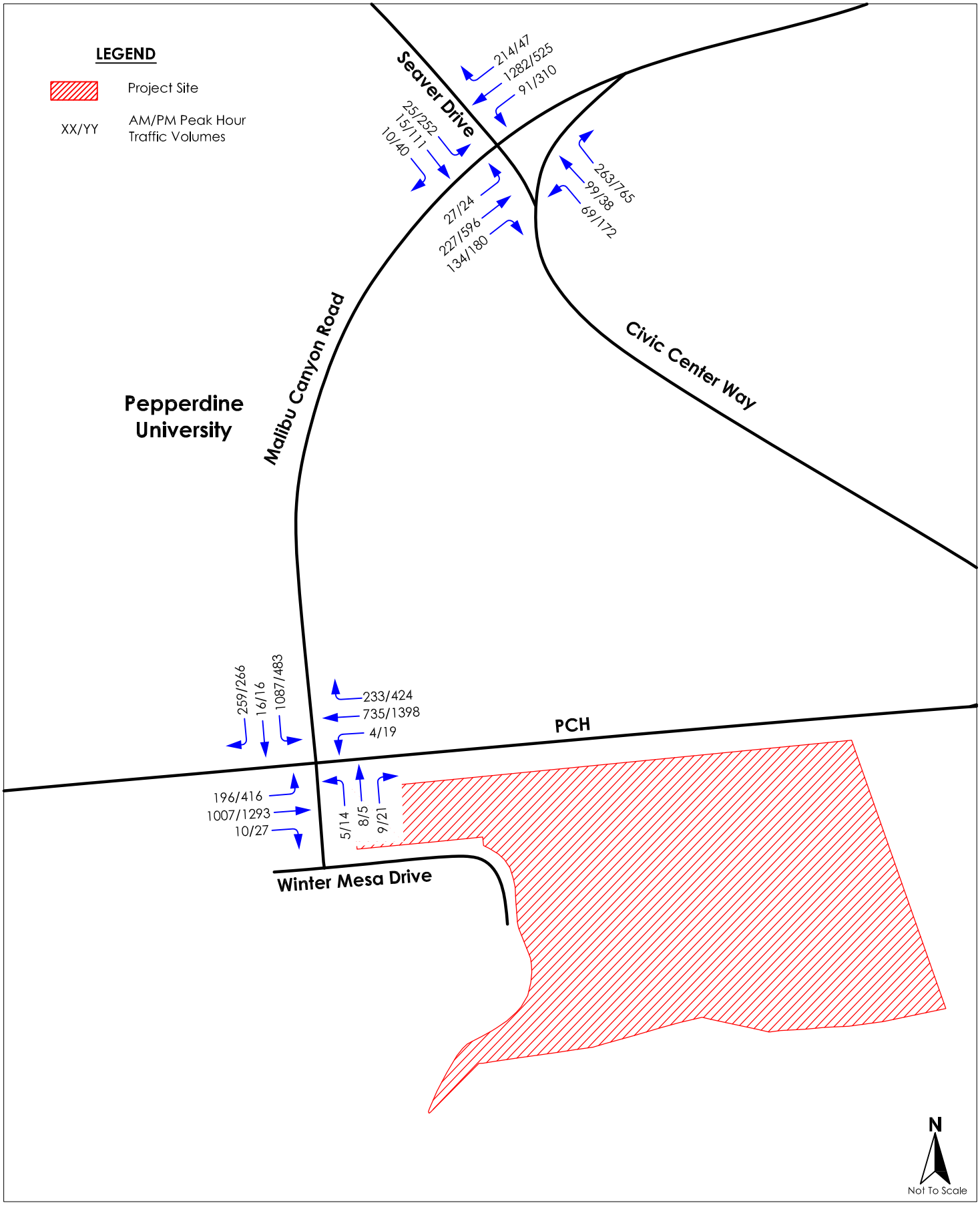
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Figure 18
Opening Year 2017 plus Project with Lot 7 Use - Baseball Field Weekday AM and PM Peak Hour Traffic Volumes



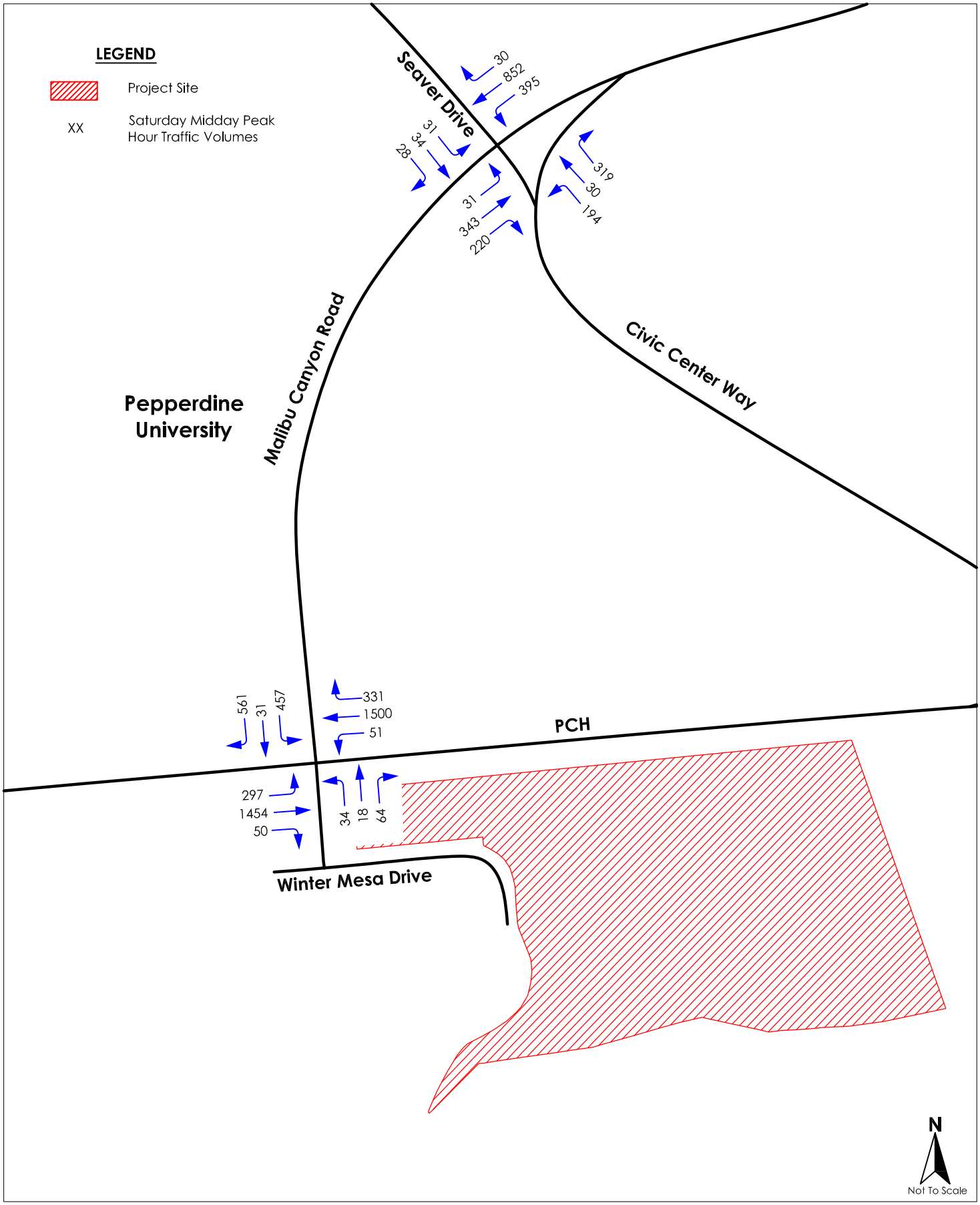
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Figure 19
Opening Year 2017 plus Project with Lot 7 Use - Baseball Field Saturday Midday Peak Hour Traffic Volumes



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Figure 20
Opening Year 2017 plus Project with Lot 7 Use - Skate Park Weekday AM and PM Peak Hour Traffic Volumes



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Figure 21
Opening Year 2017 plus Lot 7 Use - Skate Park
Saturday Midday Peak Hour Traffic Volumes

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Table N – Opening Year 2017 plus Project Intersection Level of Service Summary

Intersection	Opening Year 2017 Baseline						Opening Year 2017 plus Project						V/C Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	Midday
PROPOSED PROJECT (five single family homes)															
1. Malibu Canyon Rd/PCH	0.879	D	0.880	D	0.956	E	0.880	D	0.880	D	0.957	E	+0.001	0.000	+0.001
2. Malibu Cyn Rd/Civic Cntr Way	0.638	B	0.954	E	0.722	C	0.638	B	0.954	E	0.723	C	0.000	0.000	+0.001
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD															
1. Malibu Canyon Rd/PCH	0.879	D	0.880	D	0.956	E	0.880	D	0.888	D	**0.968**	**E**	+0.001	+0.008	**+0.012**
2. Malibu Cyn Rd/Civic Cntr Way	0.638	B	0.954	E	0.722	C	0.638	B	0.956	E	0.725	C	0.000	+0.002	+0.003
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK															
1. Malibu Canyon Rd/PCH	0.879	D	0.880	D	0.956	E	0.880	D	0.881	D	0.959	E	+0.001	+0.001	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.638	B	0.954	E	0.722	C	0.638	B	0.955	E	0.723	C	0.000	+0.001	+0.001

- Either modify the existing traffic signal to remove the right-turn overlap phase to a standard right-turn-on-red (RTOR) permissive phase resulting in LOS E at 0.930 V/C OR;
- Keep right turn overlap phase for existing #2 (outside) dedicated right-turn lane resulting in LOS E at 0.901 V/C.
- The project volume contribution to this intersection is 9.0 percent of new traffic volumes (Opening Year 2017 plus Project traffic minus Existing traffic).
- A general cost estimate for a signal modification and re-striping would be approximately $35,000 - $50,000.

Implementation of Mitigation Measure T-1 above would mitigate the significant traffic impact of the proposed project with Lot 7 use – baseball field. Figure 22 illustrates the conceptual mitigation measure.

The proposed project with Lot 7 use – baseball field would not create any significant impacts to the other study area intersections as the project-added V/C increases are less than the City's thresholds.

Proposed Project with Lot 7 Use – Skate Park

Based on the Opening Year 2017 plus Project with Lot 7 Use – Skate Park LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table O presents the results of the Opening Year 2017 plus Project roadway segment LOS analysis, while the LOS calculation sheets are provided in Appendix C.

Proposed Project (five single family homes)

Based on the Opening Year 2017 plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Opening Year 2017 plus Project with Lot 7 Use – Baseball Field LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Skate Park

Based on the Opening Year 2017 plus Project with Lot 7 Use – Skate Park LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.



Aerial Source: Google Earth, March 2013.

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Figure 22
Conceptual Mitigation Measure T-1

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Table O – Opening Year 2017 plus Project Roadway Segment Level of Service Summary

Intersection		Opening Year 2017 Baseline						Opening Year 2017 plus Project						Density Increase		
		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	AM	PM	Midday
PROPOSED PROJECT (five single family homes)																
1. PCH, John Tyler to Malibu Cnyn	EB	11.3	B	16.1	B	16.8	B	11.3	B	16.2	B	16.7	B	0.0	+0.1	0.0
	WB	9.3	A	15.6	B	19.5	C	9.3	A	15.6	B	19.5	C	0.0	0.0	0.0
2. PCH, Malibu Cnyn to Webb Wy	EB	19.5	C	16.7	B	18.3	C	19.6	C	16.7	B	18.3	C	+0.1	0.0	0.0
	WB	9.1	A	17.2	B	17.5	B	9.1	A	17.2	B	17.5	B	0.0	0.0	0.0
3. Malibu Cnyn, PCH to Civic Cntr	NB	4.9	A	9.4	A	7.2	A	4.9	A	9.4	A	7.2	A	0.0	0.0	0.0
	SB	15.2	B	8.5	A	11.7	B	15.2	B	8.5	A	11.7	B	0.0	0.0	0.0
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD																
1. PCH, John Tyler to Malibu Cnyn	EB	11.3	B	16.1	B	16.8	B	11.3	B	16.3	B	17.0	B	0.0	+0.2	+0.2
	WB	9.3	A	15.6	B	19.5	C	9.3	A	15.8	B	19.7	C	0.0	+0.2	+0.2
2. PCH, Malibu Cnyn to Webb Wy	EB	19.5	C	16.7	B	18.3	C	19.6	C	16.8	B	18.5	C	+0.1	+0.1	+0.2
	WB	9.1	A	17.2	B	17.5	B	9.1	A	17.3	B	17.7	B	0.0	+0.1	+0.2
3. Malibu Cnyn, PCH to Civic Cntr	NB	4.9	A	9.4	A	7.2	A	4.9	A	9.5	A	7.3	A	0.0	+0.1	+0.1
	SB	15.2	B	8.5	A	11.7	B	15.2	B	8.6	A	11.8	B	0.0	+0.1	+0.1
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK																
1. PCH, John Tyler to Malibu Cnyn	EB	11.3	B	16.1	B	16.8	B	11.3	B	16.2	B	16.8	B	+0.1	0.0	0.0
	WB	9.3	A	15.6	B	19.5	C	9.3	A	15.6	B	19.5	C	0.0	+0.1	0.0
2. PCH, Malibu Cnyn to Webb Wy	EB	19.5	C	16.7	B	18.3	C	19.6	C	16.7	B	18.4	C	+0.1	+0.1	+0.1
	WB	9.1	A	17.2	B	17.5	B	9.1	A	17.2	B	17.6	B	0.0	0.0	+0.1
3. Malibu Cnyn, PCH to Civic Cntr	NB	4.9	A	9.4	A	7.2	A	4.9	A	9.4	A	7.2	A	0.0	0.0	0.0
	SB	15.2	B	8.5	A	11.7	B	15.2	B	8.5	A	11.7	B	0.0	0.0	0.0

5.0 FUTURE YEAR 2030 TRAFFIC CONDITIONS

This section describes the future traffic conditions related to the following traffic scenarios:

- Future Year 2030 Baseline
- Future Year 2030 plus Project

Future Year 2030 Baseline Condition

This General Plan buildout scenario is comprised of existing traffic conditions, plus ambient traffic growth (2012 to 2030), plus traffic from cumulative (approved and/or pending) developments in the study area. These cumulative projects are located in the project study area, and have not yet been constructed, but have been approved or are pending approval, through a discretionary action or building permit issuance.

Traffic Controls and Intersection Geometrics

Per the City, there no improvements planned for the study area roadways and intersections in their current *Capital Improvement Program*. Therefore, the existing intersection traffic controls and geometrics were assumed for those intersections in the 2030 level of service analysis.

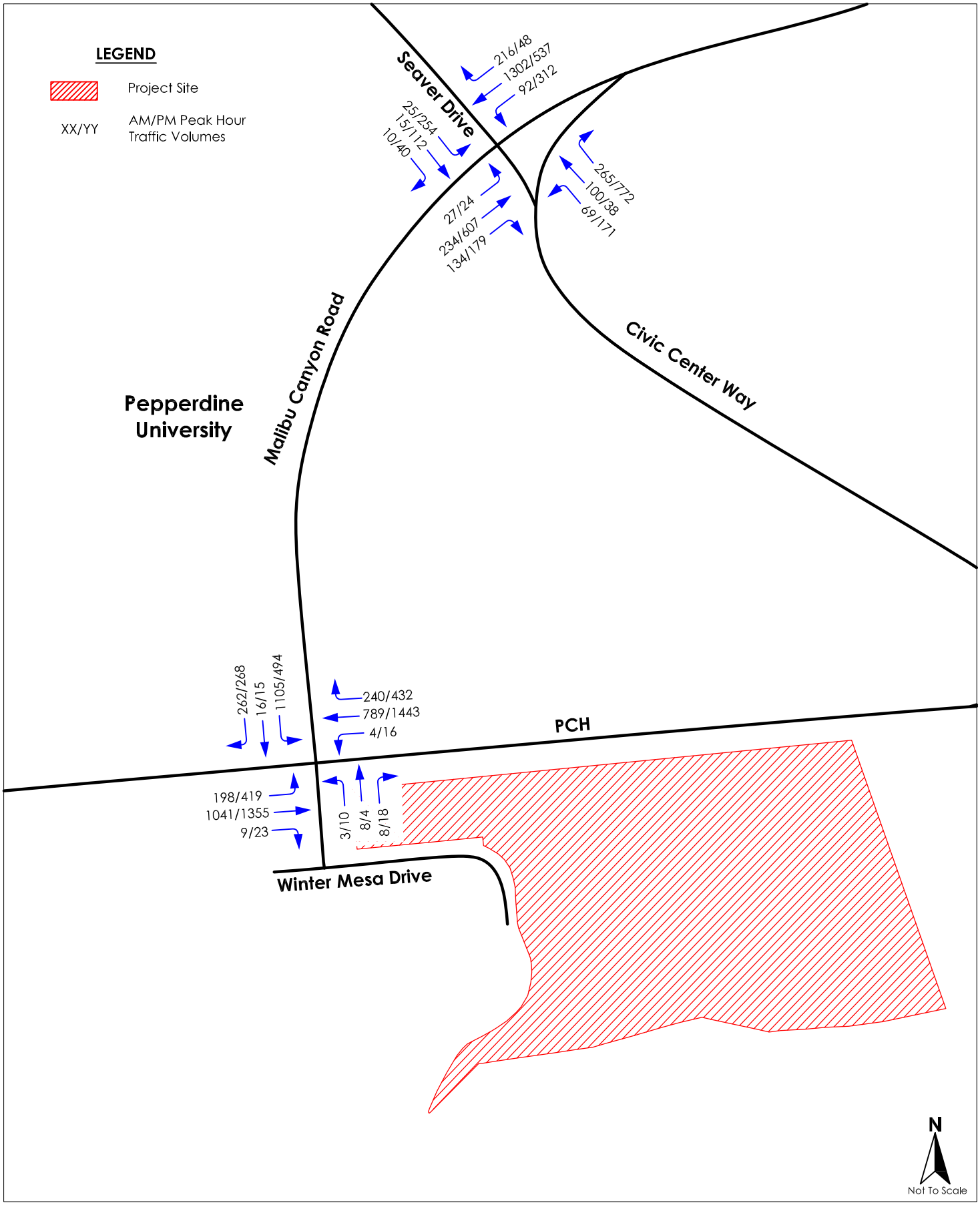
Traffic Volumes

The Future Year 2030 baseline traffic in this scenario was forecast by applying an ambient growth rate of 0.48 percent per year over 18 years (2030 – 2012) to the existing traffic volumes at both study area intersections. This growth rate was provided by City staff. In addition, traffic from cumulative (approved and/or pending) developments in the study area was added to this scenario. These cumulative projects are listed in Tables J and K above, and Figure 11 (above) shows the locations of the cumulative projects. The ambient growth rate and trips from cumulative projects were applied to the existing traffic volumes to derive the Future Year 2030 Baseline traffic volumes. Figures 23 and 24 illustrate the resulting Future Year 2030 Baseline weekday a.m. and p.m. peak hour, and Saturday midday peak hour traffic volumes, respectively.

Levels of Service

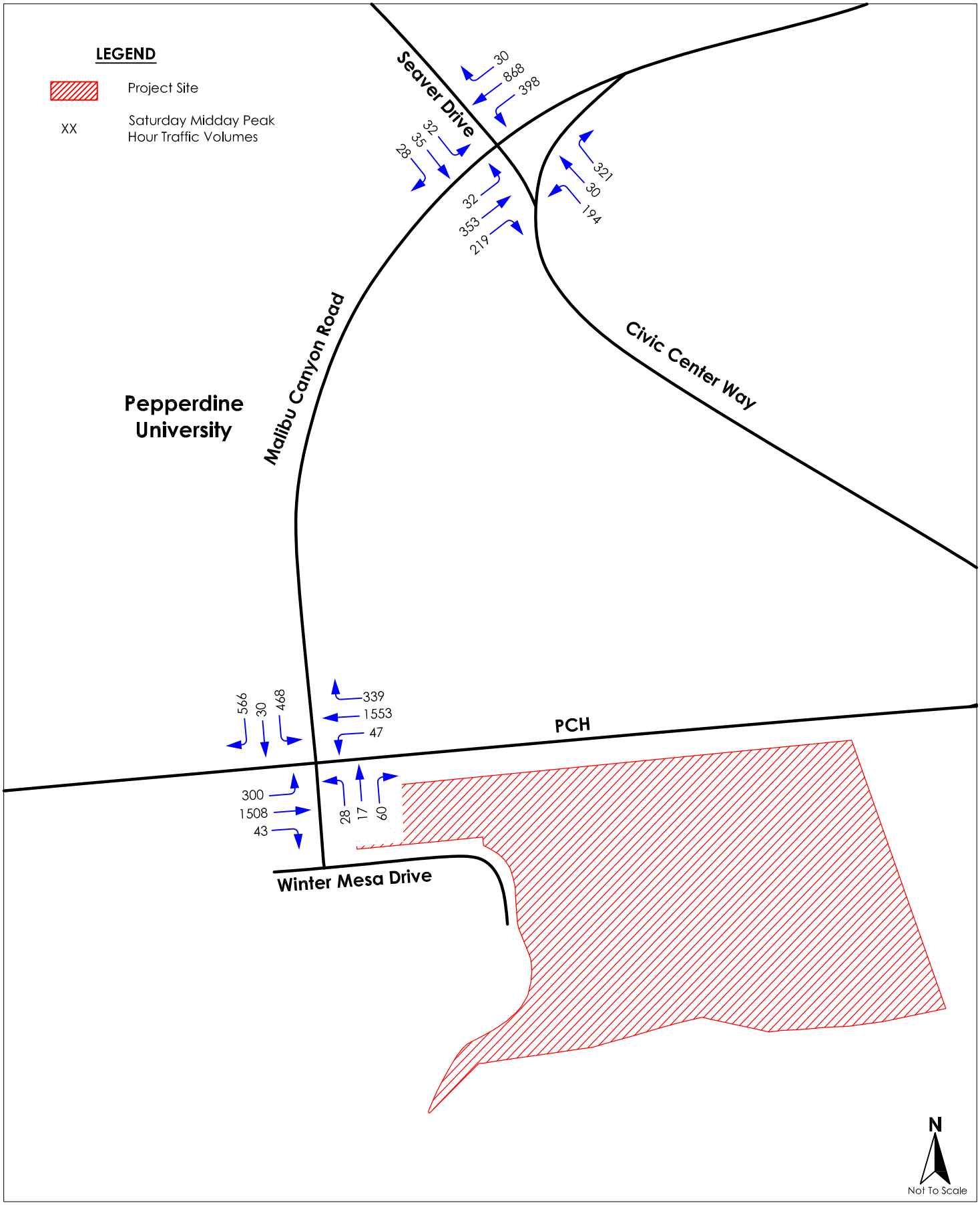
Intersections

The Future Year 2030 Baseline weekday a.m. and p.m. peak hour, and Saturday midday peak hour traffic volumes were input into the *Traffix* LOS software to determine the ICU and resulting LOS values. Table P presents the results of the Future Year 2030 Baseline intersection LOS analysis, while the LOS calculation sheets are provided in Appendix B.



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Figure 23
Future Year 2030 Baseline Weekday
AM and PM Peak Hour Traffic Volumes



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Figure 24
Future Year 2030 Baseline Saturday Midday Peak Hour Traffic Volumes

Table P – Future Year 2030 Baseline Intersection Level of Service Summary

Intersection	Control	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		V/C	LOS	V/C	LOS	V/C	LOS
1. Malibu Canyon Road/PCH	signal	0.897	D	0.899	D	0.976	E
2. Malibu Canyon Rd/Civic Center Way	signal	0.645	B	0.964	E	0.731	C

Note: LOS determined using ICU method.

Based on the Future Year 2030 Baseline LOS analysis, Malibu Canyon Road/PCH is forecast to continue to operate at LOS E during the Saturday midday peak hour. Malibu Canyon Road/Civic Center Way is forecast to continue to operate at LOS E during the weekday p.m. peak hour.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table Q presents the results of the Future Year 2030 Baseline roadway segment LOS analysis, while the LOS calculation sheets are provided in Appendix C.

Table Q – Future Year 2030 Baseline Roadway Segment Level of Service Summary

Intersection	# lanes and median	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS
1. PCH, John Tyler Dr to Malibu Cyn Rd							
- eastbound	2D	11.2	B	16.0	B	16.8	B
- westbound	2D	9.1	A	15.6	B	19.5	C
2. PCH, Malibu Cyn Rd to Webb Way							
- eastbound	2D	19.4	C	16.9	B	18.7	C
- westbound	2D	9.2	A	17.7	B	18.1	C
3. Malibu Cyn Rd, PCH to Civic Center							
- northbound	2U	5.0	A	9.3	A	7.1	A
- southbound	2U	15.5	B	8.8	A	12.1	B

Note: LOS determined using HCM Multilane Highways Operations method.
# lanes and median: 2D = two lanes divided with median; and, 2U = two lanes undivided
pcplpm = Roadway segment density expressed in passenger cars per lane per mile.

Based on the existing LOS analysis, all three study area roadway segments are forecast to operate with satisfactory LOS at LOS C or better during the weekday and Saturday peak hours.

Future Year 2030 plus Project

Traffic generated by the proposed project was added to the Future Year 2030 Baseline scenario and the project impacts on the circulation system were analyzed. This scenario would determine project-specific impacts and mitigation measures (if required).

Traffic Volumes

The proposed project trip assignments for the weekday and Saturday peak hours, noted in Figures 3, 4, 5, 6, 7, and 8, respectively, were added to the Future Year 2030 Baseline weekday and Saturday peak hour traffic volumes in Figures 23 and 24, respectively, which resulted in the Future Year 2030 plus Project traffic volumes. Figures 25 and 26 illustrate the Future Year 2030 plus Project weekday and Saturday peak hour traffic volumes, respectively. Figures 27 and 28 illustrate the Future Year 2030 plus Project with Lot 7 Use – Baseball Field weekday and Saturday peak hour traffic volumes, respectively. Figures 29 and 30 illustrate the Future Year 2030 plus Project with Lot 7 Use – Skate Park weekday and Saturday peak hour traffic volumes, respectively.

Levels of Service

Intersections

Based on the analysis methodology described in Section 1.0, the Future Year 2030 plus Project weekday and Saturday peak hour traffic volumes were input into the *Traffix* LOS software to determine the intersection ICU and LOS values. Table R presents the results of the Future Year 2030 plus Project intersection LOS analysis, while the LOS calculation sheets are provided in Appendix B.

Proposed Project (five single family homes)

Based on the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

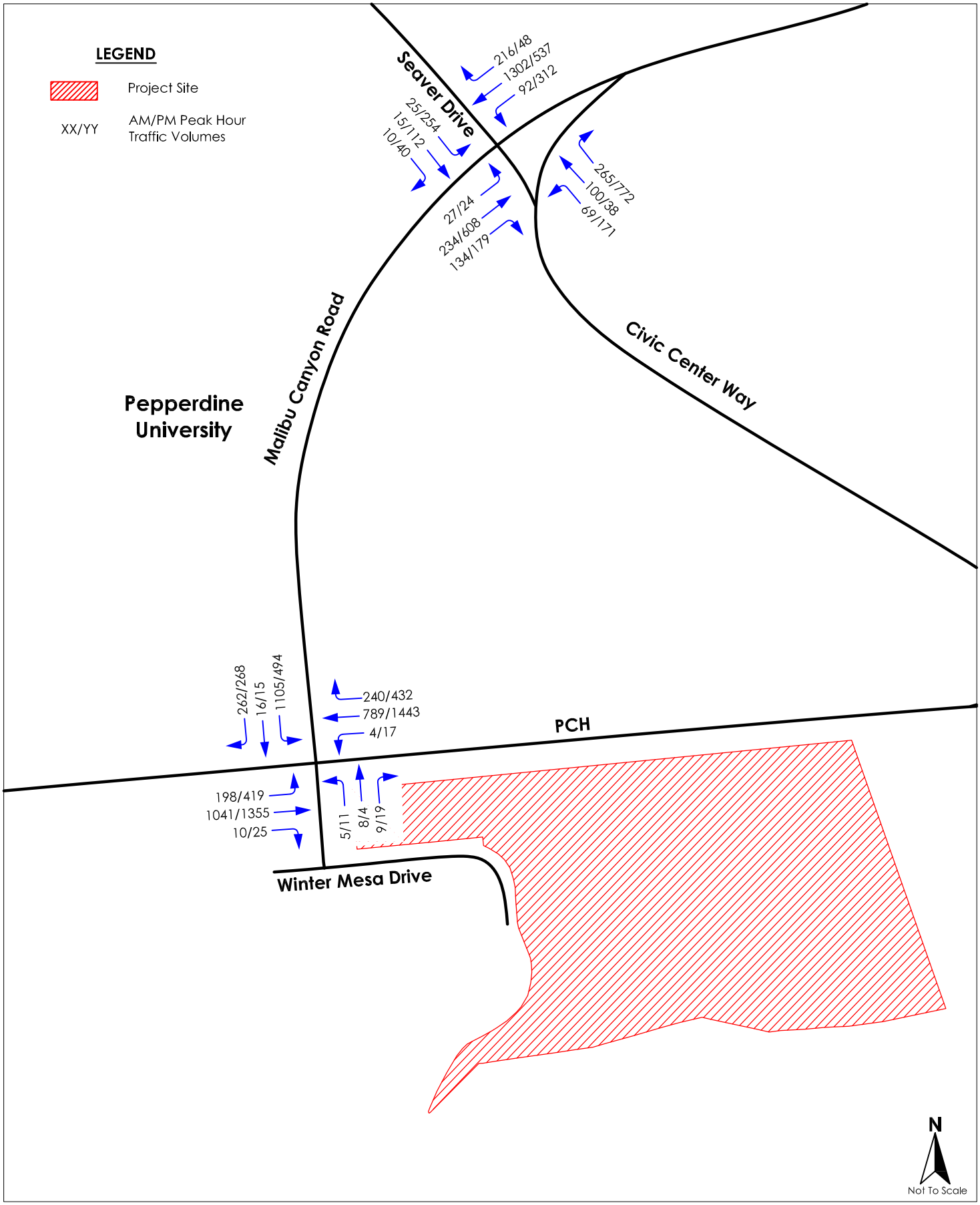
Proposed Project with Lot 7 Use – Baseball Field

Based on the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City, the proposed project would create a significant impact at Malibu Canyon Road/PCH as this intersection is forecast to continue to operate at LOS E (0.988 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F). The following mitigation measure would be required:

Mitigation Measure T-2: Prior to obtaining a Certificate of Occupancy, the Project Applicant(s) shall construct the following improvements:

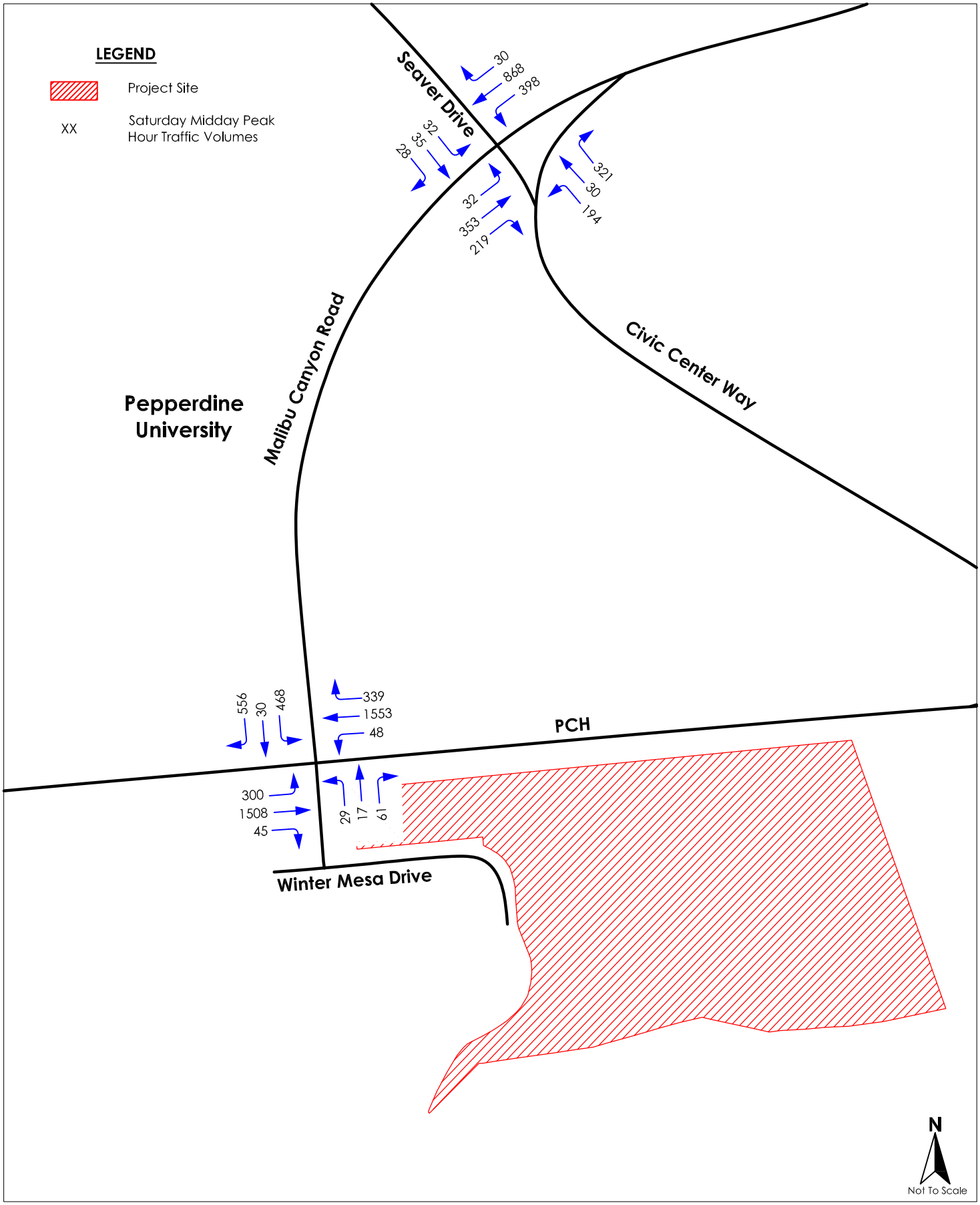
Malibu Canyon Road/PCH

- Re-stripe the existing southbound through plus left-turn lane to a through plus left- and right-turn lane.
- Either modify the existing traffic signal to remove the right-turn overlap phase to a standard right-turn-on-red (RTOR) permissive phase resulting in LOS E at 0.951 V/C OR;
- Keep right turn overlap phase for existing #2 (outside) dedicated right-turn lane resulting in LOS E at 0.923 V/C.
- The project volume contribution to this intersection is 8.0 percent of new traffic volumes (Future Year 2030 plus Project traffic minus Existing traffic).
- A general cost estimate for a signal modification and re-striping would be approximately $35,000 - $50,000.



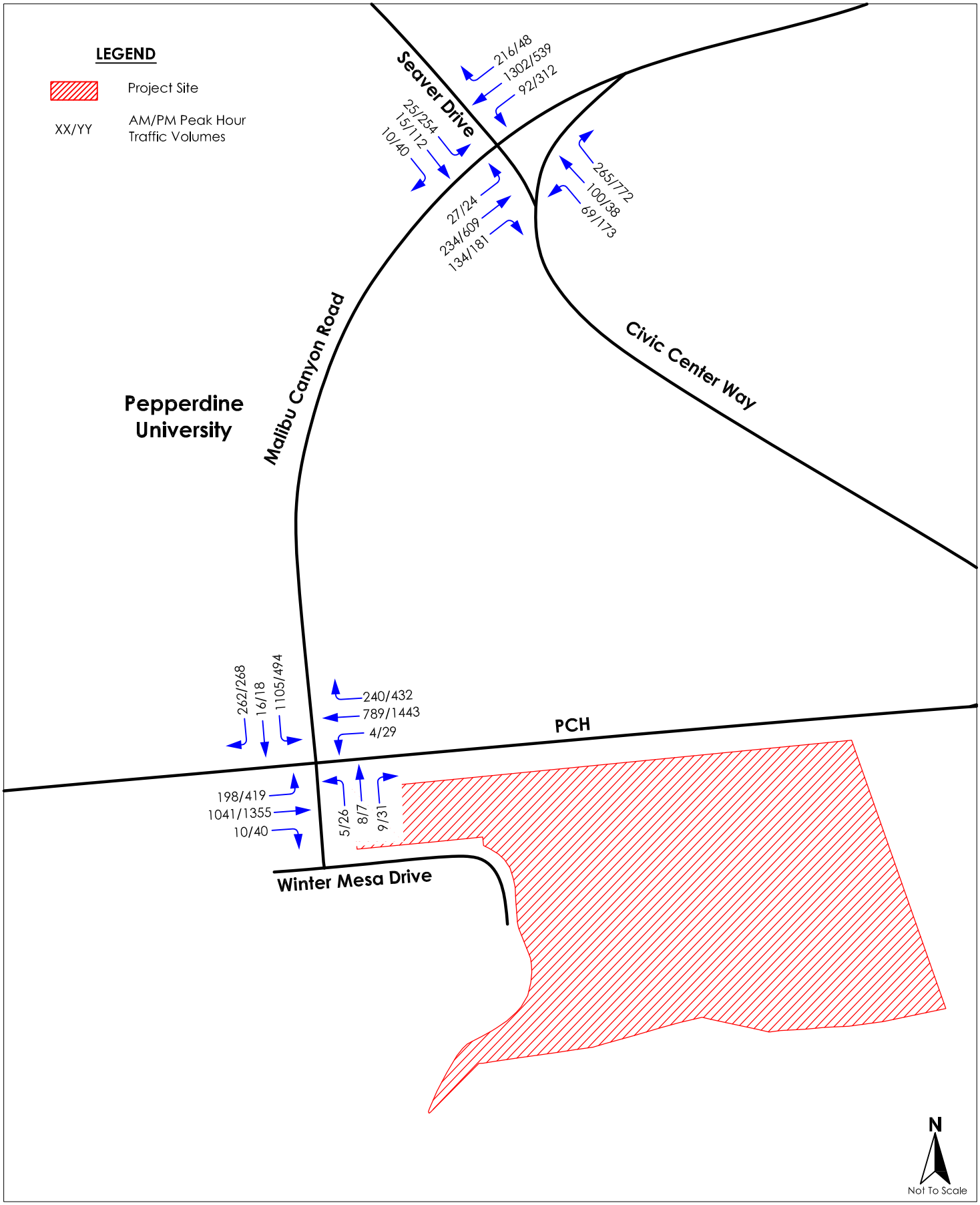
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Figure 25
Future Year 2030 plus Project Weekday
AM and PM Peak Hour Traffic Volumes



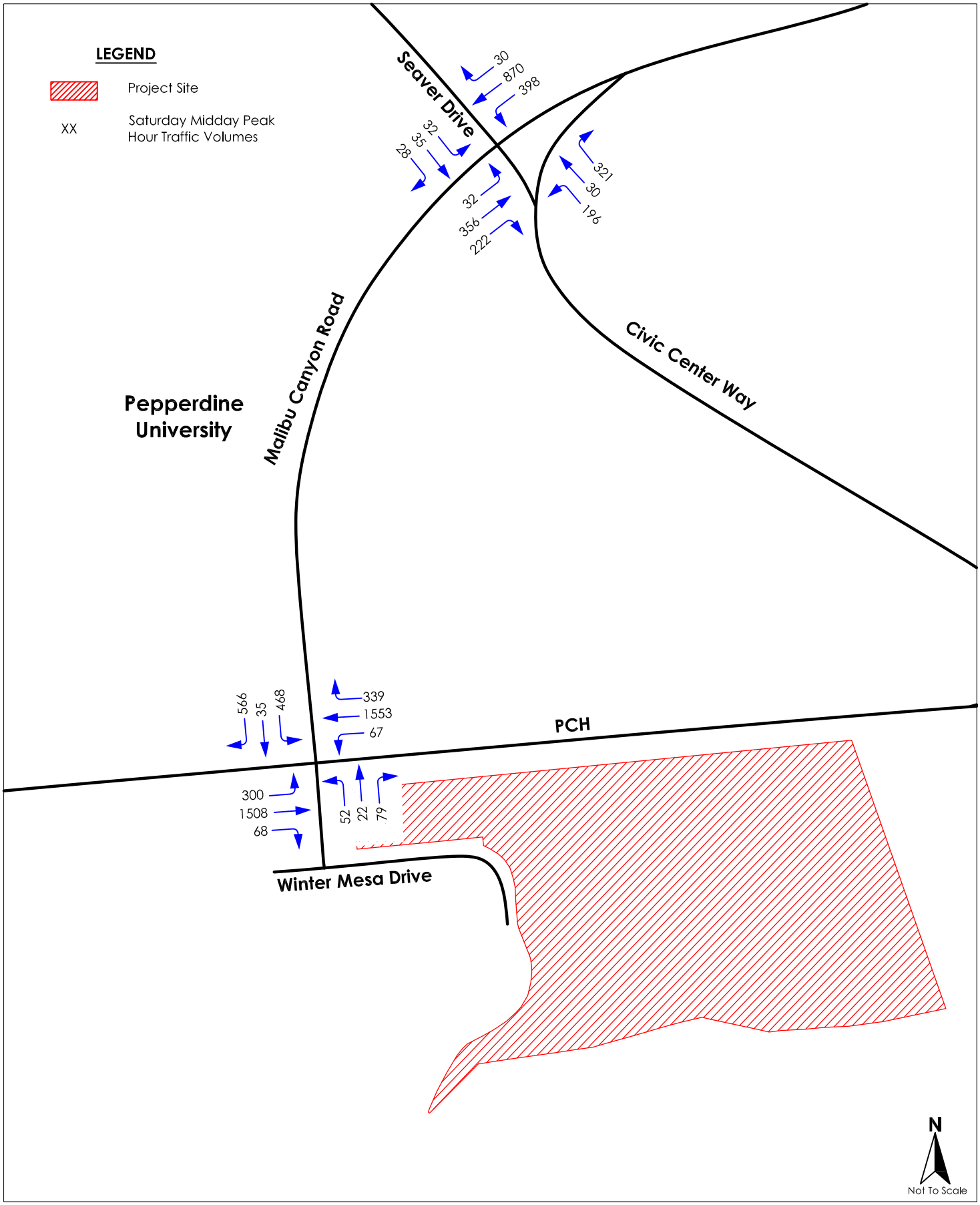
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Figure 26
Future Year 2030 plus Project Saturday Midday Peak Hour Traffic Volumes



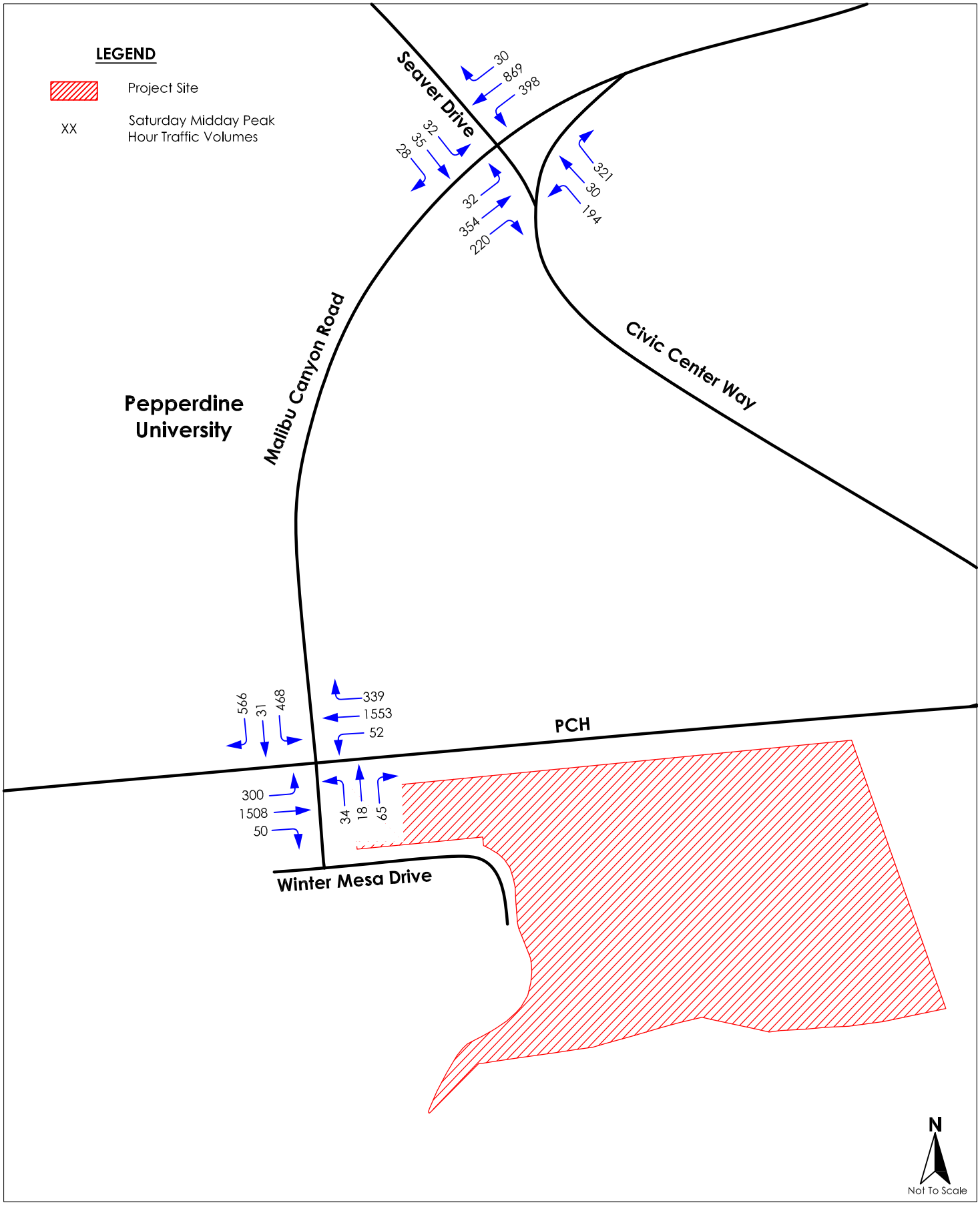
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Figure 27
Future Year 2030 plus Project with Lot 7 Use - Baseball Field Weekday AM and PM Peak Hour Traffic Volumes



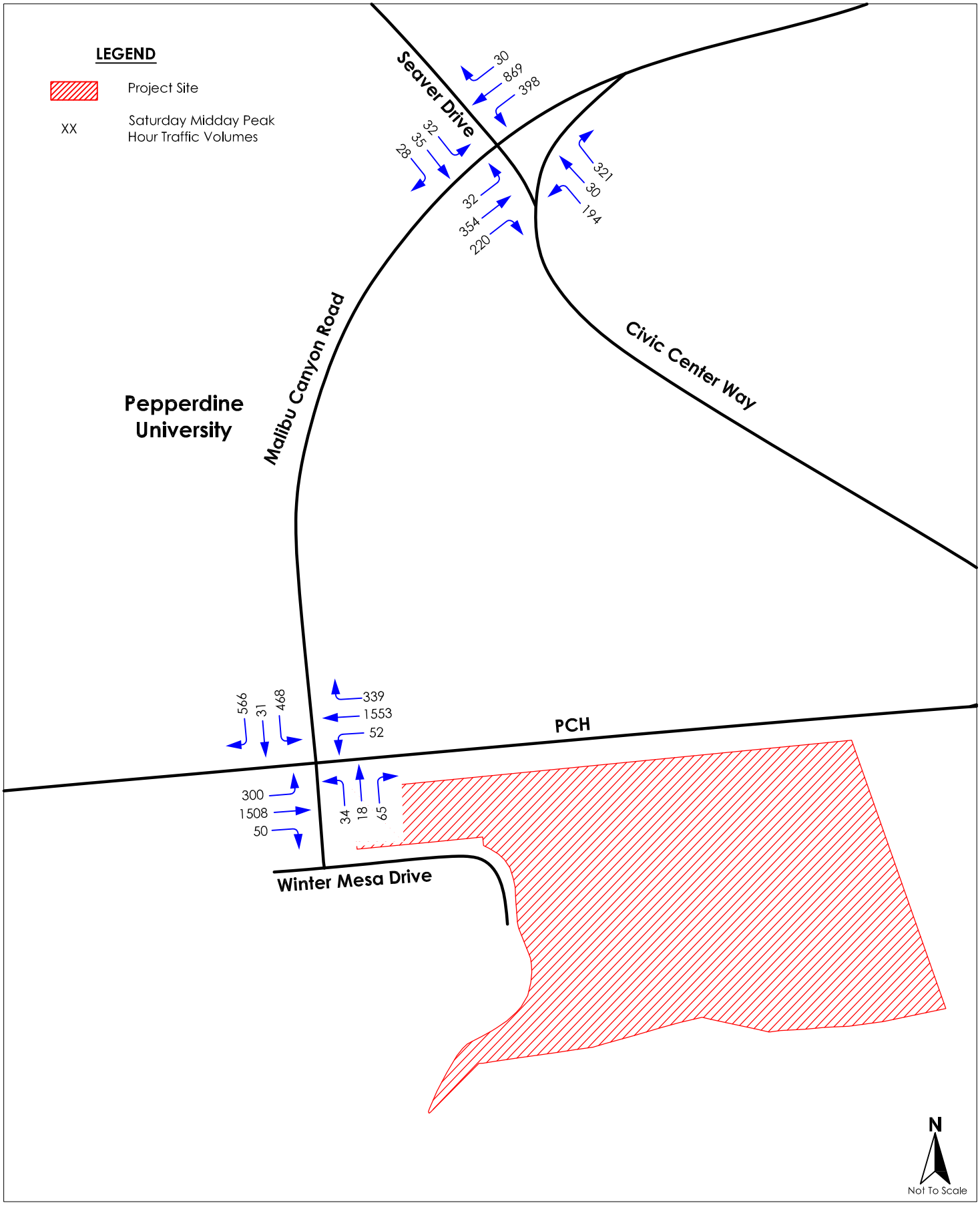
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Figure 28
Future Year 2030 plus Project with Lot 7 Use - Baseball Field Saturday Midday Peak Hour Traffic Volumes



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Figure 29
Future Year 2030 plus Project with Lot 7 Use - Skate Park
Saturday Midday Peak Hour Traffic Volumes



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Figure 30
Future Year 2030 plus Project with Lot 7 Use - Skate Park
Saturday Midday Peak Hour Traffic Volumes

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Table R – Future Year 2030 plus Project Intersection Level of Service Summary

Intersection	Future Year 2030 Baseline						Future Year 2030 plus Project						V/C Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	Midday
PROPOSED PROJECT (five single family homes)															
1. Malibu Canyon Rd/PCH	0.897	D	0.899	D	0.976	E	0.898	D	0.900	D	0.977	E	+0.001	+0.001	+0.001
2. Malibu Cyn Rd/Civic Cntr Way	0.645	B	0.964	E	0.731	C	0.645	B	0.965	E	0.731	C	0.000	+0.001	+0.001
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD															
1. Malibu Canyon Rd/PCH	0.897	D	0.899	D	0.976	E	0.898	D	0.908	E	**0.988**	**E**	+0.001	+0.008	**+0.012**
2. Malibu Cyn Rd/Civic Cntr Way	0.645	B	0.964	E	0.731	C	0.645	B	0.967	E	0.734	C	0.000	+0.003	+0.003
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK															
1. Malibu Canyon Rd/PCH	0.897	D	0.899	D	0.976	E	0.898	D	0.901	D	0.979	E	+0.001	+0.002	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.645	B	0.964	E	0.731	C	0.645	B	0.966	E	0.732	C	0.000	+0.002	+0.001

Implementation of Mitigation Measure T-2 above would mitigate the significant traffic impact of the proposed project. Figure 31 illustrates this conceptual mitigation measure.

The proposed project would not create any significant impacts to the other study area intersections as the project-added V/C increases are less than the City's thresholds.

Proposed Project with Lot 7 Use – Skate Park

Based on the Future Year 2030 plus Project with Lot 7 Use – Skate Park LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table S presents the results of the Future Year 2030 plus Project roadway segment LOS analysis, while the LOS calculation sheets are provided in Appendix C.

Proposed Project (five single family homes)

Based on the Future Year 2030 plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Future Year 2030 plus Project with Lot 7 Use – Baseball Field LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Skate Park

Based on the Future Year 2030 plus Project with Lot 7 Use – Skate Park LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.



Aerial Source: Google Earth, March 2013.

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Figure 31
Conceptual Mitigation Measure T-2

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Table S – Future Year 2030 plus Project Roadway Segment Level of Service Summary

Intersection		Future Year 2030 Baseline						Future Year 2030 plus Project						Density Increase		
		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	AM	PM	Midday
PROPOSED PROJECT (five single family homes)																
1. PCH, John Tyler to Malibu Cnyn	EB	11.6	B	16.8	B	17.3	B	11.6	B	16.8	B	17.3	B	0.0	0.0	0.0
	WB	9.8	A	16.0	B	20.0	C	9.8	A	16.0	B	20.0	C	0.0	0.0	+0.1
2. PCH, Malibu Cnyn to Webb Wy	EB	20.0	C	17.4	B	18.9	C	20.0	C	17.4	B	19.0	C	0.0	0.0	+0.1
	WB	9.6	A	17.6	B	18.1	C	9.6	A	17.6	B	18.1	C	0.0	0.0	0.0
3. Malibu Cnyn, PCH to Civic Cntr	NB	5.0	A	9.6	A	7.3	A	5.0	A	9.6	A	7.3	A	0.0	0.0	0.0
	SB	15.5	B	8.7	A	11.9	B	15.5	B	8.7	A	11.9	B	0.0	0.0	0.0
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD																
1. PCH, John Tyler to Malibu Cnyn	EB	11.6	B	16.8	B	17.3	B	11.6	B	16.9	B	17.5	B	0.0	+0.1	+0.2
	WB	9.8	A	16.0	B	20.0	C	9.8	A	16.2	B	20.2	C	0.0	+0.2	+0.2
2. PCH, Malibu Cnyn to Webb Wy	EB	20.0	C	17.4	B	18.9	C	20.0	C	17.5	B	19.1	C	0.0	+0.1	+0.2
	WB	9.6	A	17.6	B	18.1	C	9.6	A	17.8	B	17.7	B	0.0	+0.2	+0.2
3. Malibu Cnyn, PCH to Civic Cntr	NB	5.0	A	9.6	A	7.3	A	5.0	A	9.6	A	7.4	A	0.0	0.0	+0.1
	SB	15.5	B	8.7	A	11.9	B	15.5	B	8.7	A	12.0	B	0.0	0.0	+0.1
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK																
1. PCH, John Tyler to Malibu Cnyn	EB	11.6	B	16.8	B	17.3	B	11.6	B	16.8	B	17.3	B	0.0	0.0	0.0
	WB	9.8	A	16.0	B	20.0	C	9.8	A	16.1	B	20.1	C	0.0	+0.1	+0.1
2. PCH, Malibu Cnyn to Webb Wy	EB	20.0	C	17.4	B	18.9	C	20.0	C	17.4	B	19.0	C	0.0	0.0	+0.1
	WB	9.6	A	17.6	B	18.1	C	9.6	A	17.7	B	18.2	C	0.0	+0.1	+0.1
3. Malibu Cnyn, PCH to Civic Cntr	NB	5.0	A	9.6	A	7.3	A	5.0	A	9.6	A	7.3	A	0.0	0.0	0.0
	SB	15.5	B	8.7	A	11.9	B	15.5	B	8.7	A	11.9	B	0.0	0.0	0.0

6.0 PROJECT ACCESS, CIRCULATION AND PARKING

The following section discusses the proposed project's access and circulation characteristics. If required, mitigation measures will be proposed to mitigate impacts to less than significant levels.

Project Access and Circulation

The proposed project would use the same access and circulation features that are already in place at the project site, which were designed in conformance with the City of Malibu, Los Angeles County, and Caltrans standards. The project would require a new intersection on Winter Mesa Drive south of PCH, which would be designed in conformance with City standards. The project would not, therefore, result in any sharp curves or dangerous intersections.

As the proposed residential units and recreation facilities are essentially an expansion or intensification of existing uses in the site vicinity, the proposed uses would be compatible. The proposed project would not, therefore, substantially increase hazards due to a design feature or incompatible uses and no impacts would occur as a result of the project.

Parking

Parking for the proposed residential units would be provided in the driveways and garages and along the private access road that serves the five residential units. Parking for the baseball field or skate park would be provided in a new parking lot that is proposed to be constructed between the new baseball field and Winter Mesa Drive.

As currently proposed, the new parking lot would have 94 parking stalls (90 standard stalls and four handicapped spaces). In conjunction with the development of the project, the existing east-west segment of Winter Mesa Drive and the north-south segment of Winter Mesa Drive that ends in a cul-de-sac would be eliminated. Parallel parking is currently accommodated along both sides of Winter Mesa Drive and an estimated 40 cars can be parked at this location. The estimate of 40 existing parallel parking spaces was calculated by dividing the length of the available parking area (875 linear feet) by an average length of 22 feet per parking space (875 ÷ 22 = 40 vehicles).

The existing parking lot at Malibu Bluffs Park contains 81 spaces. In addition to the 40 vehicles that can be parked along both sides of Winter Mesa Drive, a total of 121 existing parking spaces are available. With implementation of the proposed project, the space for 40 vehicles along both sides of Winter Mesa Drive would be eliminated and a new 94 space parking lot would be constructed on the project site. Therefore, the total number of parking spaces to serve the existing Malibu Bluffs Park and the proposed baseball field or skate park would be 175 spaces (81 existing spaces plus 94 proposed spaces). For the proposed baseball field or skate park, the net increase in the overall number of available parking spaces would be 54 spaces, as 40 spaces (of the new 94 space parking lot) would be re-dedicated to existing park and baseball fields or skate park at Malibu Bluffs Park.

Baseball Field

Weekday Peak Parking Demand

The projected weekday peak parking demand for the proposed baseball field would be 30 vehicles per game, which is based on the assumptions outlined previously in *Section 2.0 Project Description and Traffic Generation*. If the scheduling of the games is closely spaced, the parking

demand could be as high as 60 vehicles during the interval when the participants of a game arrive at the site while the participants of a preceding game have not yet departed. The peak weekday parking demand for the baseball field (assuming 60 vehicles) would not be totally accommodated by the proposed 54 (net) additional parking stalls; however, the deficiency of six spaces would not constitute a significant parking impact because the demand of 60 vehicles represents a worst-case scenario where all 30 vehicles associated with a completed game would overlap with all 30 vehicles associated with the next game. The six vehicles would likely be waiting in the drive aisles of the parking lot for spaces to become available as people from the previous games leave the baseball field, or would parking along Malibu Canyon Road and walk to the baseball field. As this worst-case scenario would occur infrequently and would have a short duration (10 to 15 minutes), the deficiency of six spaces would not constitute a significant parking impact.

Saturday Peak Parking Demand

The projected Saturday peak parking demand for the proposed baseball field would be 46 vehicles per game, which is based on the assumptions outlined previously in *Section 2.0 Project Description and Traffic Generation*. If the scheduling of the games is closely spaced, the parking demand could be as high as 92 vehicles during the interval when the participants of a game arrive at the site while the participants of a preceding game have not yet departed. The peak Saturday parking demand for the baseball field (assuming 92 vehicles) would also not be accommodated by the proposed 54 (net) additional parking stalls. This deficiency of 38 spaces may constitute a significant parking impact, however, it assumes a worst-case scenario where all 46 vehicles associated with a completed game would overlap with all 46 vehicles associated with the next game. The 38 vehicles would likely be waiting in the drive aisles of the parking lot for spaces to become available as people from the previous games leave the baseball field, or would park along Malibu Canyon Road and walk to the baseball field. As this worst-case scenario would occur infrequently and would have a short duration (10 to 15 minutes).

The conclusion of the parking analysis is that the proposed project with the baseball field would not result in a significant impact during typical weekday operations because the proposed increase in the number of parking spaces (54 net spaces) would accommodate the anticipated parking demand of 30 vehicles during a baseball game and would only be six spaces deficient of accommodating the worst-case parking demand of 60 vehicles (when all of the vehicles from two consecutive games were to be on site at the same time). During typical Saturday operations, the proposed project would not result in a significant impact because the proposed increase in the number of parking spaces (54 net spaces) would accommodate the anticipated parking demand of 46 vehicles during a baseball game. However, assuming worst-case conditions, when all of the vehicles from two consecutive games were to be on site at the same time (92 vehicles), there would be a deficiency of 38 spaces on site.

Skate Park

Parking for the proposed residential units would be provided in the driveways and garages and along the private access road that serves the five residential units. Parking for the skate park alternative would be provided in a new parking lot that is proposed to be constructed between the new skate park and Winter Mesa Drive.

As currently proposed, the new parking lot would have 94 parking stalls (90 standard stalls and four handicapped spaces). In conjunction with the development of the project alternative, the existing east-west segment of Winter Mesa Drive and the north-south segment of Winter Mesa Drive that ends in a cul-de-sac would be eliminated. Parallel parking is currently accommodated along both sides of Winter Mesa Drive and an estimated 40 cars can be

parked at this location. As 94 parking spaces would be provided in the proposed parking lot and as 40 existing parallel spaces would be eliminated, the net increase in the overall number of parking spaces would be 54 spaces. The estimate of 40 existing parallel parking spaces was calculated by dividing the length of the available parking area (875 linear feet) by an average length of 22 feet per parking space (875 ÷ 22 = 40 vehicles).

The projected parking demand for the skate park would be 10 vehicles, which is based on the assumption that up to 20 people would be using the skate park at any given time and that the average vehicle occupancy would be two persons per vehicle. The parking demand for the skate park alternative (10 vehicles) would be accommodated by the proposed 54 additional parking stalls.

The parking impacts of the skate park alternative would be less than significant because the proposed increase in the number of parking spaces (54 spaces) would accommodate the anticipated parking demand of the skate park (10 vehicles).

Malibu Bluffs Park Parking Demand

According to staff at the City of Malibu, up to 250 people use the existing Malibu Bluffs Park at any given time, which results in a parking demand of 125 vehicles. This parking demand can be accommodated by the 121 existing parking spaces at the park (in the existing lot, and on both sides of Winter Mesa Drive), plus existing on-street parking along Malibu Canyon Road across PCH. However, during special events or during times when the patronage at the park is particularly heavy, the parking demands cannot be accommodated on site and vehicles are parked along both sides of Malibu Canyon Road, on empty parcels of land, at Webster Elementary School, and on the Crummer property. The proposed project would result in a significant parking impact during these times of peak park usage because it would eliminate the use of the Crummer property for overflow parking and it would generate additional parking demand during baseball games. With the proposed baseball field, a peak demand of 217 spaces could occur under maximum usage of the Malibu Bluffs Park and the new (third) baseball field (125 existing spaces plus 92 proposed spaces). This would result in an overall park parking shortfall of 42 spaces (217 spaces minus 175 spaces).

The impacts would not be particularly problematic on days when Malibu Bluffs Park operates at typical conditions because the deficiency of six parking spaces would have a short duration and could be accommodated at other locations within the park. The increase in parking demand associated with the baseball field would, however, aggravate a situation that is already impacted during special events at the park and during times of peak park utilization.

The significant parking impacts associated with the baseball field could be accommodated by incorporating the following mitigation measure.

Mitigation Measure T-3: Prior to obtaining a Certificate of Occupancy, the Project Applicant and/or City Parks and Recreation Department shall prepare and implement a Parking Management Plan that would preclude the use of the proposed baseball field during special events and/or other times when it is anticipated that the existing Malibu Bluffs Park would operate at over-capacity conditions relative to parking demand. In addition, the Parking Management Plan will require the Project Applicant and/or City Parks and Recreation Department to schedule baseball games with at least a half-hour to 45 minute interval between games so that the parking demand of two consecutive games would not overlap.

To accommodate this longer interval between games, less than 10 games per day would be required.

Implementation of Mitigation Measure T-3 above would mitigate the potential worst-case parking impacts of the proposed baseball field component of the proposed project. With implementation of measure T-3, the parking demand of the new baseball field would be 46 spaces. Added with the demand of the existing Malibu Bluffs Park, the overall parking demand for the park uses would be 171 spaces (125 spaces plus 46 spaces). Therefore, all park-related uses can be accommodated within the existing and new parking lots containing a total of 175 spaces.

7.0 CONCLUSIONS AND MITIGATION MEASURES

The following section provides recommended mitigation measures for the significantly impacted transportation facilities (if any) noted above in Sections 4.0 – Opening Year 2017, 5.0 – Project Access and Circulation.

Project Trip Generation

During the weekdays, the proposed project (five single family homes) would generate approximately 48 daily trips, four (4) a.m. peak hour trips (one inbound and three outbound), and five (5) p.m. peak hour trips (three inbound and two outbound). The proposed project with Lot 7 used as a baseball field would generate 168 daily trips, four (4) a.m. peak hour trips (one inbound and three outbound), and 65 p.m. peak hour trips (33 inbound and 32 outbound). The proposed project with Lot 7 used as a skate park would generate 78 daily trips, four (4) a.m. peak hour trips (one inbound and three outbound), and 15 p.m. peak hour trips (eight inbound and seven outbound).

During Saturdays, the proposed project would generate approximately 50 daily trips, and five (5) midday peak hour trips (three inbound and two outbound). The proposed project with Lot 7 used as a baseball field would generate 970 daily trips, and 97 midday peak hour trips (49 inbound and 48 outbound). The proposed project with Lot 7 used as a skate park would generate approximately 110 daily trips, and 25 midday peak hour trips (13 inbound and 12 outbound).

Existing plus Project

Intersections

Proposed Project (five single family homes)

Based on the Existing plus Project LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Existing plus Project with Lot 7 Use – Baseball Field LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Skate Park

Based on the Existing plus Project with Lot 7 Use – Skate Park LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

Proposed Project (five single family homes)

Based on the Existing plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Existing plus Project with Lot 7 Use – Baseball Field LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Skate Park

Based on the Existing plus Project with Lot 7 Use – Skate Park LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Opening Year 2017 plus Project

Intersections

Proposed Project (five single family homes)

Based on the Opening Year 2017 plus Project LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Opening Year 2017 plus Project with Lot 7 Use – Baseball Field LOS analysis, and the significance criteria of the City, the proposed project would create a significant impact at Malibu Canyon Road/PCH during the Saturday midday peak hour as this intersection is forecast to continue to operate at LOS E (0.968 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F). The following mitigation measure would be required:

Mitigation Measure T-1: Prior to obtaining a Certificate of Occupancy, the Project Applicant(s) shall construct the following improvements:

Malibu Canyon Road/PCH

- Re-stripe the existing southbound through plus left-turn lane to a through plus left- and right-turn lane.
- Either modify the existing traffic signal to remove the right-turn overlap phase to a standard right-turn-on-red (RTOR) permissive phase resulting in LOS E at 0.930 V/C OR;
- Keep right turn overlap phase for existing #2 (outside) dedicated right-turn lane resulting in LOS E at 0.901 V/C.
- The project volume contribution to this intersection is 9.0 percent of new traffic volumes (Opening Year 2017 plus Project traffic minus Existing traffic).

- A general cost estimate for a signal modification and re-striping would be approximately $35,000 - $50,000.

Implementation of Mitigation Measure T-1 above would mitigate the significant traffic impact of the proposed project with Lot 7 use – baseball field.

The proposed project with Lot 7 use – baseball field would not create any significant impacts to the other study area intersections as the project-added V/C increases are less than the City's thresholds.

Proposed Project with Lot 7 Use – Skate Park

Based on the Opening Year 2017 plus Project with Lot 7 Use – Skate Park LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

Proposed Project (five single family homes)

Based on the Opening Year 2017 plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Opening Year 2017 plus Project with Lot 7 Use – Baseball Field LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Skate Park

Based on the Opening Year 2017 plus Project with Lot 7 Use – Skate Park LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Future Year 2030 plus Project

Intersections

Proposed Project (five single family homes)

Based on the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City, the proposed project would create a significant impact at Malibu Canyon Road/PCH as this intersection is forecast to continue to operate at LOS E (0.988 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F). The following mitigation measure would be required:

Mitigation Measure T-2: Prior to obtaining a Certificate of Occupancy, the Project Applicant(s) shall construct the following improvements:

Malibu Canyon Road/PCH

- Re-stripe the existing southbound through plus left-turn lane to a through plus left- and right-turn lane.
- Either modify the existing traffic signal to remove the right-turn overlap phase to a standard right-turn-on-red (RTOR) permissive phase resulting in LOS E at 0.951 V/C OR;
- Keep right turn overlap phase for existing #2 (outside) dedicated right-turn lane resulting in LOS E at 0.923 V/C.
- The project volume contribution to this intersection is 8.0 percent of new traffic volumes (Future Year 2030 plus Project traffic minus Existing traffic).
- A general cost estimate for a signal modification and re-striping would be approximately $35,000 - $50,000.

Implementation of Mitigation Measure T-2 above would mitigate the significant traffic impact of the proposed project.

The proposed project would not create any significant impacts to the other study area intersections as the project-added V/C increases are less than the City's thresholds.

Proposed Project with Lot 7 Use – Skate Park

Based on the Future Year 2030 plus Project with Lot 7 Use – Skate Park LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

Proposed Project (five single family homes)

Based on the Future Year 2030 plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Future Year 2030 plus Project with Lot 7 Use – Baseball Field LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Skate Park

Based on the Future Year 2030 plus Project with Lot 7 Use – Skate Park LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Project Access, Circulation and Parking

The proposed project would use the same access and circulation features that are already in place at the project site, which were designed in conformance with the City of Malibu, Los

Angeles County, and Caltrans standards. The project would require a new intersection on Winter Mesa Drive south of PCH, which would be designed in conformance with City standards. The project would not, therefore, result in any sharp curves or dangerous intersections.

Parking for the proposed residential units would be provided in the driveways and garages and along the private access road that serves the five residential units. Parking for the baseball field or skate park would be provided in a new parking lot that is proposed to be constructed between the new baseball field and Winter Mesa Drive.

The conclusion of the parking analysis is that the proposed project with Lot 7 used as a baseball field would not result in a significant impact during typical weekday operations because the proposed increase in the number of parking spaces (54 spaces) would accommodate the anticipated parking demand of 30 vehicles during a baseball game and would only be six spaces deficient of accommodating the worst-case parking demand of 60 vehicles (when all of the vehicles from two consecutive games were to be on site at the same time). During typical Saturday operations, the proposed project would not result in a significant impact because the proposed increase in the number of parking spaces (54 spaces) would accommodate the anticipated parking demand of 46 vehicles during a baseball game. However, assuming worst-case conditions, when all of the vehicles from two consecutive games were to be on site at the same time (92 vehicles), there would be a deficiency of 38 spaces on site.

In addition, the proposed project would result in a significant parking impact during times of peak park usage at Malibu Bluffs Park because it would eliminate the use of the Crummer property for overflow parking and it would generate additional parking demand during baseball games.

The significant parking impacts associated with the baseball field could be accommodated by incorporating the following mitigation measure.

Mitigation Measure T-3: Prior to obtaining a Certificate of Occupancy, the Project Applicant and/or City Parks and Recreation Department shall prepare and implement a Parking Management Plan that would preclude the use of the proposed baseball field during special events and/or other times when it is anticipated that the existing Malibu Bluffs Park would operate at over-capacity conditions relative to parking demand. In addition, the Parking Management Plan will require the Project Applicant and/or City Parks and Recreation Department to schedule baseball games with at least a half-hour to 45 minute interval between games so that the parking demand of two consecutive games would not overlap. To accommodate this longer interval between games, less than 10 games per day would be required.

Implementation of Mitigation Measure T-3 above would mitigate the potential worst-case parking impacts of the proposed baseball field component of the proposed project.

The parking impacts of the skate park alternative would be less than significant because the proposed increase in the number of parking spaces (54 spaces) would accommodate the anticipated parking demand of the skate park (10 vehicles).

8.0 REFERENCES

City of Malibu, *Cumulative Projects Listing*, Updated August 1, 2012.

Garland Associates, *Traffic Impact Analysis for the Proposed Crummer Site Subdivision*, October 2008.

Garland Associates, *Traffic Impact Analysis for the Proposed Crummer Site Subdivision*, revised March 2009.

Institute of Transportation Engineers, *Trip Generation, 8th Edition*, 2008.

Institute of Transportation Engineers, *Trip Generation Handbook, Second Edition*, 2004.

Los Angeles County Metropolitan Transportation Authority (MTA), *Guidelines for CMP Transportation Impact Analysis*, Appendix B of the Los Angeles County *Congestion Management Program* (CMP), 2004.

Overland Traffic Consultants, Inc., *Traffic Impact Analysis Neighborhood Shopping Center*, May 2011.

Overland Traffic Consultants, Inc., *Traffic Impact Analysis Resort Hotel Development*, April 2012.

Transportation Research Board, *Highway Capacity Manual*, Special Report No. 209, Washington, D.C., 2000.

APPENDIX A

Raw Traffic Volume Count Sheets

ITM Peak Hour Summary

Prepared by:

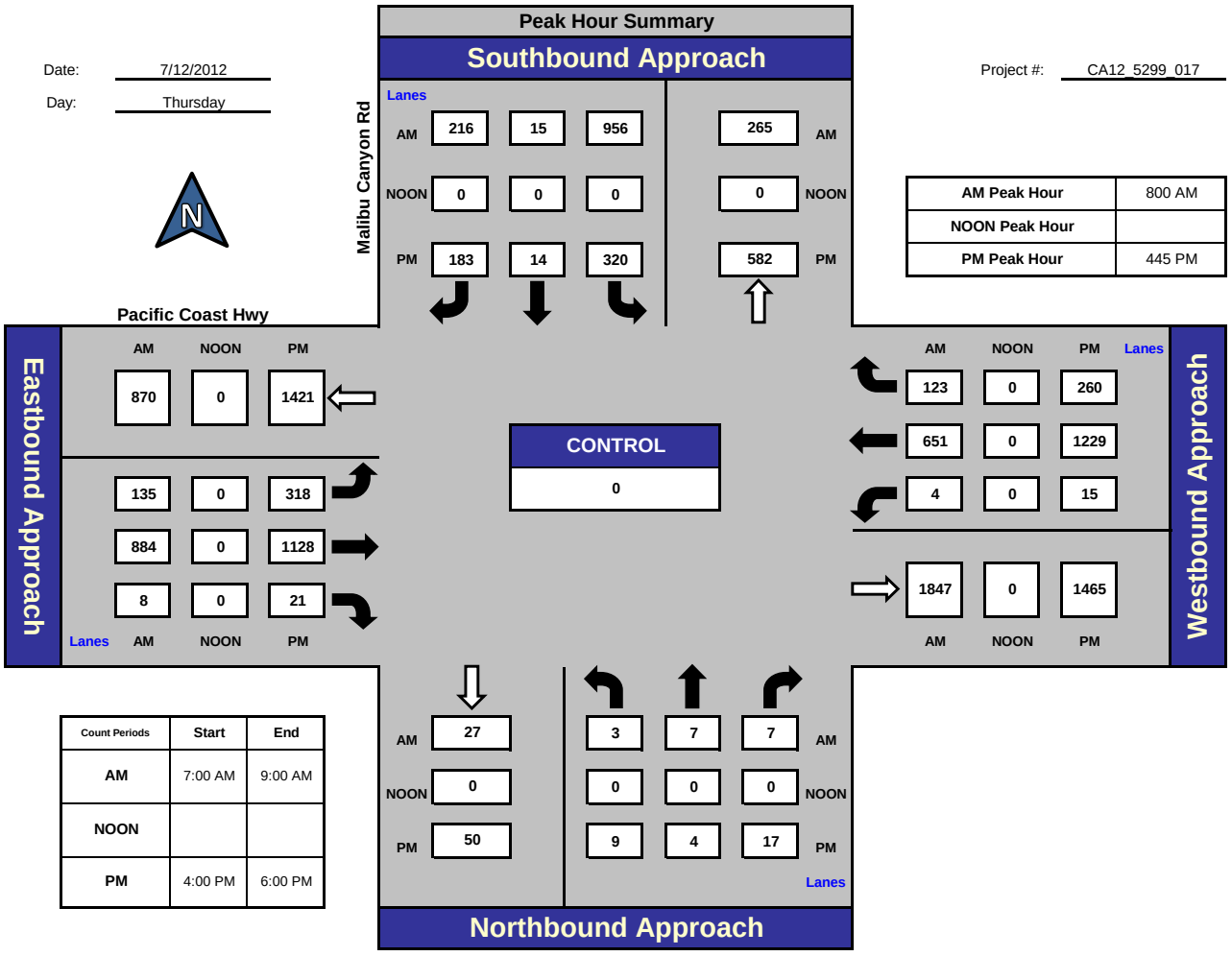
NDS

Malibu Canyon Rd and Pacific Coast Hwy , City of Malibu

Date: 7/12/2012

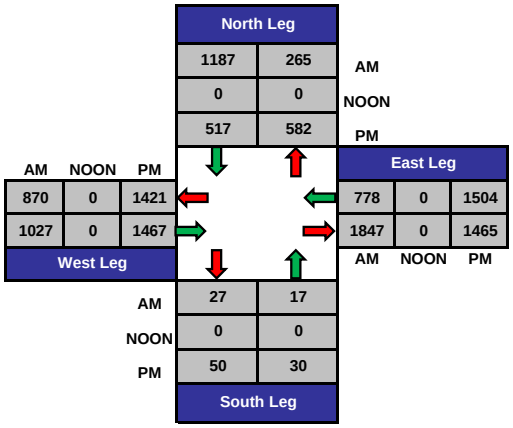
Day: Thursday

Project #: CA12_5299_017

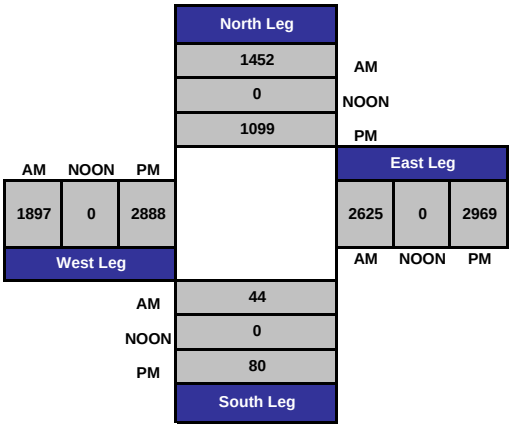


AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

NDS

Malibu Canyon Rd and Pacific Coast Hwy , City of Malibu

Date: 7/14/2012

Day: Saturday

Project #: CA12_5299_017

Peak Hour Summary	
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Southbound Approach (Malibu Canyon Rd)

Lanes					
AM	0	0	0	0	AM
NOON	449	28	280	351	NOON
PM	0	0	0	0	PM

Eastbound Approach (Pacific Coast Hwy)

Lanes	AM	NOON	PM
	0	1785	0
	0	193	0
	0	1256	0
	0	40	0

Westbound Approach

Lanes	AM	NOON	PM
	0	142	0
	0	1310	0
	0	43	0
	0	1591	0

CONTROL

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Northbound Approach

Lanes					
AM	0	0	0	0	AM
NOON	111	26	16	55	NOON
PM	0	0	0	0	PM

Total Ins & Outs

	North Leg		
AM	0	0	AM
NOON	757	351	NOON
PM	0	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
0	1785	0		0	1495	0
0	1489	0		0	1591	0

	South Leg		
AM	0	0	AM
NOON	111	97	NOON
PM	0	0	PM

Total Volume Per Leg

	North Leg	
AM	0	AM
NOON	1108	NOON
PM	0	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
0	3274	0	0	3086	0

	South Leg	
AM	0	AM
NOON	208	NOON
PM	0	PM

ITM Peak Hour Summary

Prepared by:

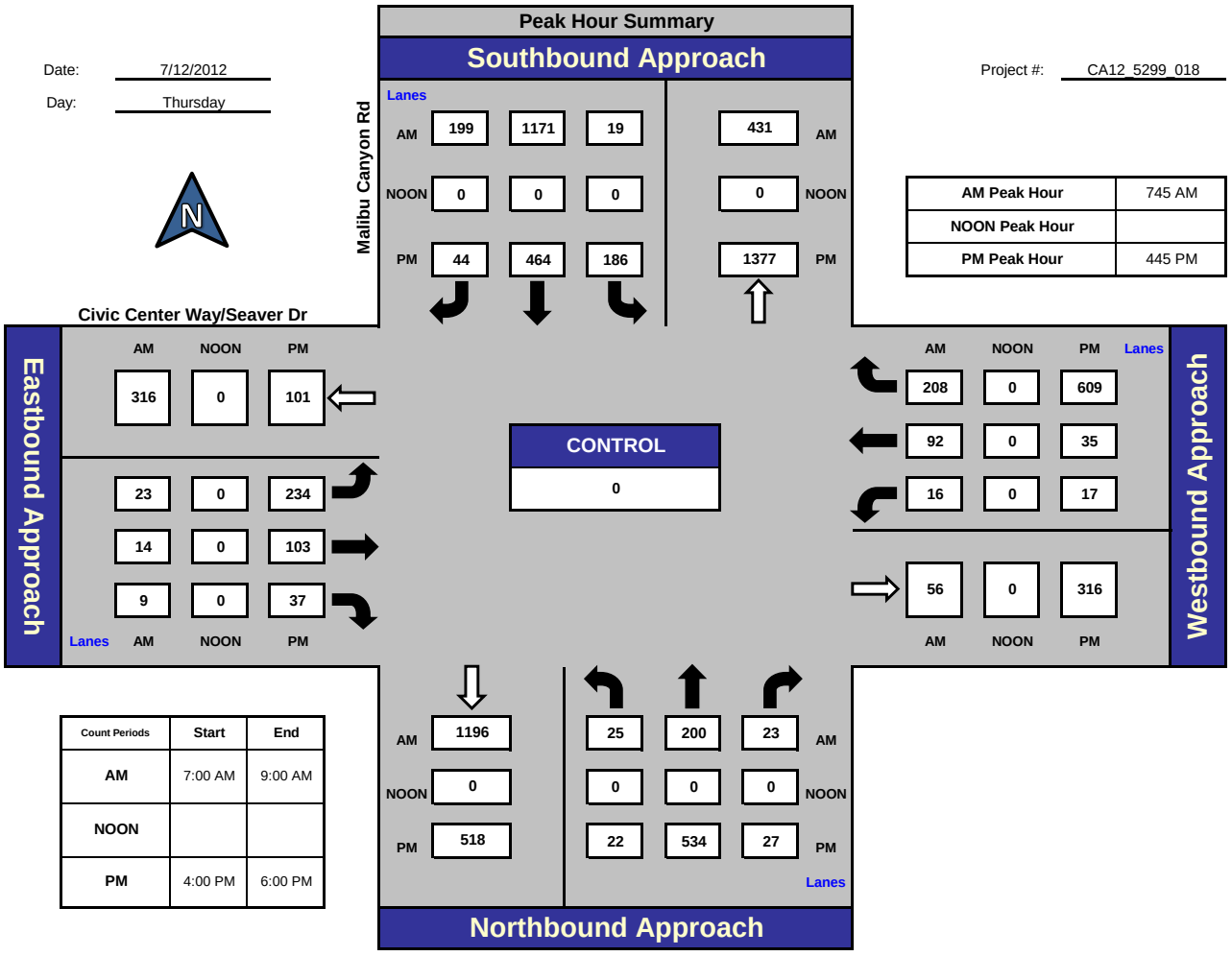
NDS

Malibu Canyon Rd and Civic Center Way/Seaver Dr , City of Malibu

Date: 7/12/2012

Day: Thursday

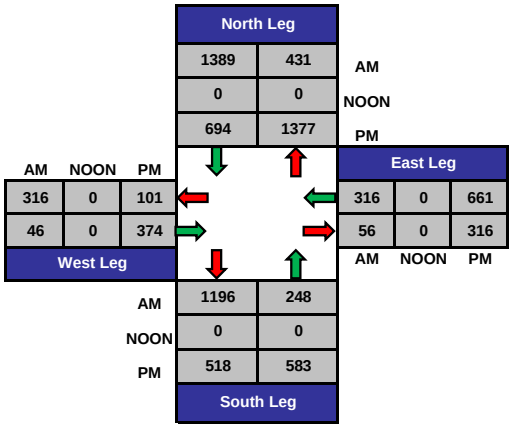
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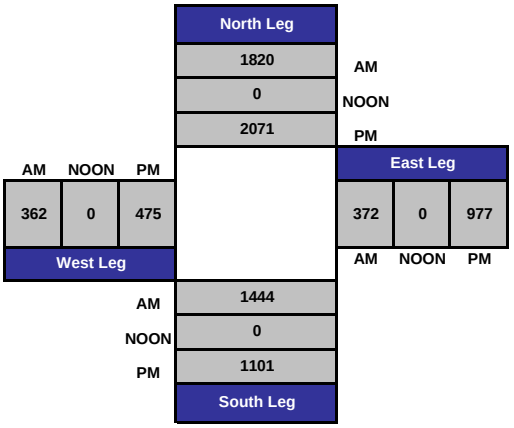
AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

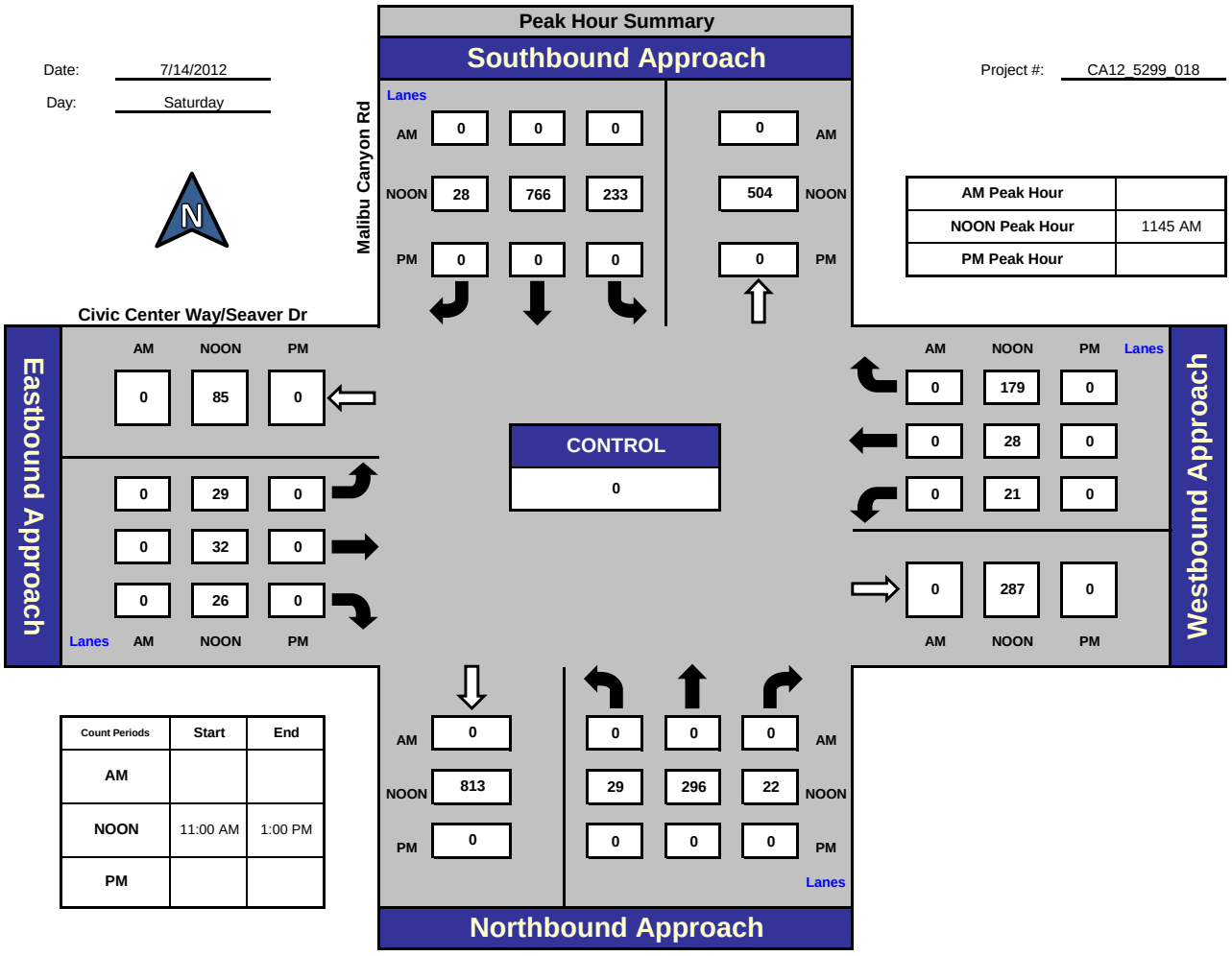
NDS

Malibu Canyon Rd and Civic Center Way/Seaver Dr , City of Malibu

Date: 7/14/2012

Day: Saturday

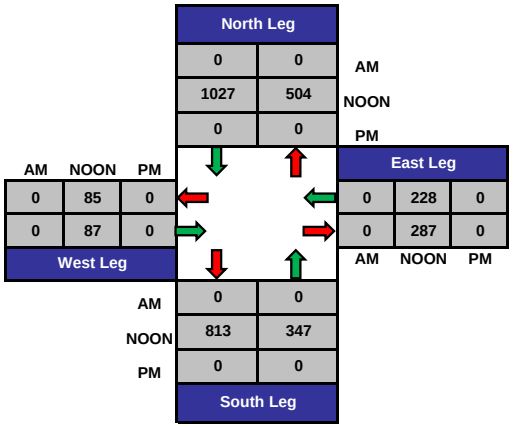
Project #: CA12_5299_018



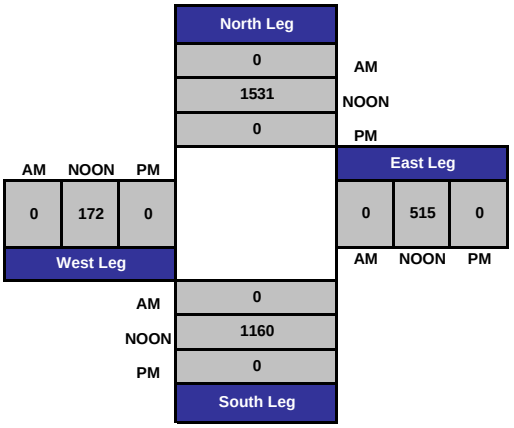
AM Peak Hour	
NOON Peak Hour	1145 AM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



APPENDIX B

Intersection Level of Service Worksheets

EXISTING CONDITION

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.738
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	C

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	4	17	320	14	183	318	1128	21	15	1229	260
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	4	17	320	14	183	318	1128	21	15	1229	260
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	4	17	320	14	183	318	1128	21	15	1229	260
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	9	4	17	320	14	183	318	1128	21	15	1229	260
OvlAdjVol:						6						47
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.60	0.40	1.00	1.92	0.08	1.00	2.00	1.96	0.04	1.00	2.00	1.00
Final Sat.:	960	640	1600	2400	800	1600	2880	3142	58	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.13	0.02	0.11	0.11	0.36	0.36	0.01	0.38	0.16
OvlAdjV/S:						0.00						0.03
Crit Moves:			****	****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.729
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	22	534	27	186	464	44	234	103	37	17	35	609
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	534	27	186	464	44	234	103	37	17	35	609
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	534	27	186	464	44	234	103	37	17	35	609
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	22	534	0	186	464	44	234	103	0	17	35	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	534	0	186	464	44	234	103	0	17	35	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	22	534	0	186	464	44	234	103	0	17	35	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.33	0.67	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	523	1077	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.33	0.00	0.12	0.15	0.03	0.15	0.06	0.00	0.03	0.03	0.00
Crit Moves:	****			****			****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.785
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	63	Level Of Service:	C

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1 0	1 0		1 1 0	0 1		2 0 1	1 0		1 0 2	0 1	
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	7	7	956	15	216	135	884	8	4	651	123
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	7	7	956	15	216	135	884	8	4	651	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	7	7	956	15	216	135	884	8	4	651	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	7	7	956	15	216	135	884	8	4	651	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	7	7	956	15	216	135	884	8	4	651	123
OvlAdjVol:						141						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.35	0.83	0.82	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	565	1318	1318	2400	800	1600	2880	3171	29	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.40	0.02	0.14	0.05	0.28	0.28	0.00	0.20	0.08
OvlAdjV/S:						0.09						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.563
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	1 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	200	23	19	1171	199	23	14	9	16	92	208
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	200	23	19	1171	199	23	14	9	16	92	208
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	25	200	0	19	1171	199	23	14	0	16	92	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	200	0	19	1171	199	23	14	0	16	92	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	25	200	0	19	1171	199	23	14	0	16	92	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.15	0.85	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	237	1363	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.13	0.00	0.01	0.37	0.12	0.01	0.01	0.00	0.07	0.07	0.00
Crit Moves:	****				****		****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.824
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	73	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	26	16	55	280	28	449	193	1256	40	43	1310	142
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	26	16	55	280	28	449	193	1256	40	43	1310	142
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	26	16	55	280	28	449	193	1256	40	43	1310	142
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	26	16	55	280	28	449	193	1256	40	43	1310	142
OvlAdjVol:						342						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.54	0.46	1.00	1.82	0.18	1.00	2.00	1.94	0.06	1.00	2.00	1.00
Final Sat.:	858	742	1600	2400	800	1600	2880	3101	99	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.02	0.03	0.12	0.04	0.28	0.07	0.40	0.41	0.03	0.41	0.09
OvlAdjV/S:						0.21						0.00
Crit Moves:			****			****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.481
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	296	22	233	766	28	29	32	26	21	28	179
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	29	296	22	233	766	28	29	32	26	21	28	179
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	29	296	0	233	766	28	29	32	0	21	28	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	296	0	233	766	28	29	32	0	21	28	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	29	296	0	233	766	28	29	32	0	21	28	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.43	0.57	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	686	914	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.19	0.00	0.15	0.24	0.02	0.02	0.02	0.00	0.03	0.03	0.00
Crit Moves:	****			****				****			****	

EXISTING PLUS PROJECT (FIVE SINGLE FAMILY HOMES)

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.786
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	64	Level Of Service:	C

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	7	7	956	15	216	135	884	8	4	651	123
Added Vol:	2	0	1	0	0	0	0	0	1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	7	8	956	15	216	135	884	9	4	651	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	7	8	956	15	216	135	884	9	4	651	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	7	8	956	15	216	135	884	9	4	651	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	7	8	956	15	216	135	884	9	4	651	123
OvlAdjVol:						141						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.50	0.70	0.80	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	800	1120	1280	2400	800	1600	2880	3168	32	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.40	0.02	0.14	0.05	0.28	0.28	0.00	0.20	0.08
OvlAdjV/S:						0.09						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.563
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	1 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	200	23	19	1171	199	23	14	9	16	92	208
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	200	23	19	1171	199	23	14	9	16	92	208
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	25	200	0	19	1171	199	23	14	0	16	92	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	200	0	19	1171	199	23	14	0	16	92	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	25	200	0	19	1171	199	23	14	0	16	92	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.15	0.85	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	237	1363	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.13	0.00	0.01	0.37	0.12	0.01	0.01	0.00	0.07	0.07	0.00
Crit Moves:	****				****		****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.739
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	C

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	4	17	320	14	183	318	1128	21	15	1229	260
Added Vol:	1	0	1	0	0	0	0	0	2	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	4	18	320	14	183	318	1128	23	16	1229	260
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	4	18	320	14	183	318	1128	23	16	1229	260
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	4	18	320	14	183	318	1128	23	16	1229	260
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	4	18	320	14	183	318	1128	23	16	1229	260
OvlAdjVol:						6						47
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.62	0.38	1.00	1.92	0.08	1.00	2.00	1.96	0.04	1.00	2.00	1.00
Final Sat.:	1000	600	1600	2400	800	1600	2880	3136	64	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.13	0.02	0.11	0.11	0.36	0.36	0.01	0.38	0.16
OvlAdjV/S:						0.00						0.03
Crit Moves:			****	****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.729
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	22	534	27	186	464	44	234	103	37	17	35	609
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	534	27	186	464	44	234	103	37	17	35	609
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	534	27	186	464	44	234	103	37	17	35	609
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	22	534	0	186	464	44	234	103	0	17	35	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	534	0	186	464	44	234	103	0	17	35	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	22	534	0	186	464	44	234	103	0	17	35	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.33	0.67	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	523	1077	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.33	0.00	0.12	0.15	0.03	0.15	0.06	0.00	0.03	0.03	0.00
Crit Moves:	****			****			****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.825
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	73	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	26	16	55	280	28	449	193	1256	40	43	1310	142
Added Vol:	1	0	1	0	0	0	0	0	2	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	16	56	280	28	449	193	1256	42	44	1310	142
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	16	56	280	28	449	193	1256	42	44	1310	142
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	16	56	280	28	449	193	1256	42	44	1310	142
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	27	16	56	280	28	449	193	1256	42	44	1310	142
OvlAdjVol:						342						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.55	0.45	1.00	1.82	0.18	1.00	2.00	1.94	0.06	1.00	2.00	1.00
Final Sat.:	873	727	1600	2400	800	1600	2880	3096	104	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.02	0.04	0.12	0.04	0.28	0.07	0.41	0.41	0.03	0.41	0.09
OvlAdjV/S:						0.21						0.00
Crit Moves:		****				****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.481
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	296	22	233	766	28	29	32	26	21	28	179
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	29	296	22	233	766	28	29	32	26	21	28	179
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	29	296	0	233	766	28	29	32	0	21	28	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	296	0	233	766	28	29	32	0	21	28	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	29	296	0	233	766	28	29	32	0	21	28	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.43	0.57	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	686	914	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.19	0.00	0.15	0.24	0.02	0.02	0.02	0.00	0.03	0.03	0.00
Crit Moves:	****			****				****			****	

EXISTING PLUS PROJECT WITH LOT 7 USE – BASEBALL FIELD

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.786
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	64	Level Of Service:	C

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	7	7	956	15	216	135	884	8	4	651	123
Added Vol:	2	0	1	0	0	0	0	0	1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	7	8	956	15	216	135	884	9	4	651	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	7	8	956	15	216	135	884	9	4	651	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	7	8	956	15	216	135	884	9	4	651	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	7	8	956	15	216	135	884	9	4	651	123
OvlAdjVol:						141						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.50	0.70	0.80	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	800	1120	1280	2400	800	1600	2880	3168	32	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.40	0.02	0.14	0.05	0.28	0.28	0.00	0.20	0.08
OvlAdjV/S:						0.09						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.563
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	1 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	200	23	19	1171	199	23	14	9	16	92	208
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	200	23	19	1171	199	23	14	9	16	92	208
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	25	200	0	19	1171	199	23	14	0	16	92	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	200	0	19	1171	199	23	14	0	16	92	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	25	200	0	19	1171	199	23	14	0	16	92	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.15	0.85	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	237	1363	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.13	0.00	0.01	0.37	0.12	0.01	0.01	0.00	0.07	0.07	0.00
Crit Moves:	****				****		****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.747
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	57	Level Of Service:	C

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1 0	1 0	1	1 0	0 1	2	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	4	17	320	14	183	318	1128	21	15	1229	260
Added Vol:	16	3	13	0	3	0	0	0	17	13	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	7	30	320	17	183	318	1128	38	28	1229	260
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	25	7	30	320	17	183	318	1128	38	28	1229	260
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	7	30	320	17	183	318	1128	38	28	1229	260
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	25	7	30	320	17	183	318	1128	38	28	1229	260
OvlAdjVol:						6						47
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.81	0.22	0.97	1.90	0.10	1.00	2.00	1.93	0.07	1.00	2.00	1.00
Final Sat.:	1290	361	1548	2400	800	1600	2880	3096	104	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.13	0.02	0.11	0.11	0.36	0.36	0.02	0.38	0.16
OvlAdjV/S:						0.00						0.03
Crit Moves:	****			****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.731
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	22	534	27	186	464	44	234	103	37	17	35	609
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	534	27	186	464	44	234	103	37	17	35	609
Added Vol:	0	2	2	0	2	0	0	0	0	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	536	29	186	466	44	234	103	37	19	35	609
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	22	536	0	186	466	44	234	103	0	19	35	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	536	0	186	466	44	234	103	0	19	35	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	22	536	0	186	466	44	234	103	0	19	35	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.35	0.65	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	563	1037	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.34	0.00	0.12	0.15	0.03	0.15	0.06	0.00	0.03	0.03	0.00
Crit Moves:	****			****			****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.836
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	76	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	26	16	55	280	28	449	193	1256	40	43	1310	142
Added Vol:	24	5	19	0	5	0	0	0	25	20	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	21	74	280	33	449	193	1256	65	63	1310	142
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	21	74	280	33	449	193	1256	65	63	1310	142
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	21	74	280	33	449	193	1256	65	63	1310	142
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	21	74	280	33	449	193	1256	65	63	1310	142
OvlAdjVol:						342						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.69	0.31	1.00	1.79	0.21	1.00	2.00	1.90	0.10	1.00	2.00	1.00
Final Sat.:	1103	497	1600	2400	800	1600	2880	3043	157	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.04	0.05	0.12	0.04	0.28	0.07	0.41	0.41	0.04	0.41	0.09
OvlAdjV/S:						0.21						0.00
Crit Moves:		****				****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.484
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	296	22	233	766	28	29	32	26	21	28	179
Added Vol:	0	2	2	0	2	0	0	0	0	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	29	298	24	233	768	28	29	32	26	23	28	179
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	29	298	0	233	768	28	29	32	0	23	28	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	298	0	233	768	28	29	32	0	23	28	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	29	298	0	233	768	28	29	32	0	23	28	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.45	0.55	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	722	878	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.19	0.00	0.15	0.24	0.02	0.02	0.02	0.00	0.03	0.03	0.00
Crit Moves:	****			****				****			****	

EXISTING PLUS PROJECT WITH LOT 7 USE – SKATE PARK

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.786
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	64	Level Of Service:	C

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	7	7	956	15	216	135	884	8	4	651	123
Added Vol:	2	0	1	0	0	0	0	0	1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	7	8	956	15	216	135	884	9	4	651	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	7	8	956	15	216	135	884	9	4	651	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	7	8	956	15	216	135	884	9	4	651	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	7	8	956	15	216	135	884	9	4	651	123
OvlAdjVol:						141						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.50	0.70	0.80	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	800	1120	1280	2400	800	1600	2880	3168	32	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.40	0.02	0.14	0.05	0.28	0.28	0.00	0.20	0.08
OvlAdjV/S:						0.09						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.563
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	1 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	200	23	19	1171	199	23	14	9	16	92	208
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	200	23	19	1171	199	23	14	9	16	92	208
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	25	200	0	19	1171	199	23	14	0	16	92	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	200	0	19	1171	199	23	14	0	16	92	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	25	200	0	19	1171	199	23	14	0	16	92	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.15	0.85	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	237	1363	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.13	0.00	0.01	0.37	0.12	0.01	0.01	0.00	0.07	0.07	0.00
Crit Moves:	****				****		****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.791
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	65	Level Of Service:	C

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	7	7	956	15	216	135	884	8	4	651	123
Added Vol:	4	1	3	0	1	0	0	0	4	3	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	8	10	956	16	216	135	884	12	7	651	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	8	10	956	16	216	135	884	12	7	651	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	8	10	956	16	216	135	884	12	7	651	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	8	10	956	16	216	135	884	12	7	651	123
OvlAdjVol:						141						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.56	0.64	0.80	1.97	0.03	1.00	2.00	1.97	0.03	1.00	2.00	1.00
Final Sat.:	896	1024	1280	2400	800	1600	2880	3157	43	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.40	0.02	0.14	0.05	0.28	0.28	0.00	0.20	0.08
OvlAdjV/S:						0.09						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.563
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	200	23	19	1171	199	23	14	9	16	92	208
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	200	23	19	1171	199	23	14	9	16	92	208
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	25	200	0	19	1171	199	23	14	0	16	92	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	200	0	19	1171	199	23	14	0	16	92	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	25	200	0	19	1171	199	23	14	0	16	92	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.15	0.85	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	237	1363	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.13	0.00	0.01	0.37	0.12	0.01	0.01	0.00	0.07	0.07	0.00
Crit Moves:	****				****		****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.827
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	73	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	26	16	55	280	28	449	193	1256	40	43	1310	142
Added Vol:	6	1	5	0	1	0	0	0	7	5	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	17	60	280	29	449	193	1256	47	48	1310	142
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	17	60	280	29	449	193	1256	47	48	1310	142
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	17	60	280	29	449	193	1256	47	48	1310	142
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	17	60	280	29	449	193	1256	47	48	1310	142
OvlAdjVol:						342						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.59	0.41	1.00	1.81	0.19	1.00	2.00	1.93	0.07	1.00	2.00	1.00
Final Sat.:	939	661	1600	2400	800	1600	2880	3085	115	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.04	0.12	0.04	0.28	0.07	0.41	0.41	0.03	0.41	0.09
OvlAdjV/S:						0.21						0.00
Crit Moves:		****				****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.483
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	296	22	233	766	28	29	32	26	21	28	179
Added Vol:	0	1	1	0	1	0	0	0	0	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	29	297	23	233	767	28	29	32	26	22	28	179
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	29	297	0	233	767	28	29	32	0	22	28	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	297	0	233	767	28	29	32	0	22	28	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	29	297	0	233	767	28	29	32	0	22	28	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.44	0.56	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	704	896	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.19	0.00	0.15	0.24	0.02	0.02	0.02	0.00	0.03	0.03	0.00
Crit Moves:	****			****				****			****	

OPENING YEAR 2017 BASELINE

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.879
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	3	8	8	1028	16	232	145	950	9	4	700	132
Added Vol:	0	0	0	33	0	16	36	39	0	0	22	72
PasserByVol:	0	0	0	26	0	11	15	18	0	0	13	29
Initial Fut:	3	8	8	1087	16	259	196	1007	9	4	735	233
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	8	8	1087	16	259	196	1007	9	4	735	233
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	8	8	1087	16	259	196	1007	9	4	735	233
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	8	8	1087	16	259	196	1007	9	4	735	233
OvlAdjVol:						161						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.35	0.83	0.82	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	565	1318	1318	2400	800	1600	3200	3173	27	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.45	0.02	0.16	0.06	0.32	0.32	0.00	0.23	0.15
OvlAdjV/S:						0.10						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.638
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	27	215	25	20	1259	214	25	15	10	17	99	224
Added Vol:	0	1	107	71	1	0	0	0	0	49	0	33
PasserByVol:	0	11	2	0	22	0	0	0	0	3	0	6
Initial Fut:	27	227	134	91	1282	214	25	15	10	69	99	263
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	27	227	0	91	1282	214	25	15	0	69	99	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	227	0	91	1282	214	25	15	0	69	99	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	27	227	0	91	1282	214	25	15	0	69	99	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.41	0.59	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	659	941	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.14	0.00	0.06	0.40	0.13	0.02	0.01	0.00	0.11	0.11	0.00
Crit Moves:	****				****		****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.880
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	91	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	10	4	18	344	15	197	342	1213	23	16	1321	280
Added Vol:	0	0	0	100	0	49	49	56	0	0	54	98
PasserByVol:	0	0	0	39	0	20	25	24	0	0	23	46
Initial Fut:	10	4	18	483	15	266	416	1293	23	16	1398	424
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	4	18	483	15	266	416	1293	23	16	1398	424
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	4	18	483	15	266	416	1293	23	16	1398	424
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	4	18	483	15	266	416	1293	23	16	1398	424
OvlAdjVol:						58						102
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.60	0.40	1.00	1.94	0.06	1.00	2.00	1.97	0.03	1.00	2.00	1.00
Final Sat.:	960	640	1600	2400	800	1600	3200	3145	55	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.20	0.02	0.17	0.13	0.41	0.41	0.01	0.44	0.26
OvlAdjV/S:						0.04						0.06
Crit Moves:			****	****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.954
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	137	Level Of Service:	E

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	22	534	27	186	464	44	234	103	37	17	35	609
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	24	574	29	200	499	47	252	111	40	18	38	655
Added Vol:	0	1	146	98	1	0	0	0	0	148	0	99
PasserByVol:	0	21	4	12	25	0	0	0	0	5	0	11
Initial Fut:	24	596	179	310	525	47	252	111	40	171	38	765
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	24	596	0	310	525	47	252	111	0	171	38	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	596	0	310	525	47	252	111	0	171	38	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	24	596	0	310	525	47	252	111	0	171	38	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.82	0.18	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1312	288	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.37	0.00	0.19	0.16	0.03	0.16	0.07	0.00	0.13	0.13	0.00
Crit Moves:	****			****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.956
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	139	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	28	17	59	301	30	483	207	1350	43	46	1408	153
Added Vol:	0	0	0	110	0	55	63	69	0	0	59	127
PasserByVol:	0	0	0	46	0	23	27	35	0	0	33	51
Initial Fut:	28	17	59	457	30	561	297	1454	43	46	1500	331
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	28	17	59	457	30	561	297	1454	43	46	1500	331
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	17	59	457	30	561	297	1454	43	46	1500	331
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	28	17	59	457	30	561	297	1454	43	46	1500	331
OvlAdjVol:						412						26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.54	0.46	1.00	1.88	0.12	1.00	2.00	1.94	0.06	1.00	2.00	1.00
Final Sat.:	858	742	1600	2400	800	1600	3200	3108	92	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.02	0.04	0.19	0.04	0.35	0.09	0.47	0.47	0.03	0.47	0.21
OvlAdjV/S:						0.26						0.02
Crit Moves:			****			****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.722
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	Level Of Service:	C

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0	1	1 0 2	0	1	1 0 1	0	1	0 1	0 0	1
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	31	318	24	250	823	30	31	34	28	23	30	192
Added Vol:	0	0	190	127	1	0	0	0	0	165	0	110
PasserByVol:	0	24	5	18	28	0	0	0	0	6	0	17
Initial Fut:	31	342	219	395	852	30	31	34	28	194	30	319
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	31	342	0	395	852	30	31	34	0	194	30	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	342	0	395	852	30	31	34	0	194	30	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	31	342	0	395	852	30	31	34	0	194	30	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.87	0.13	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1385	215	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.21	0.00	0.25	0.27	0.02	0.02	0.02	0.00	0.14	0.14	0.00
Crit Moves:		****		****				****		****		

OPENING YEAR 2017 PLUS PROJECT (FIVE SINGLE FAMILY HOMES)

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.880
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	91	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	3	8	8	1028	16	232	145	950	9	4	700	132
Added Vol:	2	0	1	33	0	16	36	39	1	0	22	72
PasserByVol:	0	0	0	26	0	11	15	18	0	0	13	29
Initial Fut:	5	8	9	1087	16	259	196	1007	10	4	735	233
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	8	9	1087	16	259	196	1007	10	4	735	233
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	8	9	1087	16	259	196	1007	10	4	735	233
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	8	9	1087	16	259	196	1007	10	4	735	233
OvlAdjVol:						161						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.49	0.71	0.80	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	786	1132	1282	2400	800	1600	3200	3170	30	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.45	0.02	0.16	0.06	0.32	0.32	0.00	0.23	0.15
OvlAdjV/S:						0.10						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.638
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	27	215	25	20	1259	214	25	15	10	17	99	224
Added Vol:	0	1	107	71	1	0	0	0	0	49	0	33
PasserByVol:	0	11	2	0	22	0	0	0	0	3	0	6
Initial Fut:	27	227	134	91	1282	214	25	15	10	69	99	263
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	27	227	0	91	1282	214	25	15	0	69	99	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	227	0	91	1282	214	25	15	0	69	99	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	27	227	0	91	1282	214	25	15	0	69	99	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.41	0.59	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	659	941	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.14	0.00	0.06	0.40	0.13	0.02	0.01	0.00	0.11	0.11	0.00
Crit Moves:	****				****		****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.880
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	91	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	10	4	18	344	15	197	342	1213	23	16	1321	280
Added Vol:	1	0	1	100	0	49	49	56	2	1	54	98
PasserByVol:	0	0	0	39	0	20	25	24	0	0	23	46
Initial Fut:	11	4	19	483	15	266	416	1293	25	17	1398	424
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	4	19	483	15	266	416	1293	25	17	1398	424
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	4	19	483	15	266	416	1293	25	17	1398	424
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	4	19	483	15	266	416	1293	25	17	1398	424
OvlAdjVol:						58						102
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.62	0.38	1.00	1.94	0.06	1.00	2.00	1.96	0.04	1.00	2.00	1.00
Final Sat.:	997	603	1600	2400	800	1600	3200	3140	60	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.20	0.02	0.17	0.13	0.41	0.41	0.01	0.44	0.26
OvlAdjV/S:						0.04						0.06
Crit Moves:			****	****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.954
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	137	Level Of Service:	E

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	22	534	27	186	464	44	234	103	37	17	35	609
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	24	574	29	200	499	47	252	111	40	18	38	655
Added Vol:	0	1	146	98	1	0	0	0	0	148	0	99
PasserByVol:	0	21	4	12	25	0	0	0	0	5	0	11
Initial Fut:	24	596	179	310	525	47	252	111	40	171	38	765
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	24	596	0	310	525	47	252	111	0	171	38	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	596	0	310	525	47	252	111	0	171	38	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	24	596	0	310	525	47	252	111	0	171	38	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.82	0.18	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1312	288	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.37	0.00	0.19	0.16	0.03	0.16	0.07	0.00	0.13	0.13	0.00
Crit Moves:	****			****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.957
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	140	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	28	17	59	301	30	483	207	1350	43	46	1408	153
Added Vol:	1	0	1	110	0	55	63	69	2	1	59	127
PasserByVol:	0	0	0	46	0	23	27	35	0	0	33	51
Initial Fut:	29	17	60	457	30	561	297	1454	45	47	1500	331
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	29	17	60	457	30	561	297	1454	45	47	1500	331
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	17	60	457	30	561	297	1454	45	47	1500	331
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	29	17	60	457	30	561	297	1454	45	47	1500	331
OvlAdjVol:						412						26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.54	0.46	1.00	1.88	0.12	1.00	2.00	1.94	0.06	1.00	2.00	1.00
Final Sat.:	872	728	1600	2400	800	1600	3200	3104	96	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.02	0.04	0.19	0.04	0.35	0.09	0.47	0.47	0.03	0.47	0.21
OvlAdjV/S:						0.26						0.02
Crit Moves:			****			****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.723
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	Level Of Service:	C

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0	1	1 0 2	0	1	1 0 1	0	1	0 1	0	0 1
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	31	318	24	250	823	30	31	34	28	23	30	192
Added Vol:	0	1	190	127	1	0	0	0	0	165	0	110
PasserByVol:	0	24	5	18	28	0	0	0	0	6	0	17
Initial Fut:	31	343	219	395	852	30	31	34	28	194	30	319
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	31	343	0	395	852	30	31	34	0	194	30	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	343	0	395	852	30	31	34	0	194	30	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	31	343	0	395	852	30	31	34	0	194	30	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.87	0.13	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1385	215	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.21	0.00	0.25	0.27	0.02	0.02	0.02	0.00	0.14	0.14	0.00
Crit Moves:		****		****				****		****		

OPENING YEAR 2017 PLUS PROJECT WITH LOT 7 USE – BASEBALL FIELD

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.880
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	91	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	3	8	8	1028	16	232	145	950	9	4	700	132
Added Vol:	2	0	1	33	0	16	36	39	1	0	22	72
PasserByVol:	0	0	0	26	0	11	15	18	0	0	13	29
Initial Fut:	5	8	9	1087	16	259	196	1007	10	4	735	233
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	8	9	1087	16	259	196	1007	10	4	735	233
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	8	9	1087	16	259	196	1007	10	4	735	233
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	8	9	1087	16	259	196	1007	10	4	735	233
OvlAdjVol:						161						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.49	0.71	0.80	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	786	1132	1282	2400	800	1600	3200	3170	30	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.45	0.02	0.16	0.06	0.32	0.32	0.00	0.23	0.15
OvlAdjV/S:						0.10						0.00
Crit Moves:	****			****			****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.638
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	27	215	25	20	1259	214	25	15	10	17	99	224
Added Vol:	0	1	107	71	1	0	0	0	0	49	0	33
PasserByVol:	0	11	2	0	22	0	0	0	0	3	0	6
Initial Fut:	27	227	134	91	1282	214	25	15	10	69	99	263
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	27	227	0	91	1282	214	25	15	0	69	99	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	227	0	91	1282	214	25	15	0	69	99	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	27	227	0	91	1282	214	25	15	0	69	99	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.41	0.59	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	659	941	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.14	0.00	0.06	0.40	0.13	0.02	0.01	0.00	0.11	0.11	0.00
Crit Moves:	****				****		****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.888
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	94	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	10	4	18	344	15	197	342	1213	23	16	1321	280
Added Vol:	16	3	13	100	3	49	49	56	17	13	54	98
PasserByVol:	0	0	0	39	0	20	25	24	0	0	23	46
Initial Fut:	26	7	31	483	18	266	416	1293	40	29	1398	424
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	26	7	31	483	18	266	416	1293	40	29	1398	424
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	7	31	483	18	266	416	1293	40	29	1398	424
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	26	7	31	483	18	266	416	1293	40	29	1398	424
OvlAdjVol:						58						102
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.80	0.23	0.97	1.93	0.07	1.00	2.00	1.94	0.06	1.00	2.00	1.00
Final Sat.:	1279	364	1558	2400	800	1600	3200	3105	95	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.20	0.02	0.17	0.13	0.42	0.42	0.02	0.44	0.26
OvlAdjV/S:						0.04						0.06
Crit Moves:	****			****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.956
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	139	Level Of Service:	E

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	1 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	22	534	27	186	464	44	234	103	37	17	35	609
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	24	574	29	200	499	47	252	111	40	18	38	655
Added Vol:	0	2	148	98	2	0	0	0	0	150	0	99
PasserByVol:	0	21	4	12	25	0	0	0	0	5	0	11
Initial Fut:	24	597	181	310	526	47	252	111	40	173	38	765
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	24	597	0	310	526	47	252	111	0	173	38	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	597	0	310	526	47	252	111	0	173	38	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	24	597	0	310	526	47	252	111	0	173	38	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.82	0.18	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1315	285	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.37	0.00	0.19	0.16	0.03	0.16	0.07	0.00	0.13	0.13	0.00
Crit Moves:	****			****			****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.968
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	152	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	28	17	59	301	30	483	207	1350	43	46	1408	153
Added Vol:	24	5	19	110	5	55	63	69	25	20	59	127
PasserByVol:	0	0	0	46	0	23	27	35	0	0	33	51
Initial Fut:	52	22	78	457	35	561	297	1454	68	66	1500	331
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	52	22	78	457	35	561	297	1454	68	66	1500	331
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	22	78	457	35	561	297	1454	68	66	1500	331
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	52	22	78	457	35	561	297	1454	68	66	1500	331
OvlAdjVol:						412						26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.68	0.32	1.00	1.86	0.14	1.00	2.00	1.91	0.09	1.00	2.00	1.00
Final Sat.:	1092	508	1600	2400	800	1600	3200	3057	143	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.04	0.05	0.19	0.04	0.35	0.09	0.48	0.48	0.04	0.47	0.21
OvlAdjV/S:						0.26						0.02
Crit Moves:		****				****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.725
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	Level Of Service:	C

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0	1	1 0 2	0	1	1 0 1	0	1	0 1	0 0	1
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	31	318	24	250	823	30	31	34	28	23	30	192
Added Vol:	0	3	193	127	3	0	0	0	0	167	0	110
PasserByVol:	0	24	5	18	28	0	0	0	0	6	0	17
Initial Fut:	31	345	222	395	854	30	31	34	28	196	30	319
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	31	345	0	395	854	30	31	34	0	196	30	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	345	0	395	854	30	31	34	0	196	30	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	31	345	0	395	854	30	31	34	0	196	30	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.87	0.13	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1387	213	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.22	0.00	0.25	0.27	0.02	0.02	0.02	0.00	0.14	0.14	0.00
Crit Moves:		****		****				****			****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.901
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	101	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1	0 1!	0 1	2	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	28	17	59	301	30	483	207	1350	43	46	1408	153
Added Vol:	24	5	19	110	5	55	63	69	25	20	59	127
PasserByVol:	0	0	0	46	0	23	27	35	0	0	33	51
Initial Fut:	52	22	78	457	35	561	297	1454	68	66	1500	331
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	52	22	78	457	35	561	297	1454	68	66	1500	331
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	22	78	457	35	561	297	1454	68	66	1500	331
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	52	22	78	457	35	561	297	1454	68	66	1500	331
OvlAdjVol:						323						26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.68	0.32	1.00	1.30	0.10	1.60	2.00	1.91	0.09	1.00	2.00	1.00
Final Sat.:	1092	508	1600	2400	800	2556	3200	3057	143	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.04	0.05	0.19	0.04	0.22	0.09	0.48	0.48	0.04	0.47	0.21
OvlAdjV/S:						0.13						0.02
Crit Moves:			****	****			****				****	

OPENING YEAR 2017 PLUS PROJECT WITH LOT 7 USE – SKATE PARK

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.880
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	91	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	3	8	8	1028	16	232	145	950	9	4	700	132
Added Vol:	2	0	1	33	0	16	36	39	1	0	22	72
PasserByVol:	0	0	0	26	0	11	15	18	0	0	13	29
Initial Fut:	5	8	9	1087	16	259	196	1007	10	4	735	233
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	8	9	1087	16	259	196	1007	10	4	735	233
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	8	9	1087	16	259	196	1007	10	4	735	233
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	8	9	1087	16	259	196	1007	10	4	735	233
OvlAdjVol:						161						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.49	0.71	0.80	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	786	1132	1282	2400	800	1600	3200	3170	30	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.45	0.02	0.16	0.06	0.32	0.32	0.00	0.23	0.15
OvlAdjV/S:						0.10						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.638
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	27	215	25	20	1259	214	25	15	10	17	99	224
Added Vol:	0	1	107	71	1	0	0	0	0	49	0	33
PasserByVol:	0	11	2	0	22	0	0	0	0	3	0	6
Initial Fut:	27	227	134	91	1282	214	25	15	10	69	99	263
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	27	227	0	91	1282	214	25	15	0	69	99	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	227	0	91	1282	214	25	15	0	69	99	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	27	227	0	91	1282	214	25	15	0	69	99	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.41	0.59	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	659	941	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.14	0.00	0.06	0.40	0.13	0.02	0.01	0.00	0.11	0.11	0.00
Crit Moves:	****				****		****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.881
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	92	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	10	4	18	344	15	197	342	1213	23	16	1321	280
Added Vol:	4	1	3	100	1	49	49	56	4	3	54	98
PasserByVol:	0	0	0	39	0	20	25	24	0	0	23	46
Initial Fut:	14	5	21	483	16	266	416	1293	27	19	1398	424
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	5	21	483	16	266	416	1293	27	19	1398	424
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	5	21	483	16	266	416	1293	27	19	1398	424
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	14	5	21	483	16	266	416	1293	27	19	1398	424
OvlAdjVol:						58						102
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.68	0.32	1.00	1.94	0.06	1.00	2.00	1.96	0.04	1.00	2.00	1.00
Final Sat.:	1087	513	1600	2400	800	1600	3200	3136	64	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.20	0.02	0.17	0.13	0.41	0.41	0.01	0.44	0.26
OvlAdjV/S:						0.04						0.06
Crit Moves:			****	****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.955
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	138	Level Of Service:	E

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	1 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	22	534	27	186	464	44	234	103	37	17	35	609
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	24	574	29	200	499	47	252	111	40	18	38	655
Added Vol:	0	1	147	98	1	0	0	0	0	149	0	99
PasserByVol:	0	21	4	12	25	0	0	0	0	5	0	11
Initial Fut:	24	596	180	310	525	47	252	111	40	172	38	765
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	24	596	0	310	525	47	252	111	0	172	38	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	596	0	310	525	47	252	111	0	172	38	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	24	596	0	310	525	47	252	111	0	172	38	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.82	0.18	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1313	287	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.37	0.00	0.19	0.16	0.03	0.16	0.07	0.00	0.13	0.13	0.00
Crit Moves:	****			****			****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.959
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	142	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	28	17	59	301	30	483	207	1350	43	46	1408	153
Added Vol:	6	1	5	110	1	55	63	69	7	5	59	127
PasserByVol:	0	0	0	46	0	23	27	35	0	0	33	51
Initial Fut:	34	18	64	457	31	561	297	1454	50	51	1500	331
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	34	18	64	457	31	561	297	1454	50	51	1500	331
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	18	64	457	31	561	297	1454	50	51	1500	331
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	34	18	64	457	31	561	297	1454	50	51	1500	331
OvlAdjVol:						412						26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.58	0.42	1.00	1.87	0.13	1.00	2.00	1.93	0.07	1.00	2.00	1.00
Final Sat.:	934	666	1600	2400	800	1600	3200	3094	106	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.03	0.04	0.19	0.04	0.35	0.09	0.47	0.47	0.03	0.47	0.21
OvlAdjV/S:						0.26						0.02
Crit Moves:			****			****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.723
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	Level Of Service:	C

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0	1	1 0 2	0	1	1 0 1	0	1	0 1	0	1
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	31	318	24	250	823	30	31	34	28	23	30	192
Added Vol:	0	1	191	127	1	0	0	0	0	165	0	110
PasserByVol:	0	24	5	18	28	0	0	0	0	6	0	17
Initial Fut:	31	343	220	395	852	30	31	34	28	194	30	319
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	31	343	0	395	852	30	31	34	0	194	30	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	343	0	395	852	30	31	34	0	194	30	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	31	343	0	395	852	30	31	34	0	194	30	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.87	0.13	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1385	215	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.21	0.00	0.25	0.27	0.02	0.02	0.02	0.00	0.14	0.14	0.00
Crit Moves:		****		****				****		****		

FUTURE YEAR 2030 BASELINE

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.897
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	98	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	3	8	8	1039	16	235	147	960	9	4	707	134
Added Vol:	0	0	0	40	0	16	36	63	0	0	69	77
PasserByVol:	0	0	0	26	0	11	15	18	0	0	13	29
Initial Fut:	3	8	8	1105	16	262	198	1041	9	4	789	240
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	8	8	1105	16	262	198	1041	9	4	789	240
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	8	8	1105	16	262	198	1041	9	4	789	240
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	8	8	1105	16	262	198	1041	9	4	789	240
OvlAdjVol:						163						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.35	0.83	0.82	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	565	1318	1318	2400	800	1600	3200	3174	26	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.46	0.02	0.16	0.06	0.33	0.33	0.00	0.25	0.15
OvlAdjV/S:						0.10						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.645
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	27	217	25	21	1272	216	25	15	10	17	100	226
Added Vol:	0	6	107	71	8	0	0	0	0	49	0	33
PasserByVol:	0	11	2	0	22	0	0	0	0	3	0	6
Initial Fut:	27	234	134	92	1302	216	25	15	10	69	100	265
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	27	234	0	92	1302	216	25	15	0	69	100	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	234	0	92	1302	216	25	15	0	69	100	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	27	234	0	92	1302	216	25	15	0	69	100	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.41	0.59	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	656	944	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.15	0.00	0.06	0.41	0.14	0.02	0.01	0.00	0.11	0.11	0.00
Crit Moves:	****				****		****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.899
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	10	4	18	348	15	199	345	1225	23	16	1335	282
Added Vol:	0	0	0	107	0	49	49	106	0	0	85	104
PasserByVol:	0	0	0	39	0	20	25	24	0	0	23	46
Initial Fut:	10	4	18	494	15	268	419	1355	23	16	1443	432
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	4	18	494	15	268	419	1355	23	16	1443	432
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	4	18	494	15	268	419	1355	23	16	1443	432
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	4	18	494	15	268	419	1355	23	16	1443	432
OvlAdjVol:						58						103
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.60	0.40	1.00	1.94	0.06	1.00	2.00	1.97	0.03	1.00	2.00	1.00
Final Sat.:	960	640	1600	2400	800	1600	3200	3147	53	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.21	0.02	0.17	0.13	0.43	0.43	0.01	0.45	0.27
OvlAdjV/S:						0.04						0.06
Crit Moves:			****	****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.964
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	147	Level Of Service:	E

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	22	534	27	186	464	44	234	103	37	17	35	609
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	24	580	29	202	504	48	254	112	40	18	38	662
Added Vol:	0	6	146	98	8	0	0	0	0	148	0	99
PasserByVol:	0	21	4	12	25	0	0	0	0	5	0	11
Initial Fut:	24	607	179	312	537	48	254	112	40	171	38	772
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	24	607	0	312	537	48	254	112	0	171	38	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	607	0	312	537	48	254	112	0	171	38	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	24	607	0	312	537	48	254	112	0	171	38	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.82	0.18	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1310	290	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.38	0.00	0.20	0.17	0.03	0.16	0.07	0.00	0.13	0.13	0.00
Crit Moves:	****			****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.976
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	162	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	28	17	60	304	30	488	210	1365	43	47	1423	154
Added Vol:	0	0	0	118	0	55	63	108	0	0	97	134
PasserByVol:	0	0	0	46	0	23	27	35	0	0	33	51
Initial Fut:	28	17	60	468	30	566	300	1508	43	47	1553	339
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	28	17	60	468	30	566	300	1508	43	47	1553	339
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	17	60	468	30	566	300	1508	43	47	1553	339
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	28	17	60	468	30	566	300	1508	43	47	1553	339
OvlAdjVol:						416						27
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.54	0.46	1.00	1.88	0.12	1.00	2.00	1.94	0.06	1.00	2.00	1.00
Final Sat.:	858	742	1600	2400	800	1600	3200	3110	90	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.02	0.04	0.20	0.04	0.35	0.09	0.48	0.48	0.03	0.49	0.21
OvlAdjV/S:						0.26						0.02
Crit Moves:			****			****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.731
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	32	322	24	253	832	30	32	35	28	23	30	194
Added Vol:	0	7	190	127	8	0	0	0	0	165	0	110
PasserByVol:	0	24	5	18	28	0	0	0	0	6	0	17
Initial Fut:	32	353	219	398	868	30	32	35	28	194	30	321
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	32	353	0	398	868	30	32	35	0	194	30	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	353	0	398	868	30	32	35	0	194	30	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	32	353	0	398	868	30	32	35	0	194	30	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.86	0.14	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1383	217	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.22	0.00	0.25	0.27	0.02	0.02	0.02	0.00	0.14	0.14	0.00
Crit Moves:		****		****				****			****	

FUTURE YEAR 2030 PLUS PROJECT (FIVE SINGLE FAMILY HOMES)

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.898
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	99	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	3	8	8	1039	16	235	147	960	9	4	707	134
Added Vol:	2	0	1	40	0	16	36	63	1	0	69	77
PasserByVol:	0	0	0	26	0	11	15	18	0	0	13	29
Initial Fut:	5	8	9	1105	16	262	198	1041	10	4	789	240
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	8	9	1105	16	262	198	1041	10	4	789	240
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	8	9	1105	16	262	198	1041	10	4	789	240
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	8	9	1105	16	262	198	1041	10	4	789	240
OvlAdjVol:						163						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.49	0.71	0.80	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	784	1134	1283	2400	800	1600	3200	3170	30	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.46	0.02	0.16	0.06	0.33	0.33	0.00	0.25	0.15
OvlAdjV/S:						0.10						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.645
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	27	217	25	21	1272	216	25	15	10	17	100	226
Added Vol:	0	6	107	71	8	0	0	0	0	49	0	33
PasserByVol:	0	11	2	0	22	0	0	0	0	3	0	6
Initial Fut:	27	234	134	92	1302	216	25	15	10	69	100	265
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	27	234	0	92	1302	216	25	15	0	69	100	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	234	0	92	1302	216	25	15	0	69	100	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	27	234	0	92	1302	216	25	15	0	69	100	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.41	0.59	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	656	944	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.15	0.00	0.06	0.41	0.14	0.02	0.01	0.00	0.11	0.11	0.00
Crit Moves:	****				****		****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.900
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	10	4	18	348	15	199	345	1225	23	16	1335	282
Added Vol:	1	0	1	107	0	49	49	106	2	1	85	104
PasserByVol:	0	0	0	39	0	20	25	24	0	0	23	46
Initial Fut:	11	4	19	494	15	268	419	1355	25	17	1443	432
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	4	19	494	15	268	419	1355	25	17	1443	432
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	4	19	494	15	268	419	1355	25	17	1443	432
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	4	19	494	15	268	419	1355	25	17	1443	432
OvlAdjVol:						58						103
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.62	0.38	1.00	1.94	0.06	1.00	2.00	1.96	0.04	1.00	2.00	1.00
Final Sat.:	997	603	1600	2400	800	1600	3200	3142	58	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.21	0.02	0.17	0.13	0.43	0.43	0.01	0.45	0.27
OvlAdjV/S:						0.04						0.06
Crit Moves:		****		****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.965
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	148	Level Of Service:	E

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	1 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	22	534	27	186	464	44	234	103	37	17	35	609
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	24	580	29	202	504	48	254	112	40	18	38	662
Added Vol:	0	7	146	98	8	0	0	0	0	148	0	99
PasserByVol:	0	21	4	12	25	0	0	0	0	5	0	11
Initial Fut:	24	608	179	312	537	48	254	112	40	171	38	772
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	24	608	0	312	537	48	254	112	0	171	38	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	608	0	312	537	48	254	112	0	171	38	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	24	608	0	312	537	48	254	112	0	171	38	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.82	0.18	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1310	290	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.38	0.00	0.20	0.17	0.03	0.16	0.07	0.00	0.13	0.13	0.00
Crit Moves:		****		****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.977
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	163	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	28	17	60	304	30	488	210	1365	43	47	1423	154
Added Vol:	1	0	1	118	0	55	63	108	2	1	97	134
PasserByVol:	0	0	0	46	0	23	27	35	0	0	33	51
Initial Fut:	29	17	61	468	30	566	300	1508	45	48	1553	339
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	29	17	61	468	30	566	300	1508	45	48	1553	339
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	17	61	468	30	566	300	1508	45	48	1553	339
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	29	17	61	468	30	566	300	1508	45	48	1553	339
OvlAdjVol:						416						27
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.54	0.46	1.00	1.88	0.12	1.00	2.00	1.94	0.06	1.00	2.00	1.00
Final Sat.:	872	728	1600	2400	800	1600	3200	3106	94	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.02	0.04	0.20	0.04	0.35	0.09	0.49	0.49	0.03	0.49	0.21
OvlAdjV/S:						0.26						0.02
Crit Moves:		****				****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.731
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	32	322	24	253	832	30	32	35	28	23	30	194
Added Vol:	0	7	190	127	8	0	0	0	0	165	0	110
PasserByVol:	0	24	5	18	28	0	0	0	0	6	0	17
Initial Fut:	32	353	219	398	868	30	32	35	28	194	30	321
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	32	353	0	398	868	30	32	35	0	194	30	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	353	0	398	868	30	32	35	0	194	30	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	32	353	0	398	868	30	32	35	0	194	30	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.86	0.14	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1383	217	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.22	0.00	0.25	0.27	0.02	0.02	0.02	0.00	0.14	0.14	0.00
Crit Moves:		****		****				****			****	

FUTURE YEAR 2030 PLUS PROJECT WITH LOT 7 USE – BASEBALL FIELD

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.898
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	99	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	3	8	8	1039	16	235	147	960	9	4	707	134
Added Vol:	2	0	1	40	0	16	36	63	1	0	69	77
PasserByVol:	0	0	0	26	0	11	15	18	0	0	13	29
Initial Fut:	5	8	9	1105	16	262	198	1041	10	4	789	240
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	8	9	1105	16	262	198	1041	10	4	789	240
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	8	9	1105	16	262	198	1041	10	4	789	240
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	8	9	1105	16	262	198	1041	10	4	789	240
OvlAdjVol:						163						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.49	0.71	0.80	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	784	1134	1283	2400	800	1600	3200	3170	30	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.46	0.02	0.16	0.06	0.33	0.33	0.00	0.25	0.15
OvlAdjV/S:						0.10						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.645
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	1 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	27	217	25	21	1272	216	25	15	10	17	100	226
Added Vol:	0	6	107	71	8	0	0	0	0	49	0	33
PasserByVol:	0	11	2	0	22	0	0	0	0	3	0	6
Initial Fut:	27	234	134	92	1302	216	25	15	10	69	100	265
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	27	234	0	92	1302	216	25	15	0	69	100	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	234	0	92	1302	216	25	15	0	69	100	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	27	234	0	92	1302	216	25	15	0	69	100	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.41	0.59	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	656	944	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.15	0.00	0.06	0.41	0.14	0.02	0.01	0.00	0.11	0.11	0.00
Crit Moves:	****				****		****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.908
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	104	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	10	4	18	348	15	199	345	1225	23	16	1335	282
Added Vol:	16	3	13	107	3	49	49	106	17	13	85	104
PasserByVol:	0	0	0	39	0	20	25	24	0	0	23	46
Initial Fut:	26	7	31	494	18	268	419	1355	40	29	1443	432
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	26	7	31	494	18	268	419	1355	40	29	1443	432
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	7	31	494	18	268	419	1355	40	29	1443	432
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	26	7	31	494	18	268	419	1355	40	29	1443	432
OvlAdjVol:						58						103
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.80	0.23	0.97	1.93	0.07	1.00	2.00	1.94	0.06	1.00	2.00	1.00
Final Sat.:	1277	364	1559	2400	800	1600	3200	3109	91	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.21	0.02	0.17	0.13	0.44	0.44	0.02	0.45	0.27
OvlAdjV/S:						0.04						0.06
Crit Moves:		****	****				****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.967
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	150	Level Of Service:	E

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	22	534	27	186	464	44	234	103	37	17	35	609
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	24	580	29	202	504	48	254	112	40	18	38	662
Added Vol:	0	8	148	98	10	0	0	0	0	150	0	99
PasserByVol:	0	21	4	12	25	0	0	0	0	5	0	11
Initial Fut:	24	609	181	312	539	48	254	112	40	173	38	772
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	24	609	0	312	539	48	254	112	0	173	38	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	609	0	312	539	48	254	112	0	173	38	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	24	609	0	312	539	48	254	112	0	173	38	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.82	0.18	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1312	288	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.38	0.00	0.20	0.17	0.03	0.16	0.07	0.00	0.13	0.13	0.00
Crit Moves:		****			****			****				****

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.988
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	179	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	28	17	60	304	30	488	210	1365	43	47	1423	154
Added Vol:	24	5	19	118	5	55	63	108	25	20	97	134
PasserByVol:	0	0	0	46	0	23	27	35	0	0	33	51
Initial Fut:	52	22	79	468	35	566	300	1508	68	67	1553	339
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	52	22	79	468	35	566	300	1508	68	67	1553	339
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	22	79	468	35	566	300	1508	68	67	1553	339
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	52	22	79	468	35	566	300	1508	68	67	1553	339
OvlAdjVol:						416						27
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.68	0.32	1.00	1.86	0.14	1.00	2.00	1.91	0.09	1.00	2.00	1.00
Final Sat.:	1090	510	1600	2400	800	1600	3200	3061	139	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.04	0.05	0.20	0.04	0.35	0.09	0.49	0.49	0.04	0.49	0.21
OvlAdjV/S:						0.26						0.02
Crit Moves:			****			****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.734
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	C

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	32	322	24	253	832	30	32	35	28	23	30	194
Added Vol:	0	10	193	127	10	0	0	0	0	167	0	110
PasserByVol:	0	24	5	18	28	0	0	0	0	6	0	17
Initial Fut:	32	356	222	398	870	30	32	35	28	196	30	321
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	32	356	0	398	870	30	32	35	0	196	30	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	356	0	398	870	30	32	35	0	196	30	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	32	356	0	398	870	30	32	35	0	196	30	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.87	0.13	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1385	215	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.22	0.00	0.25	0.27	0.02	0.02	0.02	0.00	0.14	0.14	0.00
Crit Moves:		****		****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.923
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	113	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1	0	1! 0 1	2	0 1	1 0	1	0	2 0 1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	28	17	60	304	30	488	210	1365	43	47	1423	154
Added Vol:	24	5	19	118	5	55	63	108	25	20	97	134
PasserByVol:	0	0	0	46	0	23	27	35	0	0	33	51
Initial Fut:	52	22	79	468	35	566	300	1508	68	67	1553	339
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	52	22	79	468	35	566	300	1508	68	67	1553	339
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	22	79	468	35	566	300	1508	68	67	1553	339
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	52	22	79	468	35	566	300	1508	68	67	1553	339
OvlAdjVol:						328						27
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.68	0.32	1.00	1.31	0.10	1.59	2.00	1.91	0.09	1.00	2.00	1.00
Final Sat.:	1090	510	1600	2400	800	2540	3200	3061	139	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.04	0.05	0.20	0.04	0.22	0.09	0.49	0.49	0.04	0.49	0.21
OvlAdjV/S:						0.13						0.02
Crit Moves:		****	****				****				****	

FUTURE YEAR 2030 PLUS PROJECT WITH LOT 7 USE – SKATE PARK

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.898
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	99	Level Of Service:	D

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	3	7	7	956	15	216	135	884	8	4	651	123
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	3	8	8	1039	16	235	147	960	9	4	707	134
Added Vol:	2	0	1	40	0	16	36	63	1	0	69	77
PasserByVol:	0	0	0	26	0	11	15	18	0	0	13	29
Initial Fut:	5	8	9	1105	16	262	198	1041	10	4	789	240
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	8	9	1105	16	262	198	1041	10	4	789	240
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	8	9	1105	16	262	198	1041	10	4	789	240
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	8	9	1105	16	262	198	1041	10	4	789	240
OvlAdjVol:						163						0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.49	0.71	0.80	1.97	0.03	1.00	2.00	1.98	0.02	1.00	2.00	1.00
Final Sat.:	784	1134	1283	2400	800	1600	3200	3170	30	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.46	0.02	0.16	0.06	0.33	0.33	0.00	0.25	0.15
OvlAdjV/S:						0.10						0.00
Crit Moves:	****			****				****		****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.645
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	25	200	23	19	1171	199	23	14	9	16	92	208
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	27	217	25	21	1272	216	25	15	10	17	100	226
Added Vol:	0	6	107	71	8	0	0	0	0	49	0	33
PasserByVol:	0	11	2	0	22	0	0	0	0	3	0	6
Initial Fut:	27	234	134	92	1302	216	25	15	10	69	100	265
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	27	234	0	92	1302	216	25	15	0	69	100	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	234	0	92	1302	216	25	15	0	69	100	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	27	234	0	92	1302	216	25	15	0	69	100	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.41	0.59	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	656	944	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.15	0.00	0.06	0.41	0.14	0.02	0.01	0.00	0.11	0.11	0.00
Crit Moves:	****				****		****			****		

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.901
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	101	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	9	4	17	320	14	183	318	1128	21	15	1229	260
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	10	4	18	348	15	199	345	1225	23	16	1335	282
Added Vol:	4	1	3	107	1	49	49	106	4	3	85	104
PasserByVol:	0	0	0	39	0	20	25	24	0	0	23	46
Initial Fut:	14	5	21	494	16	268	419	1355	27	19	1443	432
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	5	21	494	16	268	419	1355	27	19	1443	432
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	5	21	494	16	268	419	1355	27	19	1443	432
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	14	5	21	494	16	268	419	1355	27	19	1443	432
OvlAdjVol:						58						103
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.68	0.32	1.00	1.94	0.06	1.00	2.00	1.96	0.04	1.00	2.00	1.00
Final Sat.:	1086	514	1600	2400	800	1600	3200	3138	62	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.21	0.02	0.17	0.13	0.43	0.43	0.01	0.45	0.27
OvlAdjV/S:						0.04						0.06
Crit Moves:			****	****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.966
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	149	Level Of Service:	E

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	0 1		1 0 2	0 1		1 0 1	0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	22	534	27	186	464	44	234	103	37	17	35	609
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	24	580	29	202	504	48	254	112	40	18	38	662
Added Vol:	0	7	147	98	8	0	0	0	0	149	0	99
PasserByVol:	0	21	4	12	25	0	0	0	0	5	0	11
Initial Fut:	24	608	180	312	537	48	254	112	40	172	38	772
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	24	608	0	312	537	48	254	112	0	172	38	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	608	0	312	537	48	254	112	0	172	38	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	24	608	0	312	537	48	254	112	0	172	38	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.82	0.18	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1311	289	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.38	0.00	0.20	0.17	0.03	0.16	0.07	0.00	0.13	0.13	0.00
Crit Moves:		****		****			****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Malibu Canyon

Cycle (sec):	100	Critical Vol./Cap.(X):	0.979
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	166	Level Of Service:	E

Street Name:	Malibu Canyon						PCH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	1 1	0 0	1	2 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	26	16	55	280	28	449	193	1256	40	43	1310	142
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	28	17	60	304	30	488	210	1365	43	47	1423	154
Added Vol:	6	1	5	118	1	55	63	108	7	5	97	134
PasserByVol:	0	0	0	46	0	23	27	35	0	0	33	51
Initial Fut:	34	18	65	468	31	566	300	1508	50	52	1553	339
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	34	18	65	468	31	566	300	1508	50	52	1553	339
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	18	65	468	31	566	300	1508	50	52	1553	339
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	34	18	65	468	31	566	300	1508	50	52	1553	339
OvlAdjVol:						416						27
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.58	0.42	1.00	1.87	0.13	1.00	2.00	1.94	0.06	1.00	2.00	1.00
Final Sat.:	934	666	1600	2400	800	1600	3200	3096	104	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.03	0.04	0.20	0.04	0.35	0.09	0.49	0.49	0.03	0.49	0.21
OvlAdjV/S:						0.26						0.02
Crit Moves:		****				****	****				****	

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Malibu Canyon/Civic Center

Cycle (sec):	100	Critical Vol./Cap.(X):	0.732
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Malibu Canyon						Civic Center					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	1 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	29	296	22	233	766	28	29	32	26	21	28	179
Growth Adj:	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Initial Bse:	32	322	24	253	832	30	32	35	28	23	30	194
Added Vol:	0	8	191	127	9	0	0	0	0	165	0	110
PasserByVol:	0	24	5	18	28	0	0	0	0	6	0	17
Initial Fut:	32	354	220	398	869	30	32	35	28	194	30	321
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	32	354	0	398	869	30	32	35	0	194	30	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	354	0	398	869	30	32	35	0	194	30	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	32	354	0	398	869	30	32	35	0	194	30	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.86	0.14	1.00
Final Sat.:	1600	1600	1600	1600	3200	1600	1600	1600	1600	1383	217	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.22	0.00	0.25	0.27	0.02	0.02	0.02	0.00	0.14	0.14	0.00
Crit Moves:		****		****				****			****	

APPENDIX C

Roadway Segment Analysis Worksheets

SEGMENT 1 – PCH W/O MALIBU CANYON ROAD

Existing Condition

Existing plus Project

Existing plus Project with Lot 7 Use – Baseball Field

Existing plus Project with Lot 7 Use – Skate Park

Opening Year 2017 Baseline

Opening Year 2017 plus Project

Opening Year 2017 plus Project with Lot 7 Use – Baseball Field

Opening Year 2017 plus Project with Lot 7 Use – Skate Park

Future Year 2030 Baseline

Future Year 2030 plus Project

Future Year 2030 plus Project with Lot 7 Use – Baseball Field

Future Year 2030 plus Project with Lot 7 Use – Skate Park

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing 2012
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1027	vph	870	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	285		242	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	574	pcphpl	486	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	574	pcphpl	486	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	A		A	
Density, D	9.6	pc/mi/ln	8.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	570.6	483.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.35	2.26
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing 2012
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1489	vph	1785	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	414		496	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	833	pcphpl	998	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	833	pcphpl	998	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	13.9	pc/mi/ln	16.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	827.2	991.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.54	2.63
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing 2012
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1467	vph	1421	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	408		395	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	820	pcphpl	794	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	820	pcphpl	794	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	13.7	pc/mi/ln	13.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	815.0	789.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.53	2.51
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1028	vph	872	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	286		242	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	575	pcphpl	487	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	575	pcphpl	487	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	A		A	
Density, D	9.6	pc/mi/ln	8.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	571.1	484.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.35	2.26
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1469	vph	1422	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	408		395	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	821	pcphpl	795	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	821	pcphpl	795	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	13.7	pc/mi/ln	13.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	816.1	790.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.53	2.51
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1489	vph	1786	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	414		496	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	833	pcphpl	999	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	833	pcphpl	999	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	13.9	pc/mi/ln	16.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	827.2	992.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.54	2.63
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1028	vph	872	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	286		242	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	575	pcphpl	487	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	575	pcphpl	487	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	A		A	
Density, D	9.6	pc/mi/ln	8.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	571.1	484.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.35	2.26
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1484	vph	1437	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	412		399	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	830	pcphpl	803	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	830	pcphpl	803	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	13.8	pc/mi/ln	13.4	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	824.4	798.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.53	2.52
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1514	vph	1808	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	421		502	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	846	pcphpl	1011	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	846	pcphpl	1011	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	14.1	pc/mi/ln	16.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	841.1	1004.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.54	2.63
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1028	vph	872	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	286		242	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	575	pcphpl	487	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	575	pcphpl	487	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	A		A	
Density, D	9.6	pc/mi/ln	8.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	571.1	484.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.35	2.26
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1471	vph	1425	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	409		396	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	822	pcphpl	797	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	822	pcphpl	797	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	13.7	pc/mi/ln	13.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	817.2	791.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.53	2.51
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1496	vph	1791	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	416		498	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	836	pcphpl	1001	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	836	pcphpl	1001	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	13.9	pc/mi/ln	16.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	831.1	995.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.54	2.63
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1212	vph	997	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	337		277	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	678	pcphpl	557	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	678	pcphpl	557	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	11.3	pc/mi/ln	9.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	673.3	553.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.43	2.33
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1732	vph	1674	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	481		465	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	968	pcphpl	936	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	968	pcphpl	936	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.1	pc/mi/ln	15.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	962.2	930.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.61	2.59
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1797	vph	2089	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	499		580	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1005	pcphpl	1168	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1005	pcphpl	1168	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	16.8	pc/mi/ln	19.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	998.3	1160.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.63	2.71
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1213	vph	999	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	337		278	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	678	pcphpl	558	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	678	pcphpl	558	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	11.3	pc/mi/ln	9.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	673.9	555.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.43	2.33
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1734	vph	1675	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	482		465	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	970	pcphpl	937	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	970	pcphpl	937	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.2	pc/mi/ln	15.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	963.3	930.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.61	2.60
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1796	vph	2090	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	499		581	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1004	pcphpl	1169	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1004	pcphpl	1169	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	16.7	pc/mi/ln	19.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	997.8	1161.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.63	2.71
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1213	vph	999	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	337		278	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	678	pcphpl	558	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	678	pcphpl	558	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	11.3	pc/mi/ln	9.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	673.9	555.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.43	2.33
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1749	vph	1690	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	486		469	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	978	pcphpl	945	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	978	pcphpl	945	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.3	pc/mi/ln	15.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	971.7	938.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.62	2.60
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1819	vph	2113	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	505		587	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1017	pcphpl	1182	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1017	pcphpl	1182	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	17.0	pc/mi/ln	19.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1010.6	1173.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.64	2.71
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (Skate Park)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1213	vph	999	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	337		278	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	678	pcphpl	558	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	678	pcphpl	558	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	11.3	pc/mi/ln	9.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	673.9	555.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.43	2.33
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	PM Peak Hour
Highway:	PCH
From/To:	w/o Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	2017 + Project (Skate Park)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1736	vph	1678	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	482		466	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	971	pcphpl	938	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	971	pcphpl	938	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.2	pc/mi/ln	15.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	964.4	932.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.61	2.60
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (Skate Park)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1801	vph	2095	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	500		582	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1007	pcphpl	1172	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1007	pcphpl	1172	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	16.8	pc/mi/ln	19.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1000.6	1163.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.63	2.71
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1248	vph	1054	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	347		293	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	698	pcphpl	589	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	698	pcphpl	589	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	11.6	pc/mi/ln	9.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	693.3	585.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.45	2.36
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1797	vph	1721	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	499		478	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1005	pcphpl	962	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1005	pcphpl	962	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.8	pc/mi/ln	16.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	998.3	956.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.63	2.61
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	MID Day Peak Hour
Highway:	PCH
From/To:	w/o Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	2030
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1851	vph	2147	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	514		596	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1035	pcphpl	1201	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1035	pcphpl	1201	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	17.3	pc/mi/ln	20.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1028.3	1192.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.65	2.72
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1249	vph	1056	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	347		293	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	698	pcphpl	590	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	698	pcphpl	590	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	11.6	pc/mi/ln	9.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	693.9	586.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.45	2.36
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1799	vph	1722	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	500		478	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1006	pcphpl	963	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1006	pcphpl	963	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.8	pc/mi/ln	16.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	999.4	956.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.63	2.61
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1853	vph	2148	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	515		597	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1036	pcphpl	1201	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1036	pcphpl	1201	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	17.3	pc/mi/ln	20.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1029.4	1193.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.65	2.72
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	AM Peak Hour
Highway:	PCH
From/To:	w/o Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	2030 + Project (Baseball)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1249	vph	1056	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	347		293	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	698	pcphpl	590	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	698	pcphpl	590	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	11.6	pc/mi/ln	9.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	693.9	586.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.45	2.36
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1814	vph	1737	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	504		483	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1014	pcphpl	971	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1014	pcphpl	971	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.9	pc/mi/ln	16.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1007.8	965.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.64	2.61
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1876	vph	2171	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	521		603	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1049	pcphpl	1214	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1049	pcphpl	1214	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	17.5	pc/mi/ln	20.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1042.2	1206.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.65	2.73
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1249	vph	1056	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	347		293	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	698	pcphpl	590	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	698	pcphpl	590	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	11.6	pc/mi/ln	9.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	693.9	586.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.45	2.36
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1801	vph	1725	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	500		479	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1007	pcphpl	965	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1007	pcphpl	965	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.8	pc/mi/ln	16.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1000.6	958.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.63	2.61
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: w/o Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1858	vph	2153	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	516		598	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	1039	pcphpl	1204	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1039	pcphpl	1204	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	17.3	pc/mi/ln	20.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1032.2	1196.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.65	2.72
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

SEGMENT 2 – PCH E/O MALIBU CANYON ROAD

Existing Condition

Existing plus Project

Existing plus Project with Lot 7 Use – Baseball Field

Existing plus Project with Lot 7 Use – Skate Park

Opening Year 2017 Baseline

Opening Year 2017 plus Project

Opening Year 2017 plus Project with Lot 7 Use – Baseball Field

Opening Year 2017 plus Project with Lot 7 Use – Skate Park

Future Year 2030 Baseline

Future Year 2030 plus Project

Future Year 2030 plus Project with Lot 7 Use – Baseball Field

Future Year 2030 plus Project with Lot 7 Use – Skate Park

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing 2012
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1847	vph	778	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	513		216	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1031	pcphpl	436	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1031	pcphpl	436	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	17.2	pc/mi/ln	7.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1026.1	432.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.64	2.21
Bicycle LOS	C	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	MID Day Peak Hour
Highway:	PCH
From/To:	E/O Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	Existing 2012
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1591	vph	1495	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	442		415	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	888	pcphpl	838	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	888	pcphpl	838	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	14.8	pc/mi/ln	14.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	883.9	830.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.57	2.54
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing 2012
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1465	vph	1504	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	407		418	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	817	pcphpl	843	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	817	pcphpl	843	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	13.6	pc/mi/ln	14.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	813.9	835.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.53	2.54
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1849	vph	778	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	514		216	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1032	pcphpl	436	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1032	pcphpl	436	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	17.2	pc/mi/ln	7.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1027.2	432.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.64	2.21
Bicycle LOS	C	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1466	vph	1505	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	407		418	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	818	pcphpl	844	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	818	pcphpl	844	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	13.6	pc/mi/ln	14.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	814.4	836.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.53	2.54
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1592	vph	1496	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	442		416	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	888	pcphpl	839	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	888	pcphpl	839	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	14.8	pc/mi/ln	14.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	884.4	831.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.57	2.54
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	AM Peak Hour
Highway:	PCH
From/To:	E/O Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	Existing + Project (Baseball)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1848	vph	778	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	513		216	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1031	pcphpl	436	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1031	pcphpl	436	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	17.2	pc/mi/ln	7.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1026.7	432.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.64	2.21
Bicycle LOS	C	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	PM Peak Hour
Highway:	PCH
From/To:	E/O Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	Existing + Project (Baseball)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1478	vph	1517	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	411		421	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	825	pcphpl	851	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	825	pcphpl	851	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	13.8	pc/mi/ln	14.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	821.1	842.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.53	2.54
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1610	vph	1515	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	447		421	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	898	pcphpl	850	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	898	pcphpl	850	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	15.0	pc/mi/ln	14.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	894.4	841.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.57	2.54
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	AM Peak Hour
Highway:	PCH
From/To:	E/O Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	Existing + Project (Skatepark)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1848	vph	778	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	513		216	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1031	pcphpl	436	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1031	pcphpl	436	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	17.2	pc/mi/ln	7.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1026.7	432.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.64	2.21
Bicycle LOS	C	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: Existing + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1468	vph	1507	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	408		419	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	819	pcphpl	845	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	819	pcphpl	845	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	13.6	pc/mi/ln	14.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	815.6	837.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.53	2.54
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	MID Day Peak Hour
Highway:	PCH
From/To:	E/O Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	Existing + Project (Skatepark)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1596	vph	1500	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	443		417	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	891	pcphpl	841	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	891	pcphpl	841	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	14.9	pc/mi/ln	14.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	886.7	833.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.57	2.54
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2102	vph	972	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	584		270	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1173	pcphpl	545	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1173	pcphpl	545	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		A	
Density, D	19.5	pc/mi/ln	9.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1167.8	540.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.71	2.32
Bicycle LOS	C	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1794	vph	1838	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	498		511	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1001	pcphpl	1031	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1001	pcphpl	1031	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.7	pc/mi/ln	17.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	996.7	1021.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.63	2.64
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	MID Day Peak Hour
Highway:	PCH
From/To:	E/O Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	2017
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1970	vph	1877	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	547		521	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1099	pcphpl	1053	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1099	pcphpl	1053	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		B	
Density, D	18.3	pc/mi/ln	17.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1094.4	1042.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.68	2.65
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2103	vph	972	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	584		270	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1174	pcphpl	545	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1174	pcphpl	545	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		A	
Density, D	19.6	pc/mi/ln	9.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1168.3	540.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.71	2.32
Bicycle LOS	C	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1795	vph	1839	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	499		511	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1002	pcphpl	1031	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1002	pcphpl	1031	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.7	pc/mi/ln	17.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	997.2	1021.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.63	2.64
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1971	vph	1878	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	548		522	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1100	pcphpl	1053	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1100	pcphpl	1053	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		B	
Density, D	18.3	pc/mi/ln	17.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1095.0	1043.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.68	2.65
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2103	vph	972	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	584		270	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1174	pcphpl	545	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1174	pcphpl	545	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		A	
Density, D	19.6	pc/mi/ln	9.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1168.3	540.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.71	2.32
Bicycle LOS	C	B

Overall results are not computed when free-flow speed is less than 45 mph.

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Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1807	vph	1851	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	502		514	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1008	pcphpl	1038	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1008	pcphpl	1038	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.8	pc/mi/ln	17.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1003.9	1028.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.63	2.65
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

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OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	MID Day Peak Hour
Highway:	PCH
From/To:	E/O Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	2017 + Project (Baseball)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1989	vph	1897	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	553		527	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1110	pcphpl	1064	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1110	pcphpl	1064	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		B	
Density, D	18.5	pc/mi/ln	17.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1105.0	1053.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.68	2.66
Bicycle LOS	C	C

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OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2017 + Project (Skate Park)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2103	vph	972	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	584		270	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1174	pcphpl	545	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1174	pcphpl	545	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		A	
Density, D	19.6	pc/mi/ln	9.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1168.3	540.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.71	2.32
Bicycle LOS	C	B

Overall results are not computed when free-flow speed is less than 45 mph.

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OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	PM Peak Hour
Highway:	PCH
From/To:	E/O Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	2017 + Project (Skate Park)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1797	vph	1841	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	499		511	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1003	pcphpl	1033	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1003	pcphpl	1033	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.7	pc/mi/ln	17.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	998.3	1022.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.63	2.64
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

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OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	MID Day Peak Hour
Highway:	PCH
From/To:	E/O Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	2017 + Project (Skate Park)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1975	vph	1882	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	549		523	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1102	pcphpl	1056	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1102	pcphpl	1056	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		B	
Density, D	18.4	pc/mi/ln	17.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1097.2	1045.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.68	2.65
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

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OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2154	vph	1033	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	598		287	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1202	pcphpl	579	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1202	pcphpl	579	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		A	
Density, D	20.0	pc/mi/ln	9.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1196.7	573.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.72	2.35
Bicycle LOS	C	B

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OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1867	vph	1881	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	519		523	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1042	pcphpl	1055	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1042	pcphpl	1055	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	17.4	pc/mi/ln	17.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1037.2	1045.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.65	2.65
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

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OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2036	vph	1939	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	566		539	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1136	pcphpl	1087	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1136	pcphpl	1087	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		C	
Density, D	18.9	pc/mi/ln	18.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1131.1	1077.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.69	2.67
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

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OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2156	vph	1033	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	599		287	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1203	pcphpl	579	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1203	pcphpl	579	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		A	
Density, D	20.0	pc/mi/ln	9.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1197.8	573.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.72	2.35
Bicycle LOS	C	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1868	vph	1882	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	519		523	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1042	pcphpl	1056	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1042	pcphpl	1056	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	17.4	pc/mi/ln	17.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1037.8	1045.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.65	2.65
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2037	vph	1940	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	566		539	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1137	pcphpl	1088	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1137	pcphpl	1088	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		C	
Density, D	19.0	pc/mi/ln	18.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1131.7	1077.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.69	2.67
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2155	vph	1033	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	599		287	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1203	pcphpl	579	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1203	pcphpl	579	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		A	
Density, D	20.0	pc/mi/ln	9.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1197.2	573.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.72	2.35
Bicycle LOS	C	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1880	vph	1904	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	522		529	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1049	pcphpl	1068	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1049	pcphpl	1068	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	17.5	pc/mi/ln	17.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1044.4	1057.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.65	2.66
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	MID Day Peak Hour
Highway:	PCH
From/To:	E/O Malibu Canyon Road
Jurisdiction:	Caltrans
Analysis Year:	2030 + Project (Baseball)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2055	vph	1898	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	571		527	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1147	pcphpl	1064	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1147	pcphpl	1064	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		B	
Density, D	19.1	pc/mi/ln	17.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1141.7	1054.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.70	2.66
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2155	vph	1033	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	599		287	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1203	pcphpl	579	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1203	pcphpl	579	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		A	
Density, D	20.0	pc/mi/ln	9.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1197.2	573.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.72	2.35
Bicycle LOS	C	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1870	vph	1894	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	519		526	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1044	pcphpl	1062	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1044	pcphpl	1062	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	17.4	pc/mi/ln	17.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1038.9	1052.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.65	2.66
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: PCH
From/To: E/O Malibu Canyon Road
Jurisdiction: Caltrans
Analysis Year: 2030 + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2041	vph	1944	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	567		540	
Trucks and buses	1	%	1	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Grade	
Grade	-6.00	%	6.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		2.0	
Recreational vehicles PCE, ER	1.2		4.0	
Heavy vehicle adjustment, fHV	0.995		0.990	
Flow rate, vp	1139	pcphpl	1090	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1139	pcphpl	1090	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		C	
Density, D	19.0	pc/mi/ln	18.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1133.9	1080.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.70	2.67
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

SEGMENT 3 – MALIBU CANYON ROAD N/O PCH

Existing Condition

Existing plus Project

Existing plus Project with Lot 7 Use – Baseball Field

Existing plus Project with Lot 7 Use – Skate Park

Opening Year 2017 Baseline

Opening Year 2017 plus Project

Opening Year 2017 plus Project with Lot 7 Use – Baseball Field

Opening Year 2017 plus Project with Lot 7 Use – Skate Park

Future Year 2030 Baseline

Future Year 2030 plus Project

Future Year 2030 plus Project with Lot 7 Use – Baseball Field

Future Year 2030 plus Project with Lot 7 Use – Skate Park

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: Existing 2012
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	265	vph	1187	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	74		330	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	148	pcphpl	664	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	148	pcphpl	664	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	3.0	pc/mi/ln	13.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	147.2	659.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.66	2.42
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: Existing 2012
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	351	vph	757	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	98		210	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	196	pcphpl	423	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	196	pcphpl	423	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	3.9	pc/mi/ln	8.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	195.0	420.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.80	2.19
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: Existing 2012
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	582	vph	517	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	162		144	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	325	pcphpl	289	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	325	pcphpl	289	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	6.5	pc/mi/ln	5.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	323.3	287.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.06	2.00
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	AM Peak Hour
Highway:	Malibu Canyon Road
From/To:	N/O PCH
Jurisdiction:	City of Malibu
Analysis Year:	Existing + Project (5 Homes)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	265	vph	1187	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	74		330	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	148	pcphpl	664	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	148	pcphpl	664	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	3.0	pc/mi/ln	13.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	147.2	659.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.66	2.42
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: Existing + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	582	vph	517	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	162		144	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	325	pcphpl	289	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	325	pcphpl	289	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	6.5	pc/mi/ln	5.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	323.3	287.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.06	2.00
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: Existing + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	351	vph	757	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	98		210	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	196	pcphpl	423	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	196	pcphpl	423	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	3.9	pc/mi/ln	8.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	195.0	420.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.80	2.19
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: Existing + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	265	vph	1187	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	74		330	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	148	pcphpl	664	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	148	pcphpl	664	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	3.0	pc/mi/ln	13.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	147.2	659.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.66	2.42
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: Existing + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	585	vph	520	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	163		144	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	327	pcphpl	290	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	327	pcphpl	290	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	6.5	pc/mi/ln	5.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	325.0	288.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.06	2.00
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	MID Day Peak Hour
Highway:	Malibu Canyon Road
From/To:	N/O PCH
Jurisdiction:	City of Malibu
Analysis Year:	Existing + Project (Baseball)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	356	vph	762	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	99		212	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	199	pcphpl	426	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	199	pcphpl	426	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	4.0	pc/mi/ln	8.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	197.8	423.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.81	2.20
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: Existing + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	265	vph	1187	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	74		330	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	148	pcphpl	664	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	148	pcphpl	664	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	3.0	pc/mi/ln	13.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	147.2	659.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.66	2.42
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: Existing + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	583	vph	518	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	162		144	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	326	pcphpl	289	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	326	pcphpl	289	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	6.5	pc/mi/ln	5.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	323.9	287.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.06	2.00
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: Existing + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	352	vph	758	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	98		211	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	196	pcphpl	424	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	196	pcphpl	424	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	3.9	pc/mi/ln	8.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	195.6	421.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.81	2.19
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2017
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	437	vph	1362	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	121		378	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	244	pcphpl	761	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	244	pcphpl	761	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	4.9	pc/mi/ln	15.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	242.8	756.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.91	2.49
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2017
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	844	vph	764	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	234		212	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	472	pcphpl	427	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	472	pcphpl	427	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	9.4	pc/mi/ln	8.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	468.9	424.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.25	2.20
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2017
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	645	vph	1048	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	179		291	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	360	pcphpl	586	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	360	pcphpl	586	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	7.2	pc/mi/ln	11.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	358.3	582.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.11	2.36
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2017 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	437	vph	1362	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	121		378	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	244	pcphpl	761	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	244	pcphpl	761	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	4.9	pc/mi/ln	15.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	242.8	756.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.91	2.49
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2017 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	844	vph	764	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	234		212	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	472	pcphpl	427	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	472	pcphpl	427	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	9.4	pc/mi/ln	8.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	468.9	424.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.25	2.20
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2017 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	645	vph	1048	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	179		291	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	360	pcphpl	586	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	360	pcphpl	586	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	7.2	pc/mi/ln	11.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	358.3	582.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.11	2.36
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2017 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	437	vph	1362	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	121		378	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	244	pcphpl	761	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	244	pcphpl	761	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	4.9	pc/mi/ln	15.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	242.8	756.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.91	2.49
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2017 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	847	vph	767	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	235		213	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	473	pcphpl	429	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	473	pcphpl	429	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	9.5	pc/mi/ln	8.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	470.6	426.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.25	2.20
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: MID Day Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2017 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	650	vph	1053	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	181		293	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	363	pcphpl	589	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	363	pcphpl	589	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	7.3	pc/mi/ln	11.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	361.1	585.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.11	2.36
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2017 + Project (Skate Park)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	437	vph	1362	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	121		378	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	244	pcphpl	761	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	244	pcphpl	761	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	4.9	pc/mi/ln	15.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	242.8	756.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.91	2.49
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	PM Peak Hour
Highway:	Malibu Canyon Road
From/To:	N/O PCH
Jurisdiction:	City of Malibu
Analysis Year:	2017 + Project (Skate Park)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	845	vph	765	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	235		213	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	472	pcphpl	427	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	472	pcphpl	427	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	9.4	pc/mi/ln	8.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	469.4	425.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.25	2.20
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	Dennis Pascua
Agency/Co:	City of Malibu
Date:	10/8/2013
Analysis Period:	MID Day Peak Hour
Highway:	Malibu Canyon Road
From/To:	N/O PCH
Jurisdiction:	City of Malibu
Analysis Year:	2017 + Project (Skate Park)
Project ID:	

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	646	vph	1049	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	179		291	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	361	pcphpl	586	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	361	pcphpl	586	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	7.2	pc/mi/ln	11.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	358.9	582.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.11	2.36
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	446	vph	1383	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	124		384	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	249	pcphpl	773	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	249	pcphpl	773	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	5.0	pc/mi/ln	15.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	247.8	768.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.92	2.50
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	855	vph	777	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	238		216	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	478	pcphpl	434	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	478	pcphpl	434	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	9.6	pc/mi/ln	8.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	475.0	431.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.25	2.21
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	656	vph	1064	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	182		296	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	366	pcphpl	595	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	366	pcphpl	595	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	7.3	pc/mi/ln	11.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	364.4	591.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.12	2.36
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	446	vph	1383	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	124		384	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	249	pcphpl	773	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	249	pcphpl	773	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	5.0	pc/mi/ln	15.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	247.8	768.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.92	2.50
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	855	vph	777	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	238		216	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	478	pcphpl	434	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	478	pcphpl	434	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	9.6	pc/mi/ln	8.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	475.0	431.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.25	2.21
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030 + Project (5 Homes)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	656	vph	1064	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	182		296	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	366	pcphpl	595	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	366	pcphpl	595	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	7.3	pc/mi/ln	11.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	364.4	591.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.12	2.36
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	446	vph	1383	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	124		384	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	249	pcphpl	773	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	249	pcphpl	773	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	5.0	pc/mi/ln	15.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	247.8	768.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.92	2.50
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	858	vph	780	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	238		217	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	480	pcphpl	436	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	480	pcphpl	436	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	9.6	pc/mi/ln	8.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	476.7	433.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.26	2.21
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030 + Project (Baseball)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	661	vph	1069	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	184		297	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	369	pcphpl	598	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	369	pcphpl	598	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	7.4	pc/mi/ln	12.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	367.2	593.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.12	2.37
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: AM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030 + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	446	vph	1383	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	124		384	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	249	pcphpl	773	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	249	pcphpl	773	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	5.0	pc/mi/ln	15.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	247.8	768.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	1.92	2.50
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030 + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	856	vph	778	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	238		216	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	478	pcphpl	435	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	478	pcphpl	435	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		A	
Density, D	9.6	pc/mi/ln	8.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	475.6	432.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.26	2.21
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: Dennis Pascua
Agency/Co: City of Malibu
Date: 10/8/2013
Analysis Period: PM Peak Hour
Highway: Malibu Canyon Road
From/To: N/O PCH
Jurisdiction: City of Malibu
Analysis Year: 2030 + Project (Skatepark)
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	48.4	mph	48.4	mph

VOLUME

Direction	1		2	
Volume, V	657	vph	1065	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	183		296	
Trucks and buses	1	%	1	%
Recreational vehicles	1	%	1	%
Terrain type	Grade		Grade	
Grade	3.00	%	-3.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.993		0.993	
Flow rate, vp	367	pcphpl	595	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	367	pcphpl	595	pcphpl
Free-flow speed, FFS	48.4	mph	48.4	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	A		B	
Density, D	7.3	pc/mi/ln	11.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	365.0	591.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.12	2.37
Bicycle LOS	B	B

Overall results are not computed when free-flow speed is less than 45 mph.

APPENDIX D

Cumulative Projects List and Trip Assignments

City of Malibu Cumulative Projects Listing
Updated August 1, 2012

Acronyms
ac = acres
BPC = in building plan check
CCC = California Coastal Commission
CCD = Cross Creek Drive
CCW = Civic Center Way
CDP = coastal development permit
LLA = lot line adjustment
MCR = Malibu Canyon Road
NSFR = new, single-family residence
PA = planning approval / CDP received
PCH = Pacific Coast Highway
sf = square feet
TCR = Trancas Canyon Road
UC = under construction
UPR = still under planning review

West Malibu

Project Name	Brief Description	Location	Status	Size	Planner
Trancas Town	New residential development	6155 TCR	Pending CDP submittal; zone change UPR	Zone change from Rural Residential to Multi-Family; 32 detached townhomes (preliminary)	B. Blue
HOWS / Trancas Country Market	Remodel and expansion of existing retail	30745 PCH (at TCR)	PA; UC	53,423 sf total (27,695 sf existing; 25,728 sf new); 339 parking spaces	R. Mollica
SMMC Lechuza Beach Public Access Improvements	Several public access improvements along the areas of East Sea Level, West Sea Level and Bunnie Lane, including stairways	31720.5 PCH	UPR	Beach access stairways, view platforms, public restroom and 4 ADA parking spaces	S. Danner
Sea Star Estates	5 NSFRs (infill)	6270, 6304, 6312, 6282, and 6398 Sea Star Dr	UPR	5 NSFRs on 5 existing parcels	S. Edmondson
Malibu High and Middle School Campus Improvement Project	New admin building, remodel existing buildings, new parking area and site improvements	30215 Morning View Drive	UPR	35,315 sf of new construction, 12,509 sf of renovation/modernization of existing buildings, new 150 space parking lot, various parking and site improvements	J. Smith
Broad Beach Restoration Project	Beachwide rock revetment, off-shore sand dredging, sand nourishment, dune restoration	Broad Beach Road	UPR	Westward terminus of Zuma Beach to 6525 Point Lechuza	CA State Lands Commission / Coastal Commission, S. Danner
Malibu Athletic Field Lighting Project	Sports field lighting	30215 Morning View Drive	BPC (State)	Four 70 ft tall lights installed on the MHS football field/track (limited usability allowed - 16 nights/yr till 10:30pm between Nov to May and 45 nights/yr till 7:30pm between Nov to Mar - no lights used between June to Aug per year)	J. Smith
28811 PCH Subdivision	3 lot subdivision	28811 PCH	UPR	Potential development for each lot equals a maximum TDSF of 8,620 sf; 8,342 sf; and 8,470 sf	S. Danner
LA County Fire Station No. 71	Fire station reconstruction	28722 PCH	UPR	6,033 sf total (2,881 sf existing; 3,152 sf new); 12 parking spaces; temporary fire station relocation to Zuma Beach Lifegaurd HQ	J. Smith
Solstice Creek Fish Ladder	New fish ladder project at mouth of Solstice Creek / across a portion of Dan Blocker Beach	26038.5 PCH	BPC (State)	Bridge culvert and stream channel reconstruction with rock weirs and step-pools for a total length of 436 feet	S. Edmondson
Galahad Subdivision	5 lot subdivision; 4 buildable lots and 1 open space lot	6061 Galahad Rd	UPR	Potential development for each lot equals a maximum TDSF of 7,044 sf, 7,142 sf, 7,234 sf, and 8,414 sf	A. Fernandez
Zuma Mesa	LLA and 2 NSFR	6271 and 6277 Zuma Mesa Dr	PA; UC	5,329 sf and 6,984 sf	A. Fernandez
Trancas Highlands Water Assessment District	Water tank/line, buster pump station and NSFR	31537 Anacapa View Dr, Anacapa View Dr and TCR	PA, assessment district formation process underway	500,000 gallon water tank, +/- 12,400 linear feet of trenching, assessment district (+/- 66 existing lots), one NSFR +/- 11,000 sf	B. Blue
Sea Level	2 NSFR (infill) and road widening project	31864 and 31866 Sea Level Dr	UPR	2,185 sf and 1,925 sf, 2,000 sf; and 130 linear feet of road widening (Sea Level Dr)	A. Fernandez
N/A	2-lot LLA and 2 NSFR	5905 and 5909 Latigo Canyon Rd	UPR	Lot line adjustment and construction of 2 NSFR - 8,223 sf and 5,935 sq respectively	S. Danner
N/A	TPM	27535 PCH	PA	Subdivision of 1 lot into 2 lots	H. Ly
Puerco Canyon Road Extension	Road extension	3500 Puerco Canyon Rd	UPR	3,500 linear feet of road extension to provide access to 7 residentially zoned lots (1 City lot/6 County lots)	S. Danner

Civic Center Area

Project Name	Brief Description	Location	Status	Size	Planner
Crummer	7 lot subdivision (5 for residential)	24120 PCH	UPR; final project scope pending	(Preliminary) 5 NSFRs; expanded parking for Bluffs Park; 1.74 acre dedication to City for recreation use	H. Ly
Hajian	New office	24903 PCH	PA; UC	9,685 sf; 44 parking spaces	H. Ly
Towing Subdivision	7 lot subdivision (4 for residential)	23915 Malibu Rd	PA; BPC	4 NSFRs	S. Danner
Rancho Malibu Hotel	New hotel and spa	4000 MCR (NW corner of MCR and PCH, along Winter Canyon Rd)	UPR	146-room luxury hotel with related facilities. The hotel's 141,428 sf main building contains a retail component, day spa, fitness center, lobby, restaurant, bar, banquet and meeting facilities, and guest rooms. Development also includes 133,873 sf of detached buildings which include guest rooms. A large swimming pool, subterranean parking structure, function lawn, landscaping, and hardscape. CUP for live entertainment, events, alcohol sales and a TTM for a commercial airspace subdivision (146 hotel rooms and 2 retail spaces will be available for private ownership).	S. Danner
SMMC Beach Public Access Improvements	Public beach access improvements and a new stairway	24038 Malibu Rd	PA; pre-BPC	Beach access	R. Mollica
La Paz Shopping Center	New retail, office and institutional development	23465 Civic Center Way	PA; BPC	112,058 sf retail and office; 20,000 sf institutional; 543 parking spaces	S. Edmondson
Whole Foods Shopping Center	New retail development	23401 CCW	UPR	25,000 sf grocery; 14,839 sf retail/commercial (up to 4,000 sf restaurant)l; 220 parking spaces	B. Blue
City of Malibu Civic Center Wastewater Treatment Facility	Wastewater treatment and treated water recycling facility	unknown	Testing and preliminary design underway, pending CDP submittal	Scheduled to be online by November 2015 to serve first phase of Civic Center (commercial parcels); second phase by 2019 (residential parcels)	B. Blue
Santa Monica College	New satellite campus on 2.94 acre ground lease site out of 9.18 acre County Civic Center parcel	23525 CCW (APN 4458-022-904, lease area addressed as 23555 by County)	Pending CDP submittal	+/- 25,000 sf building to replace vacant County Sheriff facility; will serve +/- 200 FTE; 2 classrooms, 3 lab/studios, multipurpose room, 2,100 sf lecture hall, 5,700 sf sheriff substation, interpretive center	B. Blue
Housing Element Update	Overlay to allow up to 20 dwelling units per acre on three sites	28455 PCH, 28401 Pacific Coast Highway, 3700 La Paz Lane (APNs 4458-022-023 and 4458-022-024)	UPR	5.12, 3.25 and 2.3 ac sites -> change from allowing 6 units per ac up to 20 units per ac	S. Danner, R. Mollica
Malibu Sycamore Village	New non-residential mixed use commercial project	23575 CCW (APN 4458-022-011); addressed as 23789 Stuart Ranch Rd per LA County Assessor	UPR	Two projects alternatives submitted: 1) 76,000 sf retail, restaurant, and office space with a public benefit of a 5,000 sf urgent care facility, and 380 pkg spaces ; 2) 60,000 sf of retail, restaurant, and office space with 300 pkg spaces; project site is a 10 acre commercial parcel and both alternatives include outdoor exhibition space.	J. Smith

Los Angeles County

Pepperdine Campus Life Project	Project would develop and re-develop property within an existing approximately 365 acre area on the Pepperdine campus through a two-phase development program that will take 12 years	24255 PCH	PA; pending approval of an amendment at CCC	Six components of proposed development include approximately 394,137 sf of net new development comprised of the following: 1) Student Housing Rehabilitation; 2) Athletics and Events Center and Parking Structure; 3) Upgraded NCAA Soccer Field and Maintenance Facilities; 4) Town Square and Welcome Center over Subterranean Parking; 5) Enhanced Recreation Center Area; and 6) School of Law Parking Structure.	County of Los Angeles Regional Planning, S. Danner

East Malibu

Project Name	**Brief Description**	**Location**	**Status**	**Size**	**Planner**
Pierview	New restaurant	22716 PCH	PA; UC	7,100 sf; 70 parking spaces (joint use parking agreement with 22706 PCH to donate 10 spaces - total of 59 spaces required for this use with 1 extra)	S. Edmondson
Windsail	New restaurant	22706 PCH	PA; UC	5,904 sf; 64 parking spaces (joint use parking agreement with 22716 PCH for 10 additional spaces - total of 74 spaces required for this use)	S. Edmondson
N/A	New office and retail	22959 PCH	UPR	2,630 sf office; 4,517 sf retail; 31 parking spaces	J. Smith
N/A	New office	22729 PCH	PA; pre-BPC	2,499 sf; 32 parking spaces	H. Ly
Carbon Condominiums	New condominium	22065 PCH	UC	8 units	J. Smith
N/A	LLA and 3 NSFRs	18805, 18807 & 18809 PCH	PA; BPC	9,559 sf, 9,141 sf, and 7,429 sf	S. Edmondson
N/A	4 NSFRs	22301, 22303, 22305 and 22309 PCH	PA; BPC	9,529 sf, 8,649 sf, 8,271 sf, and 9,249 sf	S. Edmondson
N/A	LLA and 2 NSFRs	21997 and 22003 PCH	PA; BPC	9,818 sf and 8,542 sf	A. Fernandez
Serra Retreat	3 lot subdivision	3314 Serra Rd	PA; pending Final Parcel Map approval	Development potential for each lot equals a maximum TDSF of 7,037 sf, 7,033 sf, and 7,740 sf	S. Danner
N/A	2 NSFR	20624 and 20630 PCH	UPR	2,911 sf and 2,911 sf	R. Mollica
Seaboard	4 lot LLA and 1 NSFR	21100 Seaboard	UPR	10,517 sf NSFR and improve 2,590 linear feet of roadway. Proposed lot sizes are 7.6, 1.3, 20 an 2.6 acres.	A. Fernandez



Map Source: Google Maps, November 2012.

arch beach CONSULTING

Figure A1
5905 and 5909 Latigo Canyon
Related Project Trip Distribution



Map Source: Google Maps, November 2012.

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Figure A2
Towning Subdivision and Eastern Residential Projects
Related Project Trip Distribution



Map Source: Google Maps, November 2012.

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Figure A3
Shopping Center, Restaurant, and Other Uses
Related Projects Trip Distribution



Map Source: Google Maps, November 2012.

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Figure A4
Office Uses
Related Project Trip Distribution

earthforensics, inc.

July 1, 2013

To: **PCH Project Owner, LLC**
c/o BRP Management, LLC
315 South Beverly Boulevard, Suite 211
Beverly Hills, California 90212

Attention: **Mr. Robert Gold**

From: **W. Richard Laton, PhD, CHg**

Subject: **Hydrogeological Responses to Comments on Draft Environmental Impact Report: Proposed Residential Development, "Crummer Site", 24108, 24120, 24134, 24150, 24174 Pacific Coast Highway, City of Malibu, California.**

Per your request, we are providing responses to comments made by third-party consultants and interested Malibu residents of the DEIR for the Crummer Site (the "Site"). The comments that we are addressing are those that deal with groundwater/effluent flow related to the proposed treated effluent disposal at the Site.

Preface:

It should be noted the peak wastewater design flow from the proposed (and approved by the City) OWTS is approximately 5,000 gallons per day. This cleaned effluent is dispersed through seepage pits over approximately two-thirds of an acre. The resulting groundwater mound from the OWTS dissipates within the 24 acres of the Site boundaries and does not extend offsite. The potential rise in groundwater levels beneath the Site, the Tow Site, Malibu Road, and properties south of Malibu Road are negligible (ECI, 2012).

Site specific information in the form of boring logs, percolation testing, surface electrical resistivity, groundwater level monitoring and water chemistry were collected over a five year period of time. This includes the monitoring of water levels in 15 onsite and offsite wells. Included in this time frame is the 2010-2011 wetter than normal water year. Based upon the above information a groundwater flow model was constructed to determine the "*hypothetical / severe*" effects of onsite wastewater disposal would have upon the groundwater flow system both onsite and off (ECI, 2009, 2012). Based upon this work effort the City of Malibu has approved the project and the findings that no adverse offsite impacts will occur as a result of the onsite wastewater disposal.

Comments:

1) Comment 03-16

"Cross-Sections D-D' and F-F' by Leighton and Associates (2009b) shows existing groundwater levels that slope to the south, toward the Amarillo Beach Landslide. The DIER states that migration of effluent from the proposed OWTS will not adversely affect the existing historically

active landslides south of the subject site due to the presence of faults within the bedrock. However, the faults are buried by terrace deposits and the ability of the faults to impede the flow of groundwater is poorly defined. In addition, review of logs of borings excavated above the existing historically active landslide indicates highly fractured bedrock with numerous shears and joints. Some of the shears and joints actually dip to the south, toward the Amarillo Beach Landslide. In addition, the slide plane geometry and current groundwater conditions within the offsite landslide are poorly constrained. Therefore, the conclusions presented in the DIER pertaining to the offsite landslide do not appear to be supported by existing data."

Comment 03-17

"A raise in groundwater within the Amarillo Beach Landslide due to the proposed OWTS may have an adverse effect of the stability of the property to the south."

Comment 03-20

"Statements regarding migration of effluent toward the existing historically active landslide are poorly supported by existing data and the highly fractured nature of the bedrock may result in additional groundwater flow toward the offsite landslide."

Comment R8-18

"In addition to the above setback issue, the DEIR and its consultants have failed to specifically address our previously documented concerns in regard to the potential impact of wastewater on the adjacent landslides to the south of the Crummer site."

Comment 01-9

"Statement of the "potential not likely" for effluent to daylight on south-facing bluff; however, that is in the direction of groundwater flow. See recommendation."

Comment 01-26

"Demonstrate how effluent moving south (groundwater flow) will not daylight or contribute to movement/reactivation of landslides along southern slope. This was addressed and studied (ECI and L&A) but at the theoretical level. Re-evaluate after performance of #1 above."

Comment by Kari Kramer in 6/5/12 letter to Ha Ly

"1) Wastewater needs to be addressed as a separate item. This should include the potential impact on lubrication of landslide properties to the south of the wastewater septic system."

Comment 01-7

"The Geotechnical Report (L&A, 2009) states that the existing east-west trending faults act as a groundwater barrier and that OWTS effluent will travel along faults. This issue was addressed and modeled by ECI (2009) and L&A (2009). According the (sic) geotechinical map (Plate 1, L&A, 2009) no mapped fault exists within or south of the dispersion field in Lot 7 (see recommendation below)."

Comment 01-18

"Conduct a pilot-type study of inert fluid injection at estimated effluent discharge volume (peak total) and of duration long enough to study the relationship between groundwater quality, groundwater elevation change, and how offsite (specifically southern slope) areas are affected versus the three day percolation test study with low volumes."

Earth Forensics Response to Comments 03-16, 03-17, 03-20, R8-18, 01-9, 01-26, Kramer letter, 01-7, and 01-18: Figures 5 (Baseline Groundwater Elevation Contour Map) and 6 (Mounded Groundwater Elevation Contour Map) of Earth Consultants International's (ECI) March 2012 report show that groundwater at the Site flows in a south-southeasterly direction in the western portion of the Site and in a southeasterly direction in the eastern portion of the site, not in a directly southern direction as supposed by the third-party reviewers of the DEIR. The **existing** groundwater elevation data, collected from 15 onsite and offsite well over a five-year period, also shows that the groundwater flow gradients vary between the northern portion of the Site (0.05), between monitoring wells LMW-6 and LMW-7, and the southern extents of the site (0.28), between monitoring wells LMW-5 and CCB-22 (see figure 5; ECI, 2012). The gradient change indicates that a geologic structure between these two areas is changing the flow rates at the Site. The steep groundwater gradient present to the south of monitoring well LMW-5 is interpreted to be the expression of the inactive fault zone (fault gouge and offset lithologic layers) impeding the flow of groundwater in a southerly direction. This impediment to groundwater flows causes a 95-foot drop in groundwater elevation between the buried faults and the edge of the bluff. Treated effluent will migrate vertically after it is discharged as it moves down-gradient of the dispersion field and become part of the groundwater system. "There are no known continuous conduits from the dispersal area that would carry wastewater to areas other than those indicated by the groundwater mounding results" (page 14; ECI, 2012).

The numerical groundwater flow model predicts that the proposed treated effluent discharge from the Site and neighboring Tow Yard development will cause the groundwater levels at the properties to the south of the Site to rise between 0.03 and 0.04 feet (or less than half of an inch). Such changes in groundwater elevation should have no adverse impacts on the offsite landslides because; 1) the depth to groundwater (65 to 143 feet below the ground surface), 2) irrigation water, applied in appropriate quantities in association with the high evapotranspiration rate (44.2 inches per City of Malibu Ord. No 343), 3) the limited wastewater discharge (approximately 5,000 gallons per day), 4) the deep capping depth of the seepage pits, 5) the location of the seepage pits (upgradient of the fault), 5) the presence of an inactive fault between the seepage pits and the off-site landslide and 6) the predicted groundwater rise of less than one-half inch as a result of the wastewater discharge in these off-site areas should not result in the "lubrication" of the off-site landslides. (page 13; ECI, 2012) For further discussion of "lubrication" as it relates to the off-site slide plane, see Leighton response July 1, 2013.

Converse Consultants (1986) mapped fault F-1 to the west of trench CCT-104 (see Leighton & Associates (2009) Plate I for location of trench). ECI (2000) conducted fault trenching activities at the Site in 1999 and logged trench ECIT-1 (see Plate I of Leighton & Associates, 2009 for location of trench). ECI's trench log (Figure 4A – See Appendix B of Leighton and Associates, 2007) shows that the faults were mapped in the western wall of this trench, which suggests that the faults continue to the west of this trench. Additionally, Eldon Gath (report undated) produced a report that deals with the recency of fault

activity at the subject that depicts faults F-1 and F-3 extending almost to the western boundary of the Site. In addition to the faults identified by the trenching studies conducted by Converse Consultants and ECI, faults and shear zones were identified by Leighton and Associates, Inc. in borings PTB-7 and PTB-12. Both of these borings were downhole-logged in 2008 prior to their use as percolation pits for Lawrence Young's percolation tests. PTB-7 is located within the proposed dispersion field and boring PTB-12 is located in the northwestern corner of the Site. The presence of the fault in these borings shows that fault zones are present in the area of the proposed dispersion field and farther to the west. For further information please see Leighton Response, 2013.

The fact that the faults are buried by terrace deposits has no bearing on their ability to impede the flow of groundwater, as groundwater is present in the unoxidized bedrock zone, not the terrace deposits. The boundaries between the unoxidized and oxidized bedrock was further defined in the Aquifer Science and Technology, 2008 report and subsequently utilized within the groundwater flow model to define the bedrock morphology.

One commenter recommends that an inert fluid injection test of peak volume of effluent discharge be conducted in order "to study the relationship between ground water quality, groundwater elevation change and how offsite (specifically the southern slope) areas are affected versus the three day percolation test study with low volumes. With respect to potential groundwater elevation changes and how offsite (specifically the southern slope) areas would be affected by the proposed OWTS, based on the quantity, quality and length of time during which the Site specific data was collected, it is our opinion that the groundwater mounding model accurately assesses the commenter's concerns and as such an injection test was not conducted. (See Ensitu 2013 with respect to groundwater quality) It should also be noted that such an injection test is not required by the codes and regulations of the City of Malibu. Further the previous work conducted by ECI, 2009 and 2012, was approved by the City of Malibu.

For more information on the above comments please see Leighton response July1, 2013.

Reference:

Aquifer Science and Technology, 2008, Letter Report - Geophysical Survey of the Crummer Site, Malibu, California, dated July 10, 2008.

Converse Consultants. 1986. Draft Preliminary Fault Evaluation-South Winter Mesa, Supplemental Geotechnical Investigation, Malibu, California. December 10, 1986.

Earth Consultants, International. 2000. Report of Fault Investigation Studies. Vesting Tentative Tract 52487. Winter Mesa. 24200 Pacific Coast Highway, Malibu, California. February 6, 2000.

Earth Consultants International. 2012. Response to City of Malibu Comments on Earth Consultants International Report Entitled "Hydrogeological/Treated Water Mounding Report for the Proposed Malibu Bluffs Residential Development at 24120 (aka 24200) Pacific Coast Highway (aka Crummer Site), APN 4458-018-019, TTM 07-003, Malibu, California" dated September 21, 2009. Dated March 7, 2012.

Gath, Eldon. Undated. The "Malibu Coast Fault" on Winter Mesa is a >14 ka Liquefaction Event.

Leighton and Associates, Inc. 2007. Feasibility-Level Grading Plan Review, Proposed Malibu Bluffs Development: 5-Lot Subdivision "The Crummer Site". APN 4458-018-019. 24200 Pacific Coast Highway, City of Malibu, California. Dated December 5, 2007.

Leighton and Associates, Inc. 2009. Geotechnical Evaluation of Proposed Onsite Wastewater Treatment System, Proposed Residential Development "Crummer Site", 24200 Pacific Coast Highway APN 4458-018-019, City of Malibu, California. Dated September 21, 2009

2) Comment 03-19

"The referenced reports indicate that treated effluent will be discharged within the un-oxidized Monterey Formation bedrock at depths of approximately 61 to 67 feet below ground surface. Un-oxidized bedrock is generally less weathered and, potentially, less permeable than oxidized (or weathered) bedrock. Therefore, it is recommended that the project consultants confirm that the un-oxidized bedrock is suitable to handle the potential effluent from Lots 1 through 5."

Comment 01-22

"Modeling and figures other than Figure 7 (Groundwater Difference Contour Map, ECI 2012) of effluent dispersion with flow rates based upon accepted hydraulic conductivity (K) value. This may be better developed if a pilot-type study (see #1 above) is conducted."

Earth Forensics Response to Comments 03-19 and 01-22: The percolation tests conducted by Lawrence Young between August 2008 and September 2008 (Young, 2008) at the Site were conducted at depths (60' to 65' below ground surface) consistent with the depths (61' to 67' below ground surface) of the designed treated effluent discharge pits. Therefore the results of the percolation tests show that the geologic materials in the discharge zone are suitable to handle the potential effluent from Lots 1 through 5. ECI (2012) describes the discharge zone as follows:

With respect to the point of discharge, the dispersal zone of each proposed seepage pit (between the cap and the pit bottom) is primarily within the oxidized bedrock. The bottoms of the pits are generally located just above the oxidized/unoxidized boundary or slightly below, and are more than 10 feet above the water-bearing portion of the bedrock. Consequently, the flow path of the effluent horizontally is predominantly in the oxidized bedrock, which is not presently water-bearing, and the flow path between the bottom of the dispersal zone and the water table consists predominantly of fractured unoxidized bedrock, with localized oxidized zones. There are no known continuous conduits from the dispersal area that would carry wastewater to areas other than those indicated by the groundwater mounding results (see ECI, 2012 - Figure 7).

The results from the percolation tests conducted at the Site were utilized to calculate the hydraulic conductivities used in the numerical groundwater flow model. (ECI, 2009 and ECI, 2012) The percolation test data was utilized to calculate the hydraulic conductivity of the oxidized bedrock zone (ECI, 2012).

> K-values used in our analysis were derived from data obtained during percolation testing at the site. In order to obtain site-specific data, pressure transducers where placed inside of the percolation test pits during percolation tests conducted by Lawrence Young. The changes in

water elevations during the tests were then used to estimate the hydraulic conductivity of the receiving materials (oxidized bedrock zone). The following equation from Mulqueen and Rodgers (2001) was used to analyze the water level data:

$K_{fs} = 3{,}9/t_m$ (m/day), where K_{fs} is the saturated hydraulic conductivity of the earth material, 3.9 is a conversion constant and t_m is the time required for the water to drop 25 mm.

A conservative approach was taken by choosing the largest t_m found in the data sets (5 minutes). Using 5 minutes for t_m in the above equation results in a K_{fs} value of 2.45 ft/day. A K value of 2 ft/day was used for layer 2 (oxidized bedrock) in the revised groundwater flow model. The use of the 2 ft/day value was considered conservative in that it was 25% lower than that calculated by the field measurements.

For more information on the above comments please see Leighton response July1, 2013.

References:

Earth Consultants International. 209. Hydrogeological/Treated Water Mounding Report for the Proposed Malibu Bluffs Residential Development at 24120 (aka 24200) Pacific Coast Highway (aka Crummer Site), APN 4458-018-019, TTM 07-003, Malibu, California Dated September 21, 2009.

Earth Consultants International. 2012. Response to City of Malibu Comments on Earth Consultants International Report Entitled "Hydrogeological/Treated Water Mounding Report for the Proposed Malibu Bluffs Residential Development at 24120 (aka 24200) Pacific Coast Highway (aka Crummer Site), APN 4458-018-019, TTM 07-003, Malibu, California" dated September 21, 2009. Dated March 7, 2012.

Young, Lawrence. 2008. Percolation Test Report. 24200 Pacific Coast HWY., Malibu, CA 90265. Dated September 12, 2008.

3) Comment 01-5

"Sufficient number of groundwater monitoring wells? It is our understanding that there are currently two groundwater monitoring wells along the eastern and western margins (cross gradient) of the proposed leach field."

Comment 01-6

"Groundwater monitoring plan to re-evaluate/confirm mounding study modeling after OWTS in operation."

Comment 01-19

"Addition of monitoring wells on- and offsite for assurance of groundwater quality and confirmation of theoretical mounding study (ECI, 2009). Ideal locations include the top of (bluff) slope south of the dispersion field, north of dispersion field near the planned private road, and downstream from the site along Malibu Canyon Road."

Comment 01-20
"POCs downstream of dispersion field, including along Malibu Canyon Road and possibly along eastern and western margins of site."

Comment 01-25
"Full scale test of completed OWTS prior to agency final approval of system."

Comment R8-19
"In accordance with responsible CEQA compliance of a potential significant impact, specific mitigation should be required now, not later. Such mitigation should, at a minimum, include specific subsurface monitoring with both mechanical and computerized fail-safe technology to ensure that the adjacent landslides are not subject to lubrication and failure caused by the Crummer Site Planned Development. Additionally, similar monitoring for land movement and historical record keeping should be required. All of these monitoring systems should be of public record for computerized, real time online viewing by both the city and the public at large."

Earth Forensics Response to Comments 01-5, 01-6, 01-19, 01-20, 01-25, R8-19: It is anticipated that the operation of the OWTS will be permitted through a site-specific LARWQCB-issued Wastewater Discharge Requirements (WDR). A groundwater monitoring plan will be designed to meet the monitoring requirements set forth in the WDR, which will be subject to the approval of the LARWQCB. These requirements will likely include the installation of up-gradient and down-gradient groundwater monitoring points (monitoring wells) that will be utilized to evaluate the OWTS' impacts on regional groundwater levels and groundwater chemistry. The exact locations of the monitoring points and the data collection and reporting requirements will be identified after the WDR process has been completed and all of the comments are contained in the standard WDR.

For more information on the above comments please see Leighton response July1, 2013.

4) Comment 01-8
"No geologic cross section through leach field in a downslope direction (Cross section A-A' from ECI (2009) in an east west direction)."

Earth Forensics Response: See Leighton Response July1, 2013..

5) Comment R5-1

"Attached is a four-page report of an investigation within the Malibu Fault Zone on the Crummer property provided to Dave Brown by James Slossen, the former head of the California Department of Mines and Geology under Governors Brown and Reagan."

Comment R5-2

"In 1986 General Motors was in the process of applying for a coastal permit to build a research facility on this site when trenching on the site uncovered a trace of the Malibu Coast Fault that had moved about 18" within the past 4000 years, qualifying it as an active fault. The trenching was witnessed and documented by several geologists, including Dr. James Slosson, former

director of the Division of Mines and Geology. However, because General Motors abandoned the project, the geological data was not turned in to become part of the public record."

Earth Forensics Response to Comment R5-1 and R5-2: In the 1980's three traces of the Malibu Coastal Fault (these faults are referred to as "F-1", "F-2" and "F-3") were investigated on the Site. Using geological dating techniques available at that time it was concluded that there had been movement in the three trace faults within the last 4,000 years. Under California law, the Alquist-Priolo Act (the "A-P Act") defines a fault as active if there has been displacement (i.e. movement in the trace fault) within the last 10,000 years. Therefore, as a result of this investigation the three trace faults on the Site were designated active on A-P Special Study Maps. Since that designation techniques, such as carbon dating, have been developed, which provide a much more precise and accurate determination of the age of the geological materials. The location of where the displacement occurs is referred to as the "offset". In 1999, Earth Consultants International (ECI) excavated trenches on the Site and located the three traces of the Malibu Coastal fault and used carbon dating techniques, to determine the age of the displacement and compared that determination with the previous interpretation of the age of the displacement of the three fault zones, i.e., whether based on newer and significantly more precise dating techniques the trace faults should be considered active or inactive under the Alquist-Priolo Act. ECI's study revealed that the most recent offset on fault F-1 occurred more than 14.3 ka, (14,300 years ago) and the most recent offsets on faults F-2 and F-3 occurred more than 40 ka. (40,000 years ago). Therefore, ECI's analysis concluded that none of the trace faults on the Site meet the definition of active under the A-P Act. Both the City of Malibu and the California Geological Survey ("CGS"), a branch of the State of California Department of Conversation, agreed with ECI's conclusions that the faults were not active. As a result of the investigation, in 2007, after publication by the CGS of a revised preliminary fault map removing the faults as active from the Site and a statutory public review period of the revised preliminary map, the State of California removed these faults from the Alquist-Priolo Special Study Zone maps and these faults are no long considered active by the State of California.

References:

Earth Consultants International. 2002. Request for the Removal of the Alquist-Priolo Zone on the Malibu Coast Fault on Winter Mesa, Malibu Quadrangle. September 3, 2002.

Earth Consultants International. 2006. Request for the Removal of the Alquist-Priolo Earthquake Fault Zone for the Malibu Coast Fault on Winter Mesa, Malibu Quadrangle. September 29, 2006.

Gath, Eldon. Undated. The "Malibu Coast Fault" on Winter Mesa is a >14 ka Liquefaction Event.

Should you have any questions concerning Earth Forensics' hydrogeological responses to the DEIR comments, please contact the undersigned at your convenience. We appreciate this opportunity to be of service.

Respectfully submitted

EARTH FORENSICS, Inc.



Dr. W. Richard Laton, PG (CA, AK, AZ, IL, IN, FL, MN, OR, PA, TX, WA), CHG, CPG

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July 1, 2013

PCH Project Owner, LLC
c/o BRP Management, LLC
315 S. Beverly Drive, Suite 211
Beverly Hills, CA 90212
Attn: Robert Gold

Subject: Crummer Residential Project Located at 24120 (aka 24200) Pacific Coast Highway, Malibu, CA – Response to Comments to DEIR

Dear Mr. Gold:

INTRODUCTION

This report provides engineering responses to public comments concerning the Draft Environmental Impact Report (DEIR) on the proposed private sewage disposal system to serve the proposed 5-single family residence development with gatehouse located on the Crummer site. Ensitu Engineering Inc. (EEI) is the Project Wastewater Consultant.

O1-2	Potential Issues: OM&M
Long term operations maintenance and monitoring (OM&M) program for OWTS to include specific constituents and frequency of testing as regulated by the local agency.	

Response: This development project will obtain a Waste Discharge Requirements (WDR) permit from the Los Angeles Regional Water Quality Control Board (LARWQCB). An Application/Report of Wastewater Discharge General Information Form (Form 200) was filed with the LARWQCB on October 26, 2009. It is further understood that the Homeowners Association (HOA) established for this residential project will be responsible, through Covenants, Conditions, and Restrictions (CCRs) for ensuring that the wastewater system is properly operated and maintained in perpetuity as summarized in the letter from Project Owner dated March 7, 2012. In addition, the OWTS shall comply with the City of Malibu LCP Local Implementation Plan, Chapter 18, Onsite Wastewater Treatment System Standards Ordinance, including Chapter 18.9, which regulates ongoing maintenance, operation, and monitoring.

O1-3	Potential Issues: Point of Compliance
Point(s) of compliance (POCs). We assume they will be located prior to discharge and routine monitoring will be addressed.	

Response: As discussed in the Design Intent letter prepared by this office on April 16, 2012 the point of compliance for the following constituents will be at end of pipe (at the point of discharge to the seepage pits): Biological Oxygen Demand (BOD); Suspended Solids; Fecal Coliform; Enterococcus; pH; Ammonia-N; Nitrate-Nitrogen; and Total Nitrogen. The point of compliance for all other constituents will be from groundwater monitoring well(s) (locations on the Project Site to be determined by Earth Forensics Inc. and approved by the LARWQCB). The treated effluent produced by the treatment and disinfection components of the proposed system is

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intended to meet similar WDR requirements, General WDR Order No. 01-031, and California Ocean Plan water quality objectives.

O1-4	Potential Issues: Protocol for Failure
Protocol for failure of the OWTS, or portion thereof. How will the protocol ensure water quality in case of system failure (i.e., seismic event, landslide, power failure, fire, operator/maintenance error, etc.)? What if a connection(s) from one or more lots is/are compromised?	

Response: Five 2,000 gallon and one 1,500 gallon two-compartment precast concrete Septic Tanks and a 35,000 gallon, four-compartment, fiberglass Septic/Recirculation/Polishing/Dosing Tank will serve as the processing tanks for the subject site. The individual septic tanks (one on each residential lot and at the gate house), are designed and manufactured in accordance with the ASTM C1227 standard and were selected specifically to provide storage in the event of a system failure. Additionally the first compartment of the fiberglass tank (located on Lot 6), is manufactured to applicable requirements of UL 1316 and ANSI/AWWA D120 and provides 14,770 gallons of storage. Altogether the system provides 5 days of emergency storage. All tanks shall be equipped with audio and visual alarms as well as remote telemetry to the system maintenance provider in the event of a component failure. These features are sufficient to protect against a system malfunction caused by the events listed in the comment.

O1-5	Potential Issues: Groundwater Monitoring Wells
Sufficient number of groundwater monitoring wells? It is our understanding that there are currently two groundwater monitoring wells along the eastern and western margins (cross gradient) of the proposed leach field.	

Response: Groundwater monitoring well locations are to be determined by Earth Forensics Inc. based on the Waste Discharge Requirements (WDR) issued by the RWQCB.

O1-6	Potential Issues: Groundwater Monitoring Plan
Groundwater monitoring plan to re-evaluate/confirm mounding study modeling after OWTS in operation.	

Response: Groundwater monitoring shall be conducted in compliance with Waste Discharge Requirements (WDR) issued by the LARWQCB.

O1-7	Potential Issues: Geotechnical Report
The Geotechnical Report (L&A, 2009) states that the existing east-west trending faults act as a groundwater barrier and that OWTS effluent will travel along faults. This issue was addressed and model by ECI (2009) and L&A (2009). According to the geotechnical map (Plate 1, L&A, 2009) no mapped fault exists within or south of the dispersion field in Lot 7 (see recommendation below).	

Response: To be addressed by the Project Geologic Consultant.

O1-8	Potential Issues: Geologic Cross-Section
No geologic cross section through leach field in a downslope direction (Cross-section A-A' from ECI [2009] in an east west direction).	

Response: To be addressed by the Project Geologic Consultant.

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O1-9	Potential Issues: Daylighting
Statement of the "potential not likely" for effluent to daylight on south-facing bluff; however, this is in the direction of groundwater flow. See recommendations.	

Response: To be addressed by the Project Geologic Consultant.

O1-18	Recommendations: Inert Fluid Injection
Conduct a pilot-type study of inert fluid injection at estimated effluent discharge volume (peak total) and of duration long enough to study the relationship between groundwater water quality, groundwater elevation change, and how offsite (specifically southern slope) areas are affected versus the three day percolation test study with low volumes.	

Response: To be addressed by the Project Geologic Consultant.

O1-19	Recommedations: Monitoring Wells
Addition of monitoring wells on- and offsite for assurance of groundwater quality and confirmation of theoretical mounding study (ECI, 2009). Ideal locations include the top of (bluff) slope south of the dispersion field, north of dispersion field near the planned private road, and downstream from the site along Malibu Canyon Road.	

Response: To be addressed by the Project Geologic Consultant.

O1-20	Recommendations: Point of Compliance
POCs downstream of dispersion field, including along Malibu Canyon Road and possibly along eastern and western margins of site.	

Response: As discussed in the Design Intent letter prepared by this office on April 16, 2012 the point of compliance for the following constituents will be at end of pipe (at the point of discharge to the seepage pits): BOD; Suspended Solids; Fecal Coliform; Enterococcus; pH; Ammonia-N; Nitrate-Nitrogen; and Total Nitrogen. The point of compliance for all other constituents will be from groundwater monitoring well(s) (locations on the Project Site to be determined by Earth Forensics Inc). The treated effluent produced by the treatment and disinfection components of the proposed system is intended to meet similar WDR requirements, General WDR Order No. 01-031, and California Ocean Plan water quality objectives.

O1-21	Recommendations: Protocol for Failure
Development (and approval by governing agency) of a contingency if OWTS system or portion thereof fails.	

Response: Five 2,000 gallon and one 1,500 gallon two-compartment precast concrete Septic Tanks and a 35,000 gallon, four-compartment, fiberglass Septic/Recirculation/Polishing/Dosing Tank will serve as the processing tanks for the subject site. The individual septic tanks (one on each residential lot and at the gate house), are designed and manufactured in accordance with the ASTM C1227 standard and were selected specifically to provide storage in the event of a system failure. Additionally the first compartment of the fiberglass tank (located on Lot 6), is manufactured to applicable requirements of UL 1316 and ANSI/AWWA D120 and provides 14,770 gallons of storage. Altogether the system provides 5 days of emergency storage. All tanks shall be equipped with audio and visual alarms as well as remote telemetry to the system

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maintenance provider in the event of a component failure. These features are sufficient to protect against a system malfunction caused by the events listed in the comment.

O1-22	Recommendations: Groundwater Modeling
Modeling and figures other than Figure 7 (Groundwater Difference Contour Map, ECI 2012) of effluent dispersion with flow rates based upon accepted hydraulic conductivity (K) value. This may be better developed if a pilot-type study (see #1 above) is conducted.	

Response: To be addressed by the Project Hydrogeologic Consultant.

O1-23	Recommendations: Stormwater OM&M
Development (and approval by governing agency) of OM&M program of stormwater detention systems.	

Response: To be addressed by the Project Civil Engineer.

O1-24	Recommendations: Percolation Testing
Further exploration of Lawrence Young's response #4 to City of Malibu Environmental Health Conformance Review dated May 19, 2010. Response seems vague ("some indication as to the absorption rate… that theoretically.. should remain the same"). Response lends itself to a long duration pilot study (see #1 above).	

Response: To be addressed by Lawrence Young.

O1-25	Recommendations: Full Scale Test
Full scale test of completed OWTS prior to agency final approval of system.	

Response: All excavations for the OWTS will be monitored by the Project Geologic Consultant. All OWTS components will be inspected by the Project Wastewater Consultant throughout installation and prior to final sign-off by the Project Wastewater Consultant. System operations such as pump run times will be monitored and executed by the maintenance service provider.

O1-26	Recommendations: Daylighting
Demonstrate how effluent moving south (groundwater flow) will not daylight or contribute to movement/reactivation of landslides along southern slope. This was addressed and studied (ECI and L&A) but at a theoretical level. Re-evaluate after performance of #1 above.	

Response: To be addressed by the Project Geologic Consultant.

O1-27	Recommendations: HOA Maintenance
Contingency for adverse economic scenario of the HOA maintenance of the OWTS system.	

Response: It is understood that the Homeowners Association (HOA) established for this residential project will be responsible, through Covenants, Conditions, and Restrictions (CCRs) for ensuring that the wastewater system is properly operated and maintained in perpetuity as summarized in the letter from Project Owner dated March 7, 2012. Under the CCRs, each homeowner will be responsible for contributing a predetermined share of the operating and maintenance costs of the OWTS, typically on a monthly basis as a portion of the HOA fees and expenses payable under the CCRs. Under typical CCRs for a residential development of this kind, if a homeowner fails to make a required payment, the HOA will be entitled to a lien against the

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homeowner's real property that is subject to the CCRs. The HOA can collect the defaulted payment by exercising its' remedies with respect to the lien. This arrangement and the rights of the HOA are sufficient to protect against the possibility of a homeowner defaulting in its' payments for OWTS maintenance as required by the CCRs.

O3-51	Community Sewer System Connection
The DEIR must describe and analyze what happens as to the water quality discharge project features in 2019 if no community sewer system connection is then available.	

Response: Other than anticipating the connection to a municipal wastewater treatment plant, the plant's operational status has no effect on the OWTS proposed for this project. As discussed in the "Response to Environmental Health Questions" prepared by Ensitu Engineering dated March 7, 2012, the long term acceptance rate for each of the proposed seepage pits is expected to be sufficient to serve the development project for its full economic life. The functional life of the active seepage pits as proposed is anticipated to be approximately 40 to 50 years or longer. Additionally, the functional life of the future pits (to be installed simultaneously with the active pits), if or when brought into service, is also anticipated to be approximately 40 to 50 years or longer. Collectively, the functional life of all proposed pits is anticipated to be 80 to 100 years or longer. Therefore the OWTS will remain functional if no community sewer system connection is available by 2019.

On November 5, 2009 the Los Angeles Regional Water Quality Control Board's ('LARWQCB") approved Resolution R4-2009-007 amending the Water Quality Control Plan for the Watersheds of Ventura and Los Angeles Counties ("Basin Plan Amendment"). The Basin Plan Amendment was subsequently approved by the State Regional Water Quality Control Board and contains a moratorium on any new or expansion of existing groundwater discharges for commercial and residential properties in and adjacent to the Malibu Civic Center as outlined on Exhibit 1 attached to the Basin Plan Amendment. It also includes a complete prohibition of all ground discharges effective November 2015 for commercial properties and effective November 2019 for residential properties contained in Exhibit 1, in effect requiring the residential properties on Exhibit 1 to be connected to a municipal wastewater treatment plant November, 2019. The Basin Plan Amendment included a list of properties that were exempt from the moratorium because they were processing their entitlements, including the Project Site. These properties exempt from the moratorium are on Table 4-zz attached to the Basin Plan Amendment.

On August 23, 2011 the City and the LARWQCB entered into a Memorandum of Understanding, which established time frames and milestones to achieve compliance with the Basin Plan Amendment. In order to fund the expenses associated with the design and approval of the City's Municipal Wastewater Treatment Plant ("Municipal Plant") an election was held on November 20, 2012 among the commercial property owners in the Civic Center area of the City. Pursuant to the election, the property owners approved the formation of Community Facilities District No. 2012-1 of the City of Malibu (Malibu Civic Center Wastewater Treatment Plant Design Phase One) ("CFD"). On January 29, 2013 the CFD issued $6,500,000 of bonds. $1,000,000 of the proceeds from the bond sale went to the City of Malibu to reimburse the City for a portion of the funds it had spent to date from its General Fund in connection with the design of the Municipal Plant. The balance of $5,500,000 will be used to complete the design of the Treatment Plant, associated studies including the formation of the Phase I Assessment district, the Environmental Impact Report and entitlements for the Municipal Plant. The Phase I Assessment District will be formed which will consist of all of the commercial property owners in the Phase I and the three residential parcels included in the CFD. Once formed additional bonds will be

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issued for the construction of the Treatment Plant. At this time there is strong support amongst the commercial property owners in included in Phase I and it appears at this time that the Phase I assessment district will be approved and the bonds will be issued in order to construct the Treatment Plant.

The CFD formed for Phase I of the Municipal Plant includes all of the commercial properties in the Civic Center area, including properties owned by both the City of Malibu and the County of Los Angeles. Therefore, the Project Site will be eligible to connect to the City's Municipal Plant as developed for the Phase I properties and the Project Site's connection will not be dependent on the approval and completion of Phase II of the Municipal Plant.

Although it is not possible to predict when the Municipal Plant will be operational, there are readily available funds from the proceeds of the sale of the CFD bonds to enable the City to complete the design, EIR and other necessary entitlements required for the Municipal Plant. In addition, the Municipal Plant has strong support from the property owners included in Phase I. The City provides quarterly progress reports to the LARWQCB on the status of the Municipal Plant, and the most recent status report dated June 25, 2013 is attached hereto.

It impossible to predict what will happen in the event the Municipal Plant is not in operation by November 2019. As a technical matter, the Basin Plan Amendment would prohibit all of the residential properties subject to the Amendment from discharging effluent through existing septic systems. The residences would not be habitable unless the residents made other arrangements for disposing of the untreated wastewater, which would likely entail significant costs, inconvenience and public health considerations. However, if at that time the City is proceeding in good faith with the completion of the Municipal Plant for such residential properties, it is reasonable to assume that the LARWQCB would grant an extension of the prohibition date and that all of the property owners subject to the Basin Plan Amendment would be allowed to continue to discharge until they are connected to the Municipal Plant. It should be noted again that the proposed Crummer Project has the ability and plans to connect to the Municipal Plant upon the completion of the Phase I Municipal Plant, which is in the planning and design phase. Accordingly, it is highly likely that the Project Site will not be subject to any consequences that may occur if the Phase II residential properties are not connected to the Municipal Plant by November, 2019.

There are two significant additional benefits of including the Project Site in Phase I. Both the Project Site as well as Lot 7 will be able to use the clean effluent from the Municipal Plant for irrigation. During the construction of the project's infrastructure "purple pipe" will be installed. Purple pipe is to convey reclaimed Title 22 water and is used to distinguish it from other water lines carrying potable water. Siting locations for the disposal of treated effluent is one of the hardest issues to resolve in connection with the design of the Municipal Wastewater Plant. Connecting the Project Site to the Treatment System as part of Phase I helps the City address this critical issue.

The impact from constructing the sewage line from the property to the municipal system will be fully addressed in the City's EIR for the treatment plant. However, according to Steve Clary of RMC Water and Environmental, the City of Malibu consultant designing the Malibu Civic Center Wastewater Treatment Plant, the Project Site will connect to the sewer line beneath Winter Mesa Drive (a City right of way) inside Bluffs Park immediately south of Pacific Coast Highway. The sewer line will cross Pacific Coast Highway and run north up Malibu Canyon Road to a

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connection at Civic Center Way. The sewer line will be located alongside (but in a separate trench) as the new water line servicing the Project Site.

O3-52	Community Sewer System Connection
More importantly, the DEIR does not (and must be revised to) comment on what happens as to the proposed residences and the on-site OWTS/seepage pits in the event that the Malibu plant is not built and/or that Malibu Civic Center residents vote not to connect to the community plant in Phase Two.	

Response: The proposed residences will continue to be habitable, and the OWTS will continue to be functional. As discussed above in the response to Comment 03-51, the functional life of all proposed pits is anticipated to be 80 to 100 years or longer. Therefore the OWTS will remain functional if no community sewer system connection is available by 2019. Please see Response to Comment 03-51 for further analysis.

O3-53	Community Sewer System Connection
According to the LARWQCB's November 2009 prohibition, like all existing residences in the Civic Center area, the new residential units can no longer make any wastewater discharges after 2019. What will happen to the Project residences at that point?	

Response: Other than anticipating the connection to a municipal wastewater treatment plant, the plant's operational status has no effect on the OWTS proposed for this project. The proposed residences will continue to be habitable, and the OWTS will continue to be functional. As discussed above, the functional life of all proposed pits is anticipated to be 80 to 100 years or longer. Therefore the OWTS will remain functional if no community sewer system connection is available by 2019. As stated in the Draft EIR, this Project is exempt from the prohibition of new discharges imposed by the LARWQCB Resolution R4-2009-007 and is listed on Table 4-zz, issued in November 2009. See Response to Comment O3-51 for further analysis.

O3-54	Community Sewer System Connection
Are the anticipated "interim" water quality impacts expected to be any worse or aggravated simply because the interim system may, in fact, become permanent?	

Response: As discussed in the Design Intent letter prepared by this office on April 16, 2012, the design of the proposed wastewater treatment system is intended to comply with anticipated effluent limits and permitting conditions generally mandated by the LARWQCB on projects of similar scale within proximity to the Pacific Ocean. The treated effluent produced by the treatment and disinfection components of the proposed system is intended to meet similar WDR requirements, General WDR Order No. 01-031, and California Ocean Plan water quality objectives. Therefore the anticipated water quality impacts are not expected to be any worse or aggravated if the OWTS is not replaced by connection to the municipal wastewater treatment plant.

O3-55	Community Sewer System Connection
Will the buildings be abandoned? Will treated effluent be trucked off-site?	

Response: Other than anticipating the connection to a municipal wastewater treatment plant, the plant's operational status has no effect on the OWTS proposed for this project. The proposed residences will continue to be habitable, and the OWTS will continue to be functional. Treated effluent will not be trucked off-site. As discussed above, the functional life of all proposed pits is anticipated to be 80 to 100 years or longer. Therefore the OWTS will remain

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functional if no community sewer system connection is available by 2019. As stated in the Draft EIR, this Project is exempt from the prohibition of new discharges imposed by the LARWQCB Resolution R4-2009-007 issued in November 2009. See Response to Comment O3-51 for further analysis.

O3-56	Community Sewer System Connection
What are the expected impacts of any of these eventualities?	

Response: Other than anticipating the connection to a municipal wastewater treatment plant, the plant's operational status has no effect on the OWTS proposed for this project. The proposed residences will continue to be habitable, and the OWTS will continue to be functional. Treated effluent will not be trucked off-site. The anticipated water quality impacts are not expected to be any worse or aggravated if the interim system becomes permanent. As discussed above, the functional life of all proposed pits is anticipated to be 80 to 100 years or longer. Therefore the OWTS will remain functional if no community sewer system connection is available by 2019. As stated in the Draft EIR, this Project is exempt from the prohibition of new discharges imposed by the LARWQCB Resolution R4-2009-007 issued in November 2009. See Response to Comment O3-51 for further analysis.

O3-57	Speculative Connection
Connection to the community sewer system is speculative. The DEIR provides little information about what the polluting discharges from the Project's OWTS into the groundwater will be.	

Response: Complete information about the project's discharge is provided in the Design Intent letter prepared by this office on April 16, 2012. Effluent characteristics, both before and after treatment, are quantified. Included is a description of the estimated wastewater flow and characteristics, a description of the treatment process, and a statement of the water quality objectives.

Anticipated limits and permitting conditions assumed for this Project are based on the following guiding documents:

- California Regional Water Quality Control Board, Los Angeles Region: General Waste Discharge Requirements Order No. 01-031;
- Water Quality Control Plan Ocean Waters of California: California Ocean Plan (SWRCB 2005);
- Waste Discharge Requirements (WDRs) for proposed development projects of similar scale within similar proximity to the Pacific Ocean;
- Malibu Building/Plumbing Code; and
- Malibu Local Coastal Program/Local Implementation Plan

The treated effluent produced by the treatment and disinfection components of the proposed system is intended to meet similar WDR requirements, General WDR Order No. 01-031, and California Ocean Plan water quality objectives at end of pipe (treated effluent) for the following constituents as indicated in the table below:

End of Pipe (Treated Effluent):

Constituent	Units	Maximum Limit
BOD*	mg/L	20 (monthly 30-day average)

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Suspended Solids*	mg/L	20 (monthly 30-day average)
Fecal Coliform*	MPN/100mL	<200 (monthly 30-day average)
Enterococcus*	MPN/100mL	<104 (daily)
pH		Within limit of 6.0 to 9.0 at all times
Ammonia – N	mg/L	2.4 (daily)
Nitrate - Nitrogen**	mg/L	10.0 (daily)
Total Nitrogen	mg/L	10.0 (daily)

*Also City of Malibu Plumbing Code

See Response to Comment O3-51 for further analysis.

O3-58	**Speculative Connection**
The DEIR then leaps to the conclusion that these water quality degradation impacts would not be "significant." (DEIR at page 5.8-2.) More explanation regarding how this conclusion is reached must be included in the DEIR.	

Response: Complete information about the project's discharge is provided in the Design Intent letter prepared by this office on April 16, 2012. Effluent characteristics, both before and after treatment, are quantified. Included is a description of the estimated wastewater flow and characteristics, a description of the treatment process, and a statement of the water quality objectives.

Anticipated limits and permitting conditions assumed for this Project are based on the following guiding documents:

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- Water Quality Control Plan Ocean Waters of California: California Ocean Plan (SWRCB 2005);
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- Malibu Local Coastal Program/Local Implementation Plan

The treated effluent produced by the treatment and disinfection components of the proposed system is intended to meet similar WDR requirements, General WDR Order No. 01-031, and California Ocean Plan water quality objectives at end of pipe (treated effluent) for the following constituents as indicated in the table below:

End of Pipe (Treated Effluent):

Constituent	**Units**	**Maximum Limit**
BOD*	mg/L	20 (monthly 30-day average)
Suspended Solids*	mg/L	20 (monthly 30-day average)
Fecal Coliform*	MPN/100mL	<200 (monthly 30-day average)
Enterococcus*	MPN/100mL	<104 (daily)
pH		Within limit of 6.0 to 9.0 at all times

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Ammonia – N	mg/L	2.4 (daily)
Nitrate - Nitrogen**	mg/L	10.0 (daily)
Total Nitrogen	mg/L	10.0 (daily)

*Also City of Malibu Plumbing Code

As stated in the Draft EIR, the OWTS will not violate any water quality standards or waste discharge requirements, and the impact to local groundwater will be less than significant.

The comment takes out of context the statement in the Draft EIR at page 5.8-27 that "Seepage from the OWTS could result in increased levels of nitrogen and pathogens (fecal coliform) found in area groundwater. Groundwater quality degradation may contribute to surface-water quality issues." This is the impact statement used in the Draft EIR to frame the significance threshold. The Draft EIR then goes on to analyze the impact to water quality from the Project based on the OWTS and the location of groundwater under the seepage pits and concludes that "the construction and operation of the onsite treatment system and seepage disposal pits would not cause a significant rise in groundwater levels beneath the site and would not have significant impact on groundwater quality." (Draft EIR page 5.8-28.)

O3-59	**Prohibition Area**
The DEIR must acknowledge and analyze the effect of the LARWQCB's prohibition and questionable approval. The Project's reliance on an exemption from the Board's November 2009 prohibition has dubious legality.	

Response: On November 9, 2009 Tracy J. Egoscue, Executive Officer, Los Angeles Regional Water Quality Control Board, confirmed in an email to Robert Gold that the properties will be included in the list of temporary exemptions subject to the prohibition date of 2019. The properties are identified on Table 4-zz of the Basin Plan Amendment, Resolution No. R4-2009-007 of the LARWQCB. The Egoscue email and Table 4-zz are attached as exhibits to this letter.

O3-60	**Prohibition Area**
The Project's OWTS and seepage pits design presents a difficult approval problem for the LARWQCB and must be discussed and analyzed in the DEIR.	

Response: The OWTS does not present a "difficult approval problem" for the LARWQCB. An Application/Report of Wastewater Discharge General Information Form (Form 200) was filed with the RWQCB on October 26, 2009. As noted above, the properties are included in the list of exemptions from LARWQCB Resolution R4-2009-007.

O3-61	**Prohibition Area**
During the interim period before the connection, the proposed OWTS will be discharging treated effluent into seepage pits (onto Lot 7) which will adversely impact the groundwater with substantial pollutants. Due to the "double contingency" described above, this interim period could theoretically become a permanent situation. The Project's reliance on an exemption from the Board's November 2009 prohibition has dubious legality.	

Response: As discussed above, the design of the proposed wastewater treatment system is intended to comply with anticipated effluent limits and permitting conditions generally mandated by the LARWQCB on projects of similar scale within proximity to the Pacific Ocean. The treated effluent produced by the treatment and disinfection components of the proposed system is intended to meet similar WDR requirements, General WDR Order No. 01-031, and California

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Ocean Plan water quality objectives. The anticipated water quality impacts are not expected to be any worse or aggravated if the interim system becomes permanent. As noted above, the properties are included in the list of temporary exemptions subject to the prohibition date of 2019 (see Table 4-zz of the Basin Plan Amendment). Also see responses to Comments 03-53, 03-54, 03-55, 03-56, 03-59, 03-60 and 03-61 above.

O3-62	**Seepage Pits**
The DEIR must include further analysis of the seepage pits intended for Lot 7. There is no CEQA analysis of the seepage pits and no analysis of how the seepage pits may affect the adjacent public recreational uses.	

Response: The seepage pits will have no effect on the adjacent public recreational uses. The seepage pits will be constructed entirely below ground. At no point will the treated and disinfected effluent surface or make human contact. Therefore no mitigation measures will be necessary.

O3-63	**Land Use And Planning**
It must be explained in the DEIR why the applicant is not pursuing a zone change to one of the existing residential zoning designations.	

Response: To be addressed by the Project Applicant.

O3-64	**Land Use And Planning**
The proposed PD development standards do not conform with the City's residential development standards.	

Response: To be addressed by the Project Applicant.

O3-65	**Land Use And Planning**
The DEIR must explain how the proposed 28' height would require a variance if the Project were located in an R zone and include an analysis of the variance findings that would need to be made.	

Response: To be addressed by the Project Applicant.

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Thank you for the opportunity to have been of service. If you have any questions, or require additional assistance please feel free to contact us at (805) 772-0150.

Sincerely,

John N. Yaroslaski PE 60149
Ensitu Engineering Inc.
Principal Engineer

Lawrence Young

Registered Environmental Health Specialist *Cal. Reg. #3738*

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July 1, 2013

PCH Project Owner, LLC
c/o BRP Management, LLC
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RE: THE CRUMMER SITE SUBDIVISION PROJECT
24200 PACIFIC COAST HWY., MALIBU, CA 90265

Dear Mr. Gold:

Following is my response to AEI Consultants report dated May 10, 2013, specifically page 4, *Recommendations*, item #1 (01-18), and item #7 (01-24).

AEI Comments: 1. Conduct a pilot-type study of inert fluid injection at estimated effluent discharge volume (peak total) and of duration long enough to study the relationship between groundwater water quality, groundwater elevation change, and how offsite (specifically southern slope) areas are affected versus the three day percolation study with low volumes.

7. Further exploration of Lawrence Young's response #4 to City of Malibu Environmental Health Conformance Review dated May 19, 2010. Response seems vague ("some indication as to the absorption rate… that theoretically… should remain the same"). Response lends itself to a long duration pilot study (see #1 above).

Lawrence Young Response: The standard three day percolation test I conducted for the design of a seepage pit type subsurface sewage effluent disposal system in August, and September, 2008 was conducted in accordance with the requirements of City of Malibu Environmental Health, and in accordance with the requirements of County of Los Angeles Environmental Health.

The percolation test methodology used meets accepted industry, and jurisdictional standards. On the first day of the percolation test, each percolation test hole was filled with potable water to the capping depth recommended by the project geologist, Leighton & Associates, Inc. This first fill is called the **presoak**, which is designed to pre-saturate the subsurface soil/rock strata prior to percolation testing. The objective is to percolation test the percolation test holes after the subsurface soil/rock strata is presoaked to determine the absorption rate of the soil/rock strata when saturated with water, because when the seepage pits are eventually constructed, and put into use, the soil/rock strata in which the seepage pits are located will be continuously receiving sewage effluent and, therefore, will be continuously wet.

On the second day of the percolation test, each percolation test hole was filled with potable water to the capping depth. This second fill is actually the beginning of the **percolation test**. A **static head/metered** percolation test was then conducted, which has the advantage of maintaining the maximum water head pressure, and maintaining the maximum square footage of absorption area for the duration of the percolation test. **Static head** means, as the percolation test holes absorb the water, more water is added to keep the percolation test holes full to the capping depth for the entire eight hour percolation test period. **Metered** means, the amount of water absorbed is accurately known down to the last gallon absorbed, as all water put into the percolation test holes passes through a calibrated 1 ½ inch water meter.

On the third day of the percolation test, each percolation test hole is observed to determine the amount of water, if any, remaining in the percolation hole after the prior day's percolation test. This water is deducted from the metered results of the prior day, which reveals the exact amount of water absorbed.

This simple percolation test methodology is used world wide, and has proven over many years to be an accurate prediction as to the function, and longevity of a seepage pit type subsurface sewage effluent disposal system. Even a conventional septic system, i.e. one consisting of a septic tank offering only primary treatment prior to discharge, will historically last over 20 years before a seepage pit failure. According to County of Los Angeles Environmental Health, the premature failure rate is less than one percent.

Since the City of Malibu Plumbing Code will require the installation of a tertiary sewage effluent treatment system prior to discharge to the proposed seepage pit type subsurface sewage effluent disposal system, the seepage pits serving subject development should maintain the same absorption rate as the rate obtained as a result of my percolation test literally forever… or at least as long as the treatment system is properly maintained. In short, since the percolation test was conducted with clean water, and only clean water will be discharged into the proposed seepage pits, then the proposed seepage pits should never fail.

Furthermore, since only clean water will be discharged into the proposed seepage pits, groundwater contamination will not be a factor. Prior to discharge the sewage effluent will be tertiary treated, after discharge the clean water discharged will be further treated by percolation through the subsurface soil/rock strata, which acts as a natural filter.

As to the effect on groundwater elevation, and the effect on offsite properties as a result of future sewage effluent discharge to the proposed seepage pit type subsurface sewage effluent disposal system Leighton & Associates, Inc. (the project geologist), Earth Forensics, Inc., and Earth Consultants International, Inc. are better qualified to comment.

If you have any questions, or comments, or need further information, then please contact me at your earliest convenience.

Sincerely,



L. Young

Lawrence Young

cc:file

Lawrence Young

Registered Environmental Health Specialist *Cal. Reg. #3738*

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July 1, 2013

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AEI Comments: 1. Conduct a pilot-type study of inert fluid injection at estimated effluent discharge volume (peak total) and of duration long enough to study the relationship between groundwater water quality, groundwater elevation change, and how offsite (specifically southern slope) areas are affected versus the three day percolation study with low volumes.

7. Further exploration of Lawrence Young's response #4 to City of Malibu Environmental Health Conformance Review dated May 19, 2010. Response seems vague ("some indication as to the absorption rate… that theoretically… should remain the same"). Response lends itself to a long duration pilot study (see #1 above).

Lawrence Young Response: The standard three day percolation test I conducted for the design of a seepage pit type subsurface sewage effluent disposal system in August, and September, 2008 was conducted in accordance with the requirements of City of Malibu Environmental Health, and in accordance with the requirements of County of Los Angeles Environmental Health.

The percolation test methodology used meets accepted industry, and jurisdictional standards. On the first day of the percolation test, each percolation test hole was filled with potable water to the capping depth recommended by the project geologist, Leighton & Associates, Inc. This first fill is called the **presoak**, which is designed to pre-saturate the subsurface soil/rock strata prior to percolation testing. The objective is to percolation test the percolation test holes after the subsurface soil/rock strata is presoaked to determine the absorption rate of the soil/rock strata when saturated with water, because when the seepage pits are eventually constructed, and put into use, the soil/rock strata in which the seepage pits are located will be continuously receiving sewage effluent and, therefore, will be continuously wet.

On the second day of the percolation test, each percolation test hole was filled with potable water to the capping depth. This second fill is actually the beginning of the **percolation test**. A **static head/metered** percolation test was then conducted, which has the advantage of maintaining the maximum water head pressure, and maintaining the maximum square footage of absorption area for the duration of the percolation test. **Static head** means, as the percolation test holes absorb the water, more water is added to keep the percolation test holes full to the capping depth for the entire eight hour percolation test period. **Metered** means, the amount of water absorbed is accurately known down to the last gallon absorbed, as all water put into the percolation test holes passes through a calibrated 1 ½ inch water meter.

On the third day of the percolation test, each percolation test hole is observed to determine the amount of water, if any, remaining in the percolation hole after the prior day's percolation test. This water is deducted from the metered results of the prior day, which reveals the exact amount of water absorbed.

This simple percolation test methodology is used world wide, and has proven over many years to be an accurate prediction as to the function, and longevity of a seepage pit type subsurface sewage effluent disposal system. Even a conventional septic system, i.e. one consisting of a septic tank offering only primary treatment prior to discharge, will historically last over 20 years before a seepage pit failure. According to County of Los Angeles Environmental Health, the premature failure rate is less than one percent.

Since the City of Malibu Plumbing Code will require the installation of a tertiary sewage effluent treatment system prior to discharge to the proposed seepage pit type subsurface sewage effluent disposal system, the seepage pits serving subject development should maintain the same absorption rate as the rate obtained as a result of my percolation test literally forever… or at least as long as the treatment system is properly maintained. In short, since the percolation test was conducted with clean water, and only clean water will be discharged into the proposed seepage pits, then the proposed seepage pits should never fail.

Furthermore, since only clean water will be discharged into the proposed seepage pits, groundwater contamination will not be a factor. Prior to discharge the sewage effluent will be tertiary treated, after discharge the clean water discharged will be further treated by percolation through the subsurface soil/rock strata, which acts as a natural filter.

As to the effect on groundwater elevation, and the effect on offsite properties as a result of future sewage effluent discharge to the proposed seepage pit type subsurface sewage effluent disposal system Leighton & Associates, Inc. (the project geologist), Earth Forensics, Inc., and Earth Consultants International, Inc. are better qualified to comment.

If you have any questions, or comments, or need further information, then please contact me at your earliest convenience.

Sincerely,



L. Young

Lawrence Young

cc:file

GEOTECHNICAL RESPONSES TO COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT: PROPOSED RESIDENTIAL DEVELOPMENT, "CRUMMER SITE", 24108, 24120, 24134, 24150 AND 24174 PACIFIC COAST HIGHWAY, CITY OF MALIBU, CALIFORNIA

Prepared for

PCH Project Owner, LLC

c/o BRP Management, LLC

315 South Beverly Boulevard, Suite 211
Beverly Hills, California 90212

Project No. 10349.001

July 1, 2013

Leighton and Associates, Inc.
A LEIGHTON GROUP COMPANY

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July 1, 2013

Project No. 10349.001

PCH Project Owner, LLC
c/o BRP Management, LLC
315 South Beverly Boulevard, Suite 211
Beverly Hills, California 90212

Attention: Mr. Robert Gold

Subject: Geotechnical Responses to Comments on Draft Environmental Impact Report: Proposed Residential Development, "Crummer Site", 24108, 24120, 24134, 24150 and 24174 Pacific Coast Highway, City of Malibu, California

References: See attached.

INTRODUCTION

Leighton and Associates, Inc. (Leighton) has been providing geotechnical services for the proposed residential development in the City of Malibu (City), commonly known as the "Crummer Site" (see References).

The City has approved Leighton's geotechnical reports (Leighton 2009a, b; 2012b) for the Onsite Wastewater Treatment System (City of Malibu, 2012a), and also Leighton's geotechnical reports (Leighton, 2000; 2001; 2007; 2008; 2009a, b; 2012a, c) for the tentative tract map for the project (City of Malibu, 2012b). In addition, Leighton's lot-specific geotechnical reports (Leighton, 2012d-h) for Coastal Development Permit purposes were approved by the City (City of Malibu, 2012c-g). Additional geotechnical reports will be prepared for each lot for Building Plan Check submittal once construction documents have been prepared by the project's civil engineer for plan check.

Recently, a Draft Environmental Impact Report was prepared by The Planning Center|DC&E (April, 2013) for the City (DEIR). Comments relating to the geotechnical aspects of the DEIR have been made by various parties. The purpose of this letter is to provide written responses to the geotechnical comments.

Pertinent reports are referenced in the attached Reference list. In addition, the comments received on the DEIR and the associated comments numbering system are also attached.

RESPONSES

The Planning Center|DC&E has segregated each DEIR comment by Agency (A), Organization (O) and Resident (R), and then identified each comment by number. Comments that pertain to the geotechnical aspects of the project and to which responses are presented in this letter, are those from AEI Consultants, Gaines & Stacey, LLP (including commentary by GeoSoils Consultants, Inc.), Pepperdine University, Kari Kramer (including commentary by Land Phases, Inc.), Joan Lavine and Jo Ruggles.

In the sections that follow, each DEIR comment is presented in italics before Leighton's response.

O1 – AEI CONSULTANTS

Comment 7: The Geotechnical Report (L&A, 2009) states that the existing east-west trending faults act as a groundwater barrier and that the OWTS effluent will travel along faults. This issue was addressed and modeled by ECI (2009) and L&A (2009). According the (sic) geotechnical map (Plate 1, L&A, 2009) no mapped fault exists within or south of the dispersion field in Lot 7 (see recommendation below).

Leighton Response to 7: We have reviewed our report dated September 21, 2009 that is cited by AEI Consultants but find no discussion of faulting as related to the OWTS, effluent and groundwater. Similarly, there were no such statements in any of our other reports for the site (Leighton, 1989; 1993; 1994; 2000; 2001; 2003; 2007; 2008a, b; 2009a, b; 2012a-h).

However, Earth Consultants International (2009; 2012) has discussed the issue and Earth Forensics provides further discussion on this issue in their responses to this DEIR comment (Earth Forensics, 2013).

We do not agree with the statement that, *"….. no mapped fault exists within or south of the dispersion field in Lot 7 …..",* as shown on Plate 1 Leighton (2009a). While faults have not been mapped within the proposed dispersion field, faults south of the proposed dispersion field are shown on the referenced Plate 1 as west- / east-trending dashed or dotted black lines. In addition, please also refer to Leighton's response to O3 – Gaines & Stacey, LLP, Comment 16 herein, which discusses the definition of other subsurface faults which have not been mapped at the ground surface. The discussion concludes that the faults act as impediments to the flow of groundwater and that the likelihood of daylighting of groundwater in the south-facing bluff is remote.

Comment 8: No geologic cross-section through leach field in a downslope direction (Cross section A-A' from ECI [2009] (sic) in an east west direction).

Leighton Response to 8: The purpose of Leighton's geological (geotechnical) cross-sections was to provide an estimation of the subsurface conditions such that slope stability analyses could then be performed. The groundwater surface that was depicted on the geotechnical cross-sections and used in the slope stability analyses was the "*hypothetical / severe*" groundwater condition developed by Earth Consultants International, (2009, 2012). The hypothetical / severe groundwater condition considered all potential sources of water, and potentially extreme conditions, which could result in a maximum groundwater level beneath the site. The following groundwater recharge mechanisms were assessed:

- surface runoff from up-gradient locations
- existing treated water disposal systems up-gradient of the site
- rainfall

Just as an assessment was made of the potential contributions to groundwater, an assessment was also made by Earth Consultants International, Inc. (2009) of "*groundwater sinks*", i.e. locations or processes by which groundwater is discharged. Such discharge mechanisms included discharge to rivers or oceans, evapotranspiration by vegetation or discharge by pumping wells. (Please see Section 4.3, page 6, last paragraph, of Earth Consultants International, 2012.)

Earth Consultants International, Inc. (2009, 2012) assessed “baseline” groundwater conditions beneath the site using fifteen groundwater monitoring wells over a four-year time period. Data was supplied from nine groundwater monitoring wells at the Crummer site (CCB-22, CCB-23, LMW-1, LMW-2, LMW-3, LMW-4, LMW-5, LMW-6 and LMW-7), five groundwater monitoring wells at the adjacent “Towing” site to the east (MW-1, MW-2, MW-3, MW-4 and MW-5), and one groundwater monitoring well on Malibu Road south of the Towing site (SMBRP-11) – please see Figure 1 of Earth Consultants International (2012). Based on these data, groundwater levels that were observed in onsite and offsite groundwater monitoring wells after the wetter than “normal” water year of 2010-2011 were selected to form the basis of the “*hypothetical / severe*” groundwater condition assessment. (Please see Section 2b, page 10, second paragraph, of Earth Consultants International, 2012.)

Thereafter, Earth Consultants International (2009, 2012) assessed a variety of different scenarios in order to assess the influence that factors outside the site would have on groundwater levels beneath the site. The maximum groundwater level increases that were considered were the maximum contributions estimated from the following sources:

- up-gradient Winter Canyon treated water recharge
- treated water from Malibu Bluffs Park
- treated water dispersal from the adjacent “Towing” site adjacent to the east
- treated water dispersal from the Crummer site

Given the four contributions to the maximum groundwater levels beneath the site that are listed above, the “*hypothetical / severe*” groundwater condition of Earth Consultants International (2012) was defined by them and used by Leighton in its analyses. (Please see Section 4.2, page 5, of Earth Consultants International, 2009.)

For the purpose of slope stability, geotechnical cross-sections were only drawn in critically representative areas (i.e. locations at the site that were anticipated to have ”worst-case” geotechnical conditions) and which included either adverse geology, steep slopes or high predicted groundwater, or a combination of the preceding. Geotechnical Cross-Sections D and F of Leighton (2009) and Sections I, J and K of Leighton (2012a) were used for this purpose and extended through the south-facing bluff at the locations shown by Leighton (2009, 2012a), which are south and southeast of the proposed seepage pits. They included the hypothetical / severe groundwater conditions of Earth

Consultants International (2009, 2012). A section through the proposed leach field in a "downslope direction" would not portray critically representative conditions in the bluff south of the proposed leach field, is not warranted and was not performed. This is because an assessment of the stability of the slopes in the canyon south of the proposed leach field had already been made by Leighton (2012a) in order to verify the location of the geotechnical setback line. For example, Geotechnical Cross-Section L-L' of Leighton (2012a) extends through the eastern side of the canyon and a geotechnical setback of approximately 50 feet from the bluff edge was confirmed. At this location, the canyon slope is steeper and higher than would be the case if a geotechnical cross-section had been drawn through the leach field towards the canyon to the south. In addition, the proposed leach field is further away from slopes than is the case for Geotechnical Cross-Section L-L', that being approximately 110 feet.

Comment 9: Statement of the "potential not likely" for effluent to daylight on south-facing bluff; however, that is in the direction of groundwater flow. See recommendations.

Leighton Response to 9: We cannot find the statement apparently attributed to Leighton in any of our reports, and the report from which the statement was supposedly taken is not cited by the DEIR comment. The closest statement to that cited in the DEIR comment was made by Leighton (2012b), page 7, first paragraph, as follows: *"..... we believe that the potential for daylighting of the effluent is remote."*

The term "*daylighting*" refers to the emergence of a subsurface geological feature at the ground surface. It is typically used in relation to the emergence of either geologic bedding planes or groundwater surfaces on the faces of slopes. We agree that the direction of the treated effluent and the direction of groundwater flow are the same, and this was one of the reasons that geotechnical cross-sections were drawn through the south-facing bluff. Geotechnical Cross-Sections D and F (Leighton, 2009, 2012a) each show the hypothetical / severe groundwater condition at their respective locations. (Please see Leighton's response to O1 – AEI Consultants, Comment 8 herein for a summary of the hypothetical / severe groundwater condition.) Given that the hypothetical / severe groundwater condition (which contains the contributions estimated by Earth Consultants International (2009, 2012) from the treated effluent) does not daylight, and given that this groundwater level is the maximum predicted by Earth Consultants International (2009, 2012), we conclude that our statement is correct and that the potential for daylighting of the treated effluent is remote.

Comment 14: Will stormwater discharge to slopes and canyons below the proposed site result in adverse geologic conditions (i.e. erosion, slope failure, affect mapped landslides along the south facing bluffs, etc.)?

Leighton Response to 14: As stated by Leighton in each of the lot-specific geotechnical reports (Leighton, 2012d-h; see the top of page 3 in each report), surface drainage will be directed towards an on-lot detention / stormwater quality treatment basin or an on-lot storm drain catch basin. Thereafter, the collected waters will be conveyed into underground stormwater detention / filtration tanks and then to drainage devices that outlet at the toes of the slopes in a controlled manner.

Given that surface waters will be collected on each lot and transported to the toes of the slopes in engineered devices, the transmission of surface water into the subsurface is minimized. Consequently, the potential for erosion, slope failure, and reactivation of mapped landslides along the south facing bluffs as a result of stormwater discharge is also minimized.

Comment 15: Planned earthen berms at top of bluffs to divert runoff will channelize flow which in turn increases the runoff energy and rate which will increase erosive potential along slope faces and in canyons below the site.

Leighton Response to 15: Please see Psomas (2013; page 6, response to Comment O1-15) for a more complete response to this comment. However, in summary, the berms will be lined with a concrete swale that contain small check dams and rip rap to reduce velocity and minimize erosion. Such waters will be directed to appropriate outlet devices where the stormwater will be detained and released in a controlled manner at the toes of slopes into existing storm drains. Therefore, the erosive potential along slope faces and in the canyons below the site will be reduced.

Comment 26: Demonstrate how effluent moving south (groundwater flow) will not daylight or contribute to movement/reactivation of landslides along southern slope. This was addressed and studied (ECI & L&A) but at the theoretical level. Re-evaluate after performance of #1 above.

Leighton Response to 26: This issue has been discussed in detail by Leighton (2012a) in response to a prior City review comment (please refer to our response to Comment 3 in Leighton, 2012a). In summary, the assessment of whether groundwater and the associated treated effluent would daylight or not, and whether it would reactivate the

landslides along the southern slope was based on a characterization of the maximum possible groundwater levels beneath the site by Earth Consultants International (2009, 2012). They characterized these maximum levels as the "*hypothetical / severe*" groundwater condition, which has been summarized herein in Leighton's response to O1 – AEI Consultants, Comment 8. The "hypothetical / severe" groundwater condition was based on fifteen onsite and offsite groundwater monitoring wells that generated data over a four-year period.

Leighton (2012b) has presented Geotechnical Cross-Sections D and F which extend through the south-facing bluff. The sections were not *"theoretical",* but considered an extensive dataset consisting of 53 onsite borings, 9 onsite borings that were converted into groundwater monitoring wells, 6 offsite groundwater monitoring wells and 9 onsite test pits. The sections depict the hypothetical / severe groundwater condition, which includes the treated effluent. The hypothetical / severe groundwater condition does not daylight along the southern slope; therefore, by inference, the treated effluent will also not daylight.

The assessment of the hypothetical / severe groundwater condition by Earth Consultants International (2012) demonstrated that there was no measureable effect on groundwater levels in the south-facing bluff as a result of the proposed project. We conclude that southerly-moving effluent will not contribute to movement or reactivation of the offsite landslides. The potential for reactivation of the landslides is also discussed in our response to R8 – Kramer, Kari, 5/20/2013, Comment 19, herein.

Based on a review of Earth Forensics (2013), an injection study to further model the transport of subsurface waters is unnecessary, is not required by applicable codes and regulations, and need not be performed. Given that an injection study is not necessary, a re-evaluation of the potential for daylighting of effluent and landslide reactivation is also not necessary and will not be performed. The work performed by Earth Consultants International (2009, 2012) was approved by the City of Malibu (2012a).

O3 – GAINES & STACEY, LLP

Comment 9: ***Slopes along the southern and eastern boundaries of the project do not meet the City's requirement for the minimum factors of safety (Threshold G-1 (iv):***

Since slope stability may adversely affect proposed structures along the tops of descending slopes, this impact was assigned a Threshold of Significance of G-1 (iv). The potential for slope instability may expose people or structures to substantial adverse effects, including loss of live (sic) or property. This threshold is being reduced by the use of structural setback zones. As stated above, Leighton and Associates have recommended slope setback zones along the southern and eastern portions of the site. In addition, they conclude that the proposed OWTS will not adversely affect slope stability, as the potential for groundwater mounding and daylighting through natural slopes is low.

Leighton Response to 9: GeoSoils Consultants, Inc. (GeoSoils), excerpts a California Environmental Quality Act (CEQA) -required statement from the DEIR on the stability of the bounding slopes to the east and south of the project site ("***Slopes along the southern and eastern boundaries of the project do not meet the City's requirement for the minimum factors of safety (Threshold G-1 (iv):")*** and then summarizes recommendations made by Leighton in various reports. Leighton concurs with the summary made by GeoSoils. The locations of the slope setback zones shown by Leighton (2012a; Plate 1) are appropriate.

Comment 10: ***Project development could result in substantial soil erosion or the loss of topsoil (Threshold G-2):***

Development of the subject site may result in loss of soil, erosion, decomposition, and removal and transportation. To reduce these potential impacts, site grading and development shall conform to all applicable codes and regulations, including South Coast Air Quality Management District Rules 402 and 403, NPDES, and SWPPP.

Leighton Response to 10: GeoSoils excerpts a California Environmental Quality Act (CEQA) -required statement from the DEIR on the potential for soil erosion or loss of topsoil at the project site ("***Project development could result in substantial soil erosion or the loss of topsoil (Threshold G-2):")***, and then summarizes recommendations made by Leighton in various reports to mitigate such a condition.

Leighton concurs with the summary made by GeoSoils. Further, implementation of the applicable codes and regulations, including those by the Air Quality Management District (AQMD, Rules 402, 403) and the National Pollutant Discharge Elimination System (NPDES), and also the Storm Water Pollution Prevention Plan (SWPPP) for the project, will reduce soil erosion to a level that is less than significant.

Comment 11: ***The proposed project would place structures on potentially unstable soils (Thresholds G-3 and G-4):***

Potentially unstable soils on the site will be mitigated through over-excavation and recompaction below proposed structures. Since the site is not subject to liquefaction, deep removals or other soil stabilization measures are not required. Conventional grading techniques shall be used to mitigate unstable soils.

Leighton Response to 11: GeoSoils excerpts a California Environmental Quality Act (CEQA) -required statement from the DEIR on the potential for structures to be located on unstable soils at the site ("***The proposed project would place structures on potentially unstable soils (Thresholds G-3 and G-4):")*** and then summarizes recommendations made by Leighton in various reports to mitigate such a condition. Leighton concurs with the summary made by GeoSoils. The grading recommendations provided by Leighton will stabilize the soil and there will be no significant impact due to soil instability.

Comment 12: ***Site conditions are adequate to support the onsite wastewater treatment system (Threshold G-5):***

As discussed above and within the referenced reports, Lots 1 through 5 will be serviced by an OWTS, with treated effluent being dispersed in a series of 10 seepage pits located on Lot 6. The referenced documents indicate that the OWTS is feasible and this system was reviewed and approved by the City of Malibu. The proposed systems shall be kept outside of the previously established slope setback zones. As discussed by the project consultants, groundwater mounding and/or migration will not adversely affect the proposed development or adjacent properties.

Leighton Response to 12: GeoSoils excerpts a California Environmental Quality Act (CEQA) -required statement from the DEIR on the ability of site to support the proposd onsite wastewater treatment system ***("Site conditions are adequate to support the onsite wastewater treatment system (Threshold G-5):")*** and then summarizes

recommendations made by Leighton in various reports to mitigate these conditions. Leighton concurs with the summary made by GeoSoils.

Comment 13: *The primary geologic constraints that may adversely affect proposed development on the subject site consist of ground rupture, strong ground shaking, soil settlement, and slope instability. These potential impacts may be exasperated (sic) by the introduction of water into the subsurface soils, either through the proposed OWTS or natural runoff and/or irrigation. The potential for ground rupture on the site is low; however, strong ground shaking as a result of nearby faults is possible during the life of the proposed development and should be taken into consideration during design. Soil settlement will be mitigated through standard grading techniques. Removal and recompaction will result in firm soils below proposed structures, thus mitigating the potential for settlement.*

Leighton Response to 13: The geologic constraint of ground rupture will not be affected by the introduction of water into the subsurface soils. Faulting is induced by movement within deep-seated crustal bedrock as a result of regional plate tectonics. The introduction of surface waters into the shallow subsurface will have no bearing on this issue, as further discussed by Earth Forensics (2013). Regardless, Earth Consultants International (2000; 2001a, b; 2002a-c) has demonstrated that active faulting does not exist at the site and that the potential for onsite ground rupture due to the presence of active faulting is low. As a result of the work performed by Earth Consultants International (2000; 2001a, b; 2002a-c), the State of California (2007a, b) removed their designation of an Alquist-Priolo Earthquake Fault Zone from the area which included the Crummer site. (The Alquist-Priolo Earthquake Fault Zoning Act was created in 1972 and requires site-specific exploration for areas that are impacted by active faulting.) As a result, Earth Consultants International has concluded that the potential for onsite ground rupture due to the presence of active faulting is low.

The potential for strong ground shaking was assessed by Leighton (2007) and recommendations were provided for seismic design. As is customary, additional recommendations will be provided during the forthcoming Building Plan Check submittal process.

With respect to soil settlement through the introduction of water into the subsurface, we have demonstrated in our response to O1 AEI Consultants Comment 15 herein that Psomas (2012a-3; 2013) have incorporated a surface drainage system on each lot that

is designed to intercept the majority of the surface drainage and direct it to storm drains at the toes of slopes via non-erodible devices.

With respect to slope stability and subsurface water, an assessment of the hypothetical / severe groundwater condition across the site and the adjacent bounding slopes was made by Earth Consultants International (2009, 2012). (Please see Leighton's response to O1 – AEI Consultants, Comment 8 herein for a summary of the hypothetical / severe groundwater condition). Earth Consultants International (2012) demonstrated that, as a result of the proposed project, there was no measurable effect on the groundwater levels south of the site, and that an increase in groundwater levels ranging from approximately 0.06 feet (approximately ¾ inch) to 0.26 feet (approximately 3 inches) was predicted in the bounding slopes to the east.

Given that groundwater levels south of the site are not predicted to be affected by the project, we conclude that reactivation of the landslides south of the site will not be influenced by the project. As a consequence, the slope stability analyses of Leighton (Leighton 2000; 2003; 2007; 2009a, b; 2012a) remain valid.

Landslides have not been mapped on the bounding slopes to the east of the project; also, the maximum predicted increase of the groundwater levels of approximately 3 inches is negligible and does not increase groundwater levels above the toe of the slope or above what is termed the "*critical failure surface*" in the slope stability analyses performed by Leighton (2007). The critical failure surface was defined by the slope stability analyses of Leighton (2007) during the assessment of the geotechnical setback line near the top of the south and east bounding slopes. It is a three-dimensional surface, which, in cross-sectional view, is defined as an arc. Below the critical failure surface, the factor of safety is greater than 1.5; above the critical failure surface, the factor of safety is less than 1.5. The factor of safety is a measure of the forces that would cause a slope to fail versus the forces that resist such failure. A factor of safety of 1.5 means that the resisting forces are 1.5 times as great as the forces that would cause a slope to fail.

Given the preceding discussion and definition of terms, groundwater levels in the vicinity of the eastern bounding slope remain well below the critical surface, do not promote slope instability, and do not influence the results of the slope stability analyses. Therefore, we conclude that the stability of the eastern bounding slope is also not affected by the proposed project and that the slope stability analyses of Leighton (2007) remain valid.

Leighton concurs with the DEIR statement made regarding settlement and its mitigation though the use of conventional grading techniques. Preliminary recommendations for the removal and recompaction of loose soils within the proposed structural areas of the shallow foundations proposed for the project have been previously recommended by Leighton (2007); these will be reiterated during the forthcoming Building Plan Check stage for on-lot construction.

Comment 14: *Structural setback zones were established along the south and east sides of the property to mitigate potential slope instability from impacting proposed structures. According to the DlER (sic), no structures shall be permitted within the previously established setback zone. In addition, the proposed OWTS on Lot 6 should not be located within a setback zone.*

Leighton Response to 14: All structures at the site intended for human occupancy will have a factor of safety of at least 1.5 in accordance with the requirements of the City of Malibu (2002a). The majority of these structures are located landward of Leighton's geotechnical setback line (for example, see Plate 1 in each report by Leighton, 2012d-h) and have a factor of safety of at least 1.5.

However, on Lot 1, the eastern margin of the proposed pool is within an area that has a factor of safety less than 1.5. In order to provide a factor of safety of at least 1.5 for this portion of the pool, Leighton (2012d) suggested several options. One of the options was to provide piles. This option of piles requires an understanding of the definition of the geotechnical setback line at depth, as opposed to the manner in which it is depicted on the ground surface. At the lot surface, the setback is defined as a line, on the pad side of which the factor of safety is greater than 1.5. In cross-sectional view, the setback is defined by an arc, the "*critical failure surface*", below which the factor of safety is greater than 1.5. Therefore, and in order to provide a factor of safety of at least 1.5 for all of the proposed pool area, piles would need to extend below the setback line in cross-sectional view and be founded in bedrock. (The terms "*critical failure surface*" and "*safety factor*" are defined in Leighton's response to O3 – Gaines & Stacey, LLP, Comment 13, herein.)

Other options for improvement of this portion of the pool to a factor of safety of at least 1.5 were noted by Leighton (2012d) to include retention structures such as soldier piles, or ground improvement such as grouting.

Whether piles, retention structures or ground improvement methods are used, they would all result in improving this portion of Lot 1 to a factor of safety of at least 1.5. It was noted by Leighton (2012d) that specific design recommendations will be provided during the Grading Plan Check stage of the project.

Similarly, on Lot 2, a portion of the proposed residence is in an area that has a factor of safety of less than 1.5 (Leighton, 2012e). However, as for Lot 1, the conceptual design recommendations of piles, retention structures or ground improvement can be used to improve the factor of safety to at least 1.5. Also, as is customary, specific design recommendations will be provided during the Grading Plan Check stage of the project.

Comment 15: *The setback zone along the southern portion of the property was based on stability analyses prepared by the project geotechnical consultant (References). As indicated on Geologic Cross-Sections D-D' and F-F' (Leighton and Associates, 2009b), the consultant has forced a failure surface along the toe of the descending natural slope. The structural setback was then determined by calculating the 1.5 factor-of-safety failure surface for the subject slope. The point at which the 1.5 factor-of-safety failure surface meets the ground surface defines the southern setback line and structures shall not be built south of the setback. The lower portion of the critical failure surface presented in the analyses toes out at the bottom of the existing slope. In addition, this location corresponds to the top of the Amarillo Beach Landslide. Although portions of the Amarillo Beach Landslide are identified as being historically active, the DIER (sic) states that headward migration of the Amarillo Beach Landslide will not encroach onto or adversely affect the proposed development. In addition, the DIER (sic) states that the proposed OWTS will not adversely affect the existing historically active landslides along the southern boundary of the project.*

Leighton Response to 15: Leighton concurs with the above statements. Some structures are proposed south of the proposed setback, but mitigation has been recommended such that these structures will have a geotechnical factor of safety at least 1.5. For additional discussion on this issue, refer to Leighton's response to DEIR comment O3 - Gaines & Stacey, LLP 14 herein.

Comment 16: *Cross-Sections D-D' and F-F' by Leighton and Associates (2009b) shows existing groundwater levels that slope to the south, toward the Amarillo Beach Landslide. The DIER (sic) states that migration of effluent from the proposed OWTS will not adversely affect the existing historically active landslides south of the subject site due to the presence of faults within the bedrock. However, the faults are buried by*

terrace deposits and the ability of the faults to impede the flow of groundwater is poorly defined. In addition, review of logs of borings excavated above the existing historically active landslide indicates highly fractured bedrock with numerous shears and joints. Some of the shears and joints actually dip to the south, toward the Amarillo Beach Landslide. In addition, the slide plane geometry and current groundwater conditions within the offsite landslide are poorly constrained. Therefore, the conclusions presented in the DIER (sic) pertaining to the offsite landslides do not appear to be supported by existing data.

Leighton Response to 16: It is true that some of the faults at the site are buried by terrace deposits, do not extend through the terrace deposits and are not recognizable at the ground surface. However, such burial does not necessarily interfere with the identification of such faults or how they interrupt the flow of groundwater and that, to a great extent, they act as barriers to groundwater flow. For example, groundwater data presented in Table 1 on pages 5 and 6 of Leighton (2012b) from January 20, 2012 shows that there is an approximately 87-foot southerly decrease in groundwater elevations between Monitoring Well LMW-5 approximately in the center of Lot 5 and Monitoring Well CCB-22 at the southern margin of Lot 5; this is over a distance of approximately 350 feet. Similarly, there is an approximately 96-foot southerly decrease between Monitoring Well LMW-4 in the center of Lot 1 and Monitoring Well CCB-23 at the southern margin of Lot 1; this is over a distance of approximately 370 feet. The dramatic decrease in groundwater elevations towards the bluff over such short distance is clearly related to a fault barrier. This is discussed further by Earth Forensics (2013).

We agree that the borings excavated at the site above (i.e. north of) the Amarillo Beach Landslide are fractured and contain shears and joints. However, while some of the shears and joints dip to the south, the overwhelming majority of the shears and joints dip to the north, which, subjectively, suggests more stable conditions than if the overwhelming majority of the shears and joints dipped to the south towards the open bluff face. If the overwhelming majority of the shears and joints dipped to the south towards the open bluff face, then, subjectively and absent slope stability analyses, there would be a greater likelihood of slope failure. The comment does not mention bedding, but this, too, has a northerly dip component, not southerly. Please refer to the logs of Borings B-8 (southern margin of Lot 1) and B-9 (southern margin of Lot 5) on Plates B-8 and B-9, respectively, in Geolabs (2000); these borings are closest to the landslide and would be most representative of the subsurface conditions adjacent to the landslide. The prevailing northerly geologic attitudes are summarized on Geotechnical Cross-Sections D and F on Plate 3 of Leighton (2009a).

Given the great prevalence of northerly-dipping geologic structure (whether bedding, joints or shears), failure of this portion of the slope would have to occur across the northerly-dipping structural grain, which, subjectively, is more difficult than if the prevailing geologic structure were to dip to the south towards the landslides. This characterization of the geologic structure was incorporated into Leighton's slope stability analyses (Leighton 2000; 2003; 2007; 2009a, b; 2012a), which derived a factor of safety of at least 1.5 for the bluff.

We also disagree that the slide plane geometry of the Amarillo Beach Landslide is poorly constrained. The headscarp is clearly visible and we do not need further definition of the offsite landslide to be able to assess the stability of the portion of the bluff that does not form part of the landslide. In fact, and as mentioned previously, the stability of the bluff was assessed assuming that the landslide had been entirely removed.

Given that construction is not planned within the offsite landslides, that an appropriate geotechnical setback from the landslides has been defined, and that the slope stability analyses were performed assuming that the landslides had been removed, additional definition if the offsite landslides is not warranted, Therefore, we disagree with the statement that the conclusions presented in the DEIR pertaining to the offsite landslides do not appear to be supported by existing data. The conclusions are supported to the extent that they are required by the analyses.

Comment 17: *A raise in groundwater within the Amarillo Beach Landslide due to the proposed OWTS may have an adverse effect of the stability of the property to the south. Portions of the offsite landslide are occupied by existing residential structures and additional movement would adversely affect those structures.*

Leighton Response to 17: Earth Consultants International (2009; 2012) and Leighton (2009a, b; 2012a, b) assessed a hypothetical / severe groundwater level condition across the site and within the Amarillo Beach Landslide. (Please see Leighton's response to O1 – AEI Consultants, Comment 8 herein for a summary of the hypothetical / severe groundwater condition.) That work shows that, within the landslide, there was no discernible difference in the groundwater elevations with and without contributions from the OWTS effluent. The OWTS is not forecast to induce a rise in groundwater elevations in the area. As such, an adverse effect on stability of the property to the south is not anticipated.

Comment 18: *The DIER (sic) states that headward migration of the Amarillo Beach Landslide will not encroach onto the subject property; however, any movement of the existing landslide may affect the overall stability of the southern slope area and, in turn, have an effect on the proposed setback zone on the subject site. Movement of the landslide may result in different slope conditions then considered in the current analyses. As shown on the geologic cross· sections and stability analyses (Leighton 2009b), the current setback zone is based on the critical failure surface daylighting at the toe of the existing slope, which is at the head of the Amarillo Beach Landslide. If the slide were to move, then the slope configuration used in the analyses would change, possibly resulting in a higher slope or change in soil parameters due to extension of the head-scarp area. As a result, a larger setback zone may be required and the zone may extend below the proposed structures on the subject site.*

Leighton Response to 18: Leighton (2008b) has assessed the Amarillo Landslide based on a review of historic aerial photographs and topographic maps covering the period from 1903 to 2007. While small, localized, surficial failures were noted within the landslide mass, larger slope failures were lacking. Also, the Amarillo Landslide appears to be buttressed by alluvium and beach deposits; it is expected to remain stable because it is unlikely that the buttressing materials will be removed or be allowed to erode during the design life of the proposed development or the offsite adjacent developments to the south.

Leighton's approach and assessment of the Amarillo Landslide with respect to the proposed development was performed in accordance with City requirements and discussions with the City Geologist, and was ultimately approved by the City (2012b). Reconsideration of the landslide interpretation or the method of analyses is not warranted.

Comment 19: *The proposed OWTS will consist of 10, 6-foot diameter pits located within the limits of Lot 6. The referenced reports indicate that treated effluent will be discharged within the un-oxidized Monterey Formation bedrock at depths of approximately 61 to 67 feet below ground surface. Un-oxidized bedrock is generally less weathered and, potentially, less permeable than oxidized (or weathered) bedrock. Therefore, it is recommended that the project consultants confirm that the un-oxidized bedrock is suitable to handle the potential effluent from Lots 1 through 5.*

Leighton Response to 19: This comment relates to the same issue raised by the City during its review of prior Leighton reports (Leighton, 2009a, b), although the City also

requested a discussion of bedrock percolation characteristics across the **entire** site, not just at the location of the seepage pits. The issue is discussed at length by Leighton (2012a; please refer to Comment 1.2 on page 4, and its associated response).

In short, Aquifer Science and Technology (2008) defined the boundaries between unoxidized and oxidized bedrock that underlies the Terrace Deposits which mantle the site by performing an electrical resistivity study. It was confirmed by Leighton (2012a) that effluent from the seepage pits would first percolate into oxidized bedrock, not unoxidized bedrock, and would then percolate deeper into unoxidized bedrock. Earth Consultants International (2012, pages 6 through 8) demonstrated the hydraulic conductivities of the oxidized and unoxidized bedrock, and concluded that these parameters were sufficient to provide transport of the treated effluent away from the seepage pits. It was also noted by Leighton (2012a) that the presence of open fractures and joints, the presence of diatomaceous beds, and the dissolution of calcium carbonate and gypsum linings of joints and fractures upon contact with the treated effluent would further serve to increase percolation characteristics of the bedrock and efficient transport of the treated effluent.

Comment 20: *In summary, it is the undersigned (sic) opinion that the DIER (sic) and referenced reports do not adequately address stability along the southern slope area of the site. Statements regarding migration of effluent toward the existing historically active landslide are poorly supported by existing data and the highly fractured nature of the bedrock may result in additional groundwater flow toward the offsite landslide. Reactivation of the offsite landslide may result in damage to existing residential structures and may result is a less stable slope condition and larger setback zones on the subject site. Additionally, uncontrollable factors may also adversely affect the overall stability of the offsite landslide, such as an increase in groundwater due to other sources, as well as potential seismic activity.*

Leighton Response to 20: We direct attention to responses to various DEIR comment responses herein, specifically:

- O1 – AEI Consultants: 14 and 26
- O3 – Gaines & Stacey, LLP: 16, 17, and 18
- R8 – Kramer, Kari 5/20/2013: 18, 19, and 20

Our responses to DEIR comments herein clearly show that the characteristics of the bedrock have been properly assessed by Aquifer Science & Technology (2008), Earth Consultants International (2012a) and by Leighton (2009a, b; 2012a-c), and that they have been incorporated in Earth Consultants International's hypothetical / severe groundwater model studies (Earth Consultants International, 2009; 2012). This model included the effects of the treated effluent, irrigation and rainfall which has adequately modeled the, *"….. uncontrollable factors"*, which, *"….. may adversely affect the overall stability of the offsite landslide, such as an increase in groundwater due to other sources ….."*, as stated by the DEIR comment. Therefore, the physical characteristics of the site's subsurface have been properly characterized such that the migration of effluent can also be properly characterized. As such, the introduction of effluent into the subsurface will not result in additional groundwater flow towards the offsite landslide.

With respect to potential seismic activity that could affect the stability of the offsite landslides, the slope stability analyses of Leighton (2000; 2003; 2007; 2009a, b; 2012a) were performed per the requirements of the City, which includes ground motions that could be induced as a result of regional earthquakes.

Given the preceding, Leighton (2012a) has demonstrated, and the City has approved (City of Malibu, 2012b), that, even given the hypothetical / severe groundwater model, reactivation of the landslide complex on the south bluff is remote.

O7 – PEPPERDINE

Comment 2: *Pepperdine's ability to access and monitor geologic conditions at Bluffs Park is critical to support the HMP and to ensure that it is not contributing to unsafe geologic conditions at the Project site. Further, while the evidence conclusively shows that Pepperdine is not contributing to existing slope instability, it is our understanding from the Draft EIR and our historical knowledge of the area that the slopes where the Project is proposed are subject to geotechnical instability. Moreover, this geotechnical instability has been documented since the early 1900s. Thus, the EIR should study whether the Project will implement appropriate monitoring to ensure it does not contribute to groundwater infiltration and does not impact existing slope instability.*

Leighton Response to 2: Leighton has not been provided with any information relating to Pepperdine's Hydrogeologic Monitoring Program (HMP). However, Earth Consultants International (2009, 2012) has developed a hypothetical / severe groundwater surface

that incorporated maximum anticipated groundwater levels and contributions from treated effluent, irrigation and rainfall. (Please see Leighton's response to O1 – AEI Consultants, Comment 8 herein for a summary of the hypothetical / severe groundwater condition.) Leighton has demonstrated by way of slope stability analyses along Geotechnical Cross-Sections D and F that a factor of safety of at least 1.5 would be maintained throughout the project site even given the hypothetical / severe groundwater surface.

In addition, and with respect to the following portion of the DEIR comment: "….. *it is our understanding from the Draft EIR and our historical knowledge of the area that the slopes where the Project is proposed are subject to geotechnical instability. Moreover, this geotechnical instability has been documented since the early 1900s.",* we concur. However, based on detailed slope stability analyses (Leighton, 2000; 2003; 2007; 2009a, b; 2012a), we have provided recommendations for the proposed development to be set back from the slopes and to have appropriate foundations such that the development will have a factor of safety of at least 1.5. Also, Earth Consultants International (2009, 2012) has shown that groundwater levels within the offsite landslides will not be affected by, and will not increase as a result of, the proposed project. Also, our responses to O3 – Gaines & Stacey, LLP, Comment 13 herein demonstrate that the stability of the bounding slope to the east will also not be affected by the proposed project. Leighton's work (Leighton, 2000; 2003; 2007; 2009a, b; 2012a) and Earth Consultants International's work (Earth Consultants International, 2009, 2012) was approved by the City of Malibu (2012a, b).

In addition to the preceding, upon installation of the proposed Onsite Wastewater Treatment System (OWTS), monitoring of groundwater levels across the site will be a requirement of the State Water Resources Control Board in its Waste Discharge Requirement permit to ensure that the levels are as predicted by the project design. Further, the site is currently part of a Sewer District within which the feasibility of constructing a sewer to connect with the City's infrastructure is being assessed by the City. Should such a sewer be constructed, the proposed development will connect to that sewer and the treated effluent will not be discharged to the subsurface.

R8 – KRAMER, KARI 5/20/2013

Comment 17: *The setbacks from the bluff edge are questionable.*

Pursuant to the Engineering Geologic Memorandum, Land Phases, Inc., 5/14/13 prepared for Mr. Lyn Konheim. Malibu Road property owner adjacent (south) to the Crummer Site, the setbacks of structures are not in conformance with the LCP. Please see the referenced Geologic Memorandum attached hereto. This technical oversight by the developer affects a number of lots and must be addressed.

Leighton Response to 17: For the Crummer site, there is no requirement to define geotechnical setbacks based on the combined setback that would result by adding together the setback estimated through slope stability analyses and the setback estimated by the coastal retreat study. For an explanation, please see Leighton's response to R8 – Kramer, Kari 5/20/2013, Comment 27. However, in short, the bluffs to the south of the project site are only considered to be a coastal bluff for the determination of setbacks if the bluff is subject to direct wave action (City of Malibu, 2002b; City of Malibu Planning Division, 2008). However, the bluff is not subject to direct wave action because other structures with associated coastal protection devices are located between the ocean and the bluff. Therefore, geotechnical setbacks for the project were based on an assessment of historic bluff retreat (Leighton, 2008b) and slope stability analyses (Leighton, 2000; 2003; 2007; 2009a, b; 2012a), and all reports referenced therein). The setbacks estimated through slope stability analyses resulted in the most conservative setbacks, were the ones that were recommended by Leighton, and are in conformance with the requirements of the LCP. Details of this rationale are provided in Leighton's response to R8 – Kramer, Kari 5/20/2013, Comment 27, herein.

Comment 18: *In addition to the above setback issue, the DEIR and its consultant have failed to specifically address our previously documented concerns in regard to the potential impact of wastewater on the adjacent landslides to the south of the Crummer site. The only special mitigation is to require restrictions to be determined in the project's future Covenants, Conditions and Restrictions (CC&R's). This approach of "kicking the can down the road" holds future problems and liability for both the city and the developer.*

Leighton Response to 18: Please see prior responses to this issue herein, as follows:

- O1 - AEI Consultants: 7, 8, 9, 14, 26
- O3 – Gaines & Stacey, LLP: 13, 17, 20

In short, (Leighton, 2009a, b; 2012a, b) has demonstrated that a factor of safety of at least 1.5 will be maintained at the project site even given the development of the hypothetical / severe groundwater surface. This groundwater surface includes the maximum anticipated groundwater, and also the contributions from the treated OWTS effluent, rainfall and irrigation. (Please see Leighton's response to O1 – AEI Consultants, Comment 8 herein for a summary of the hypothetical / severe groundwater condition.) Specifically, Earth Consultants International (2009, 2012) has shown that groundwater levels in the adjacent offsite landslides will not be affected by, or increased as a result of, the proposed project. We conclude that the proposed project will not affect the stability of the landslides to the south of the site.

Comment 19: *In accordance with responsible CEQA compliance of a potentially significant impact, specific mitigation should be required now, not later. Such mitigation should, at a minimum, include specific subsurface monitoring with both mechanical and computerized fail-safe technology to ensure that the adjacent landslides are not subject to lubrication and failure caused by the Crummer Site Planned Development. Additionally, similar monitoring for land movement and historical record keeping should be required. All of these monitoring systems should be of public record for computerized, real time online viewing by both the city and the public at large.*

Leighton Response to 19: For the sake of clarity, we assume that the term "*lubrication*", as used in the DEIR comment, is intended to refer to an increase in the quantity of subsurface water along the landslide failure plane as a result of the proposed project. We also infer that the DEIR comment is questioning whether such "*lubrication*" could facilitate renewed movement of the landslide. (The landslide failure plane is the lower-most surface along which the landslide originally moved, and separates the landslide mass above the landslide shear plane from the intact bedrock below the landslide shear plane.) Given these assumptions, our response to the DEIR comment follows.

Hydrogeological studies performed by Earth Consultants International (2009; 2012) have defined the hypothetical / severe groundwater condition as the maximum groundwater level that could occur at the site given the highest anticipated groundwater

levels, and also the contributions from the treated effluent, rainfall and irrigation. (Please see Leighton's response to O1 – AEI Consultants, Comment 8 herein for a summary of the hypothetical / severe groundwater condition.) The studies by Earth Consultants International show that groundwater levels in the adjacent landslide would not be affected by, or increased as a result of, the proposed project. As a result, increased "*lubrication*" and failure of the landslide to the south as a result of the proposed project is not likely.

While groundwater monitoring will be performed once the proposed development has been constructed (see Leighton's response to DEIR comment O7 Pepperdine 2, herein), monitoring for land movement is not necessary or required by the City, and need not be performed.

Comment 21: *The alternatives to the project are weak and inadequate. The reasoning for not considering an alternative site plan that would re-arrange footprints to set back further from the bluff edge (especially Lot 5) and for eighteen foot heights is based on assumption with no substantive study or supportive factual data. The weak alternatives have an appearance of impropriety in meeting CEQA requirements and in catering to the developer's wishes and desires instead of the intent and letter of the regulations for both the State of California and the City of Malibu.*

The major justification by the EIR consultant regarding the limited and inadequate alternatives are based on grading quantities and on reduction of open space that would result from the spreading of footprints in one story structures. These "justifications" not only lack any real substantive data but are so inadequate that they almost require no discussion. There are numerous arguments that can disqualify their entire logic. For example, two stories can certainly be achieved in an 18' height and geometrically compact foot print thereby helping to resolve the issues of open space, visual height impact, grading and footprint all in "one fell swoop"....and, all in an environmentally superior alternative.

Suffice to say, site and building design can offer multiple approaches to address consistency between governmental regulatory requirements and site characteristics.

Leighton Response to 21: The geotechnical portion of these statements relates to setbacks from the bluff edge. The setbacks at the site on the east-, south- and north-facing slopes were based on an extensive data set that included 53 onsite borings, 9 onsite borings that were converted into groundwater monitoring wells, 9 onsite test pits,

and six offsite groundwater monitoring wells. Each of these exploration locations are depicted on Plate 1 of Leighton's most recent report (Leighton, 2012a). These explorations formed the basis for extensive laboratory testing and slope stability analyses (Leighton 2000; 2003; 2007; 2009a, b; 2012a), that resulted in the setbacks recommended by Leighton for the project.

Given the preceding, Leighton's studies are, in fact, substantive, and the supporting factual data are extensive. On that basis, the City of Malibu (2012a-g) provided its Geotechnical Planning Review approval of single family residential development of the five lots (City of Malibu, 2012c-g) and subdivision of the site from a geotechnical perspective for the proposed project (City of Malibu, 2012b).

Comments 24, 25, 26 and 27: *Preparation of this memorandum follows our review of the referenced geologic/geotechnical reports regarding the subject property which were prepared by Leighton and Associates, Inc. (1989-2012). The referenced reports present detailed geologic/geotechnical findings, conclusions, and recommendations regarding the proposed 5-lot residential development project. However, our review focused on the geologic conditions of the southern-most lots of the subject property (i.e. Lots 2, 3, and 5); the slope stability analysis of the south-facing descending slope (i.e. a coastal bluff) of these lots; the 100-year bluff retreat determination performed by Leighton: the resulting Geotechnical Setback Line established by Leighton for these lots; and the location of the currently proposed development (i.e. site grading and structures) in relation to the top of the coastal bluff. Based on our review of the referenced reports, it is LP's professional engineering geologic opinion that significant geologic/geotechnical concerns and code inconsistencies are currently associated with Lots 2, 3, and 5 which should be addressed and/or corrected by the project consultants and developer prior to any discretionary or technical review of the project. These concerns and code inconsistencies are as follows:*

Current Geotechnical Setback Line Is Not In Conformance With LCP:

Based on our review of the referenced reports by Leighton, the geotechnical setback line of subject property was not established in conformance with Chapter 10, Section 10.4.D.l of the City of Malibu LCP. To clarify, this section of the LCP deals with development restrictions and required setbacks from the top of a coastal bluff and states:

If the bluff exhibits a factor of safety of less than 1.5 for either gross or surficial landsliding, then the location of the bluff top at which a 1.5 factor of safety exists shall be determined Development shall be set back a minimum of distance equal to the distance from the bluff edge to the 1.5 factor-of-safety-line, plus the distance that the bluff might reasonably be expected to erode over 100 years. These determinations, to be made by a state-licensed Certified Engineering Geologist, Registered Civil Engineer, or Geotechnical Engineer, shall be based on a site-specific evaluation of the long-term bluff retreat rate at this site and shall include an allowance for possible acceleration of historic bluff retreat rates due to sea level rise.

Based on their detailed geologic and geotechnical analysis of the subject property, Leighton established a 1.5 factor of safety line (labeled by Leighton as Geotechnical Setback Line) within the southern portion of the site (i.e. a line which delineates a code-conforming slope stability to the north and a substandard slope stability to the south). While it is acknowledged that the undersigned Certified Engineering Geologist is not a State of California Civil Engineer or Geotechnical Engineer, the established geotechnical setback line appears to have been established in a manner consistent with the current geotechnical guidelines of the City of Malibu and the current industry standard of care. In addition, Leighton also performed the required 100- year bluff retreat analysis as part of their work. Based on this analysis, Leighton estimated that the maximum amount of bluff retreat at the subject property would be 20 feet over a 100 year period. Based on our review of Leighton's bluff retreat analysis, it too appears to have been performed in a manner consistent with the current geotechnical guidelines of the City of Malibu and the current industry standard of care. However, following the establishment of the geotechnical setback line, Leighton did not properly add their calculated 100-year bluff retreat setback distance of 20 feet to the geotechnical setback line as required by the aforementioned section of the LCP. Thus, a more restrictive geotechnical setback line (i.e. 20 feet further northward than what is presented in the referenced reports and current site development plans) is warranted. It follows that the proposed development (i.e. grading and structures) of Lots 2, 3, and 5 will need to be re-located further northward than currently planned in order to be in conformance with the aforementioned section of the LCP.

Leighton Response to 24, 25, 26 and 27: We do not agree that the geotechnical setback line needs to be moved further northward. While Chapter 10, Section 10.4.D.1 of the Malibu LCP states that the, "*Development shall be set back a minimum distance equal to the distance from the bluff edge to the 1.5 factor-of-safety line, plus the distance that the bluff might reasonably be expected to erode over 100 years.*", the City's Local

Coastal Interpretation Number 9 dated March 28, 2005 (contained in City of Malibu Planning Division, 2008) defines a coastal bluff as, *"Any cliff, sea cliff, bluff or bluff edge that is directly affected by wave action ….."*. We note that the bluff is not directly affected by wave action. It goes on to say, *"If there is a road or structures that require, or use, coastal protection, between the "bluff" and the "body of water" then it is not considered a coastal bluff because at that point it is no longer affected by coastal erosion processes related directly to wave action."*. The bluff on the project site is separated from the ocean and direct wave attack by either houses or Malibu Road, each of which incorporate some type of coastal protection devices.

Given the preceding, the project's site's southern bluff is not considered a coastal bluff for the purposes of LCP interpretation. Use of the setback that was defined by geotechnical slope stability analyses (Leighton, 2000; 2003; 2007; 2009a, b; 2012a) because it was greater than the coastal erosion setback estimated by Leighton (2008b) is, therefore, appropriate. An addition of 20 feet to the setback assessed through slope stability analyses is not warranted and our geotechnical setback is valid.

Comment 28: *Grading Planned to South of Established Geotechnical Setback Line:*

In addition to the aforementioned issues regarding the proper location of the established geotechnical setback line, the undersigned has significant concerns in regards to the grading currently planned for the southern portions of Lots 2, 3, and 5. Specifically, the site development/grading plans for these lots currently indicate that grading (i.e. the construction of engineered fill-slopes) is planned to the south of the established geotechnical setback line. This is not a code-conforming condition as those portions of the proposed grading which are located to the south of the geotechnical setback line will be located in an area that has been determined by Leighton to have a factor of safety which is not code-conforming. It follows that the graded fill-slopes will also possess a substandard slope stability factor of safety. This condition is not typically permitted and performed unless additional mitigation measures are implemented which provide the code-required factor of safety for the proposed grading. Moreover, the construction of the proposed fill-slopes to the south of the established geotechnical setback line would effectively be adding "weight" or driving force at the top of a slope which has experience (sic) large- scale instability (i.e. landsliding) in the past. Thus, the proposed grading of Lots 2, 3, and 5 will need to be re-located further northward or redesigned in a manner so that it is does not extend south of the established geotechnical setback line.

Leighton Response to 28: With respect to grading beyond the setback line, habitable structures at the site will have a factor of safety of at least 1.5 whether that is by virtue of their location with respect to the geotechnical setback line, or whether by the use of piles to achieve sufficient embedment into an area of the subsurface that has a factor of safety of at least 1.5 (see Leighton's response to DEIR Comment O3 Gaines & Stacey, LLP 14, herein.). For the small portions of fill slopes that will extend beyond the setback lines (i.e. extend into areas that have a factor of safety less than 1.5), such areas will be considered non-structural and construction of habitable structures will not be allowed. These slopes are not within landslide areas and, at most, increase existing grades by approximately 5 feet. As such, they will have no bearing on the stability of the site or the south-facing bluff.

The proposed construction with respect to the geotechnical setback line on each lot (Leighton, 2012d-h) has been approved by the City (2012c-g) for the purposes of Coastal Development Permits. Reevaluation of the locations of the proposed slopes with respect to the geotechnical setback lines is not necessary and need not be performed.

Comment 29: *As discussed above, it is LP's professional engineering geologic opinion that significant geologic/geotechnical concerns and code inconsistencies are currently associated with the currently proposed residential development of Lots 2, 3, and 5. It is recommended that these issues be brought to the attention of the City of Malibu and the project consultants to insure that the final site development plans are revised to a code-conforming condition.*

Leighton Response to 29: Given our responses to R8 – Kramer, Kari 5/20/2013 Comments 24, 25, 26, and 27, (and all responses contained in herein) we have demonstrated that there are no geologic or geotechnical concerns or code inconsistencies associated with any part of the proposed development. All Leighton's work has been code-conforming, such that the City of Malibu (2012a-g) has provided its approval of the project at the tentative tract stage (City of Malibu, 2012b) and for lot-specific Coastal Development Permits (City of Malibu, 2012c-g).

R10 – LAVINE, JOAN

Excerpt of geotechnical comment: *Geotechnical safety issues over slope stability: I have looked over the geotechnical report accompanying the developer's initial proposal. It shows three fault lines, FI, F2 and F3 running east-west at pages 23-24 of the Earth International Report, dated March 7, 2012 (complete report). I remember that a proposed GE or GM facility was cancelled due to these fault lines and potential for catastrophic failure in a (sic) earthquake. What I believe to be a continuation of those fault areas runs a few feet from the surface and travels eastward to and under the area at PCH and Las Flores Canyon about four miles to the east of the subject site. Between 10 and 15 years ago, catastrophic slope failure of a Las Flores bluff onto PCH resulted in the collapse of at least two homes on the east side of the La Flores Canyon, even though at least one home had deep caissons designed by a prominent structural engineer and installed down into what was considered solid, unfractured bedrock.*

Leighton Response: Since the General Motors project was cancelled, Earth Consultants International (2000; 2001a, b; 2002a-c) has assessed the site, including Faults F1, F2 and F3, and demonstrated that active faulting does not exist at the site. As a result of their work, the State of California removed their designation of an Alquist-Priolo Earthquake Fault Zone from the area which included the Crummer site. As a result, Earth Consultants International has concluded that the potential for onsite ground rupture due to the presence of active faulting is low.

R13 – RUGGLES, JOANNA 5/20/2013

Comments 1, 2, 3 and 4: Please include these comments in the Draft EIR on the Crummer Project property.

Attached are the Warshall Landslide map of the Crummer property and the Hannon Geotechnical Hazards map of the Crummer property.

I was a member of the Malibu General Plan Task Force when the attached studies were prepared. These were used in drafting the Land Use Element of the General Plan and selecting the appropriate Land Use for each parcel in the City of Malibu. As you can see from the attached maps of the Crummer parcel, the entire Bluffs Park area was deemed TOO HAZARDOUS for any Land Use designation other than Open Space, because the slopes of Bluffs Park were shown to be all old

LANDSLIDE, and the area contained traces of both the Puerco Canyon Fault and perhaps the Malibu Coast Fault, as well. Consequently, the entire Bluffs Parks area was designated Open Space in the Malibu General Plan adopted in 1995.

How a portion of Bluffs Park was "rezoned" to Single Family Residential is hard to imagine, as the geological hazards of that area are too dangerous for human habitation and would pose a severe threat to potential future "residents."

I am, therefore, adamantly opposed to ANY residential use of the Crummer property.

Leighton Response to 1, 2, 3 and 4: The DEIR comment mischaracterizes the designation of the site in the City's General Plan as Open Space. Exhibit LU-1C of the City's General Plan (City of Malibu, 1995) shows that the site was classified as private "Vacant Land". In addition, Figure H-2 identifies the eastern half of the site as a "Potential Housing Site". In addition, the zoning maps in the City's LCP designate the property as "PD" (Planned Development), which allows for a mix of residential and recreational uses.

Section 7.2.9 of the General Plan notes that, *"….. the vast majority of this land ….."*, (referring to all Vacant Land within the City and not solely the Crummer site), *"….. may be subject to some form of geologic or hydrologic hazard and will, therefore, require further study prior to approval of plans for new construction."*. As Leighton has noted in its prior reports (Leighton, 1989; 1993; 1994; and 2000), there are geologic and hydrologic hazards at the site. However, subsequent detailed exploration and analyses of the site by Leighton (2001; 2003; 2007; 2008a, b; 2009a, b; and 2012a-h) and by Psomas (2012a-e; 2013) have demonstrated that such hazards can be effectively mitigated and the site made suitable for structures intended for human occupancy. Such studies have been approved by the City of Malibu (2012a-g).

Closure

Should you have any questions concerning Leighton's geotechnical responses to the DEIR comments, please contact the undersigned at your convenience. We appreciate this opportunity to be of service.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.



Gareth I. Mills, PG, CEG 2034
Managing Director / Associate Principal Geologist



Carl C. Kim, GE 2620
Senior Principal Engineer

GIM/CCK/lr

Attachments: References

Distribution: (4) Addressee (+ 1 CD containing Adobe PDF and MS Word versions)
(1) Earth Forensics, Inc., Attention: Mr. Richard Layton (1, via e-mail)
(1) Ensitu Engineering, Inc., Attention: Ms. Meg Henry (1, via e-mail)
(1) Psomas, Attention: Mr. Andrew Nickerson (1, via e-mail)
(1) Mr. Lawrence Young (1, via e-mail)

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City of Malibu, 2012d, Geotechnical Review Sheet, 24120 Pacific Coast Highway, Lot 2, Review Log # 2928-2, Planning # CDP 07-146, dated July 16, 2012.

City of Malibu, 2012e, Geotechnical Review Sheet, 24134 Pacific Coast Highway, Lot 3, Review Log # 2928-3, Planning # CDP 07-147, dated July 16, 2012.

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COUNTY OF LOS ANGELES

Department of
Agricultural Commissioner/
Weights and Measures

12300 Lower Azusa Road
Arcadia, California 91006-5872
http://acwm.lacounty.gov

Kurt E. Floren
Agricultural Commissioner
Director of Weights and Measures

Richard K. Iizuka
Chief Deputy

4458 018 019
PCH PROJECT OWNER LLC
PAUL HASTINGS JANOFSKY WALKER LP
515 S FLOWER ST 25TH FL
LOS ANGELES CA 90071

Annual Weed Abatement Notice

Dear Property Owner:

You are the recorded owner of a parcel of land, identified as Assessor's Identification Number (AIN):

ASSESSOR'S IDENTIFICATION NUMBER			ZONE
MAPBOOK	PAGE	PARCEL	
4458	018	019	01

The following is a legal notice regarding hazardous conditions that are or could be on the parcel. The other side of this letter contains a much more detailed explanation of your responsibility as a property owner and how to get more information.

NOTICE TO DESTROY WEEDS, REMOVE BRUSH, RUBBISH AND REFUSE

NOTICE IS HEREBY GIVEN THAT ON JANUARY 15, 2013, THE BOARD OF SUPERVISORS OF THE COUNTY OF LOS ANGELES

passed or will pass a resolution declaring noxious or dangerous vegetation* or rubbish and refuse were growing or occurring upon or in front of property on certain streets in said city or unincorporated area of the County of Los Angeles, more particularly described in the resolution, and that they constitute a public nuisance which must be abated by the removal of said noxious or dangerous vegetation, rubbish and refuse. The resolution further declares that, if not abated, the vegetation and/or rubbish and refuse may be removed and the nuisance abated by County authorities in which case the cost of removal shall be assessed upon the lots or land from or in front of which the noxious or dangerous vegetation, rubbish and refuse are removed. Such cost will constitute a special assessment against such lots or lands. Reference is hereby made to said resolution for further particulars. In addition, the Board of Supervisors of the County of Los Angeles authorized and directed the Agricultural Commissioner to recover its costs of details. All property owners having any objections to the proposed removal of noxious or dangerous vegetation, rubbish and refuse and the recovery of inspection costs, are hereby notified that they may attend a hearing at the following location(s):

WEED ABATEMENT REFEREE HEARINGS

(1) **Arcadia**
Wednesday, February 20, 2013, from 9:30 AM until noon at 12300 Lower Azusa Road, Arcadia, CA 91006 or

(2) **Antelope Valley**
Thursday, February 21, 2013, from 9:30 AM until noon at the Los Angeles County Administrative Bldg. 335 East Ave. K-10, Lancaster, CA 93535

A property owner may attend a public hearing before the Board of Supervisors on March 26, 2013, at 9:30 am.

You are not required to go to the public hearing(s). See reverse of this notice for more information regarding the public hearings.

**Including weeds, brush, tumbleweeds, sagebrush or vegetation that is not pruned or is otherwise neglected so as to attain such large growth as to become, when dry, a fire menace to adjacent improved property.*

This Notice Dated: February 1, 2013 Kurt E. Floren, Agricultural Commissioner

Protecting Consumers and the Environment Since 1881
To Enrich Lives Through Effective and Caring Service

THE DEPARTMENT

We are the Los Angeles County, Department of Agricultural Commissioner/Weights and Measures. One of our missions is to help protect the lives and property of Los Angeles County residents through a Hazard Abatement Program (Program) conducted pursuant to the California Health and Safety Code sections 13879 and 14875-14922*

ABOUT THIS NOTICE

You received this notice because you were identified as the owner of the parcel referenced by the AIN number on the front of this document. Your name and address were obtained as they appeared on the last equalized tax assessment roll.

Your parcel (property) was included in the Program for one of the following reasons:

- ✓ Weeds, brush, neglected vegetation or accumulated trash are, or could grow to be, close enough to a house, or other structure, to pose a fire hazard to the house.
- ✓ (Antelope Valley only) Large amounts of tumbleweeds are, or may be, on the property which can blow off and spread, cause traffic accidents on the highway, damage agricultural crops or build up along fences, homes, etc.**

WHAT ARE YOUR RESPONSIBILITIES

For your property

You are expected to maintain your property hazard free. Depending on the area, dry weeds, brush, or neglected vegetation within **100 feet up to 200 feet** from a home or other structure, or 10 feet of a road, are considered a hazard. Please contact us if you are not sure how much you are expected to clear or if you have any questions. If your vacant parcel is in the Antelope Valley and is not within 100 feet of a home or other structure, it has been included in the Program because of the potential for tumbleweeds.**

The Hearings

The front of this notice has dates, locations and times for public hearings. They are provided to give property owners the chance to discuss the Program and bring up any concerns directly with Program staff.

YOU ARE NOT REQUIRED TO GO TO THE PUBLIC HEARING(S), however the **Weed Abatement Referee Hearings** may be good opportunities for you to:

- Find out exactly where your vacant property is located
- Learn why your property was included in the Program
- Provide us with information to help us determine if your property should be removed from the Program.

Change of Ownership

If you are no longer the owner of the property identified in this notice, please notify the L.A. County Assessor's Office, Ownership Services, at 1(888) 807-2111 (Toll Free), (213) 974-3211, or their website http://assessor.lacounty.gov immediately. If you sell or have sold the property, failure to disclose this legal notice to the new owner may make you liable for all hazard abatement charges assessed to the property.

Native Trees

In many areas of the County, certain native trees like oaks, walnuts and sycamores may be protected by County or City ordinances. Please contact our office prior to cutting or pruning any of these.

HAZARD ABATEMENT (CLEARANCE) TIMELINE

IMPORTANT! Don't clear your property too early. Your property may not need to be cleared at the time of receiving this notice. April 1, 2013, is the earliest the County will begin clearance operations. It could be much later in your area. The process of County inspections and abatement can take up to several months, so if you are planning to maintain your own property, let us know by using the enclosed Response Card or online at http://acwm.lacounty.gov no later than **March 15, 2013.** You will then be sent a clearance deadline specific to your area. For more information visit our website or call our office.

Regrowth of vegetation due to late rainfall may result in the need for more than one clearance during the year.

After **April 1, 2013**, the County will begin systematically inspecting parcels and, if hazardous weeds, brush or trash are present, the County will abate the hazard(s).** The cost of the abatement will be assessed to the parcel appearing as a separate item (LA CO HAZ ABATE) on the annual tax bill.

INSPECTION FEE

The Board of Supervisors has authorized an Inspection Fee of $39.81 which will be assessed on all affected properties whether or not they are cleared by the property owners.

HOW TO CONTACT US

You may communicate with us using the enclosed Response Card, online at http://acwm.lacounty.gov or by telephone at (626) 575-5484.

* In the following cities, the Hazard Abatement Program is conducted pursuant to the California Government Code, sections 39560-39588: Arcadia, Commerce, Glendale, La Verne, Montebello, Monterey Park, Palos Verdes Estates, Santa Fe Springs, and South Pasadena.

SPECIAL INFORMATION REGARDING TUMBLEWEEDS: Because of environmental factors, systematic inspections and abatement of current season's growth of tumbleweeds on parcels in the Antelope Valley will not begin until **October 1, 2013.

Telecommunication for the hearing impaired is available at: (626) 575-5520.
Para información en español, llame al (626) 575-5462.

5.11 TRANSPORTATION AND TRAFFIC

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Crummer Site Subdivision to result in transportation and traffic impacts in the City of Malibu. The analysis in this section is based in part on the following technical report:

- Arch Beach Consulting. 2013, September. Revised Traffic Impact Analysis Crummer Site Subdivision City Of Malibu, CA.

A complete copy of the study is included in Appendix G of the FEIR.

5.11.1 Environmental Setting

Study Area Boundary

Figure 5.11-1, *Project Location and Study Area Intersections* illustrates the project site location, study area, and intersection traffic control and geometrics. Local access to the project site is provided by Malibu Canyon Road/Winter Mesa Drive and PCH. These intersections are shown in Figure 5.11-1, *Project Location and Study Area Intersections.*

- Malibu Canyon Road/Pacific Coast Highway – State Route 1 (PCH – SR 1)
- Malibu Canyon Road/Seaver Drive – Civic Center Way

The signalized intersection of PCH and Malibu Canyon Road/Winter Mesa Road is operated and maintained by Caltrans. The signalized intersection of Malibu Canyon Road and Civic Center Way/Seaver Drive is operated and maintained by the City of Malibu.

Methodology

Intersections

The signalized study area intersections were analyzed using the Intersection Capacity Utilization (ICU) methodology for weekday and Saturday peak hour levels of service (LOS). The ICU method determines the volume-to-capacity (V/C) ratio on a critical lane basis and determines LOS associated with each critical V/C ratio at the signalized intersection. The results of the analysis must be compared to the City's significance criteria as established in the Traffic Impact Analysis (TIA) Guidelines

Roadway Segments

The study area roadway segments were analyzed using the City's TIA Guidelines and Highway Capacity Manual (HCM) methodology as prescribed in the City's TIA Guidelines. The Highway Capacity Software (HCS) Multilane Highways module was used to calculate LOS values for each study area roadway segment. HCS calculates the density of the subject roadway segment in terms of passenger cars per lane per mile (pcplpm) and assigns a specific level of service (LOS A–F).

The degree of congestion at an intersection is described by the level of service, which ranges from LOS A to LOS F, with LOS A representing free-flow conditions with little delay and LOS F representing over-saturated traffic flow throughout the peak hour. A complete description of the meaning of level of service can be found in the Highway Research Board Special Report 209, Highway Capacity Manual (HCM 2000). Brief descriptions of the six levels of service for signalized intersections are shown in Table 5.11-1, *Level of Service Definitions* and Table 5.11-2, *Level of Service Descriptions* provides detailed descriptions of each level of service

Table 5.11-1
Level of Service Definitions

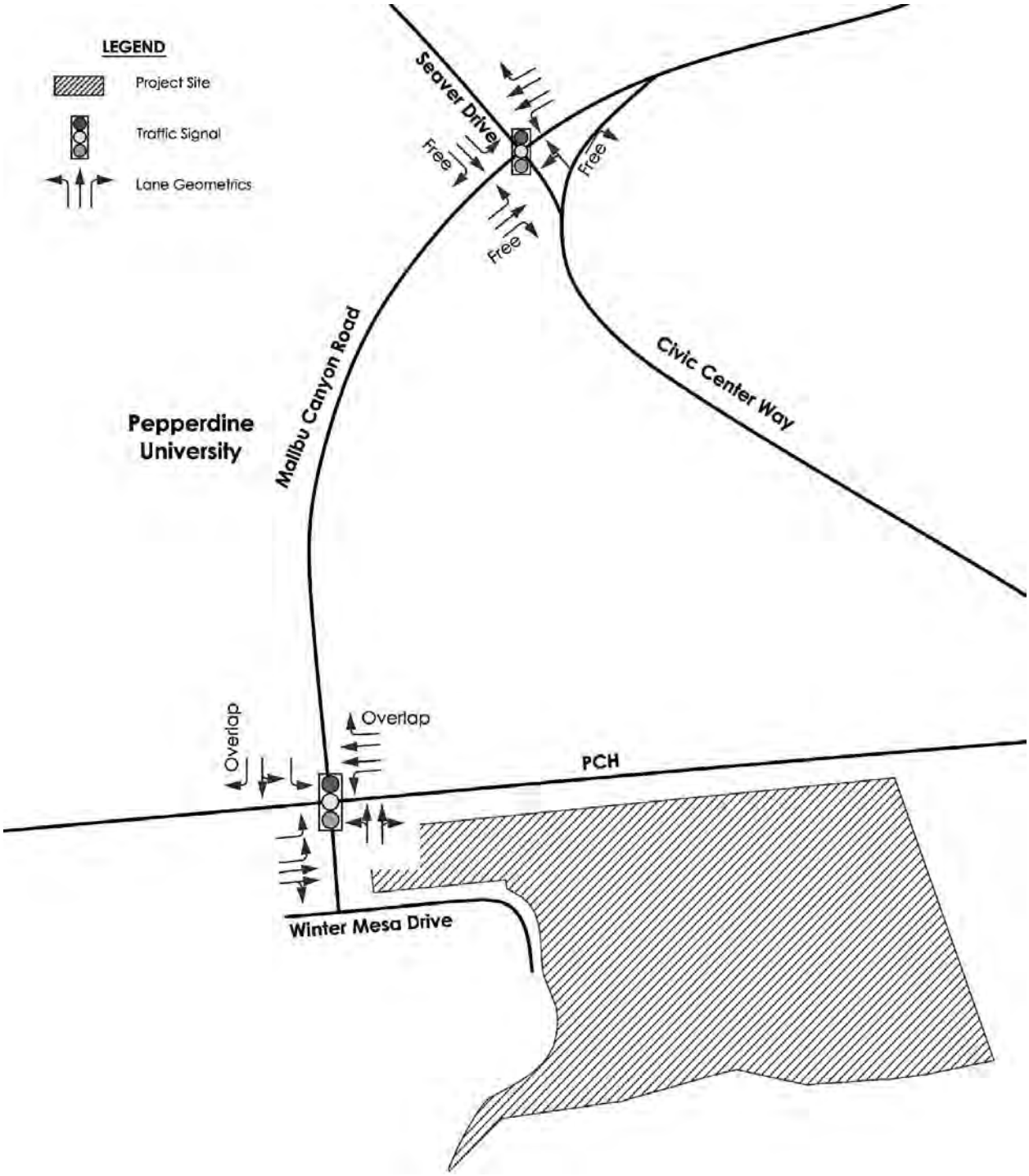
Level of Service	V/C Ratio or ICU (signalized)	Control Delay in Seconds (unsignalized)
A	0.00 – 0.60	0.0–10.0 seconds
B	0.61 – 0.70	10.1–15.0 seconds
C	0.71 – 0.80	15.1–25.0 seconds
D	0.81 – 0.90	25.1–35.0 seconds
E	0.91 – 1.00	35.1–50.0 seconds
F	1.01 or greater	50.1 seconds or greater

Table 5.11-2
Level of Service Descriptions

LOS	Description
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

Project Location and Study Area Intersections



NOT TO SCALE

Source: Arch Beach Consulting 2012

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Regulatory Setting

The roadway network in the study area that would serve as an access system for the project site is within the jurisdiction of three public agencies: Caltrans, Los Angeles County, and the City of Malibu. These agencies are responsible for the operation and maintenance of the study area roadways. The implementation of any proposed mitigation measures regarding the roadway network would, therefore, be subject to approval by the responsible public agency. With regard to the roadways that were addressed in this analysis, PCH is a Caltrans facility, Malibu Canyon Road is partially a City of Malibu facility and partially a Los Angeles County facility, and Civic Center Way and Winter Mesa Drive are City of Malibu facilities. Any modifications to the operation of a roadway by the project applicant and/or a contractor would require the issuance of an encroachment permit by the responsible agency prior to the proposed action.

City of Malibu Standards

Development projects that have the potential to substantially affect the City of Malibu's current transportation system may be required to prepare a TIA. The goal of TIA is to identify the roadway network improvements that would be required to ensure that the road network will operate efficiently upon completion of the project. The City will consider the requirement of a TIA on a case-by-case basis as development projects are brought forward for consideration. The City TIA guidelines streamline the approval process and provide a standardized framework to follow when submitting studies for review. The City TIA guidelines include specific thresholds for project related increases in the V/C of study intersections and roadways. Table 5.11-3, *City of Malibu Significance Criteria*, illustrates the V/C ratio increases that are considered significant impacts. According to the City, an intersection would be significantly impacted by a project if the project would result in an increase in the V/C ratio of 0.02 or greater at an intersection that is projected to operate at LOS F, or 0.01 at an intersection operating at LOS E or F.

Table 5.11-3
City of Malibu Significance Criteria

Level of Service (LOS)	Preproject V/C	Project Related V/C increase
C	> 0.70–0.80	equal to or greater than 0.040
D	> 0.80–0.90	equal to or greater than 0.020
E, F	> 0.90 or more	equal to or greater than 0.010

Congestion Management Program Standards

The Los Angeles County Metropolitan Transportation Authority is responsible for implementing the CMP for Los Angeles County. State statute requires that a congestion management program be developed, adopted, and updated biennially for every county that includes an urbanized area, and shall include every city and the county government within that county. The CMP sets LOS standards for specific roadways, referred to as CMP-designated roadways.

According to the Guidelines for CMP Transportation Impact Analysis, which is Appendix B of the Los Angeles County CMP, a traffic analysis shall address all CMP arterial monitoring intersections where the proposed project would add 50 or more trips during the weekday peak hour and any mainline freeway monitoring locations where the project would add 150 or more trips in either direction during the peak hour. The only CMP arterial roadway in the vicinity of the project site is PCH, which runs along the north edge of the project site.

Because the intersection of Malibu Canyon Road/PCH is a CMP arterial monitoring location, this intersection was evaluated in the traffic impact analysis. According to the CMP criteria for determining a significant impact, a CMP

intersection would be significantly impacted by a project if the project would result in an increase in the V/C ratio of 0.02 or greater at an intersection that is projected to operate at LOS F. Other CMP intersections in the project vicinity are PCH at Decker Canyon Road, Kanan Dune Road, and Las Flores Canyon Road. However, the results of the CMP analysis must be compared to the City's significance criteria as established in the TIA Guidelines. According to the City, an intersection would be significantly impacted by a 0.01 increase at an intersection operating at LOS E or F.

Existing Traffic Conditions

Roadway Network

The roadways that provide access to the project vicinity include PCH, Malibu Canyon Road, Civic Center Way, and Winter Mesa Road. PCH is a four-lane, east–west roadway that abuts the north side of the project site. It is designated a Modified Major Arterial in the Circulation Element of the City of Malibu General Plan and an Eligible Scenic Highway by the California Department of Transportation (Caltrans).

Malibu Canyon Road is a north–south roadway that intersects with PCH at the northwest corner of the project site. It has four travel lanes between PCH and Civic Center Way and two travel lanes north of Civic Center Way. Malibu Canyon Road is classified a Major Arterial in the Circulation Element.

Civic Center Way is a two-lane, east–west roadway that intersects with Malibu Canyon Road approximately one-quarter mile north of the project site. The continuation of Civic Center Way west of Malibu Canyon Road on the Pepperdine University campus is called Seaver Drive. Civic Center Way is classified a Collector in the Circulation Element.

Winter Mesa Road is a two-lane roadway that is the continuation of Malibu Canyon Road south of PCH. It is a north–south roadway immediately south of PCH, then curves to the east and runs along the south edge of the project site. Access to the project site would be provided from Winter Mesa Road.

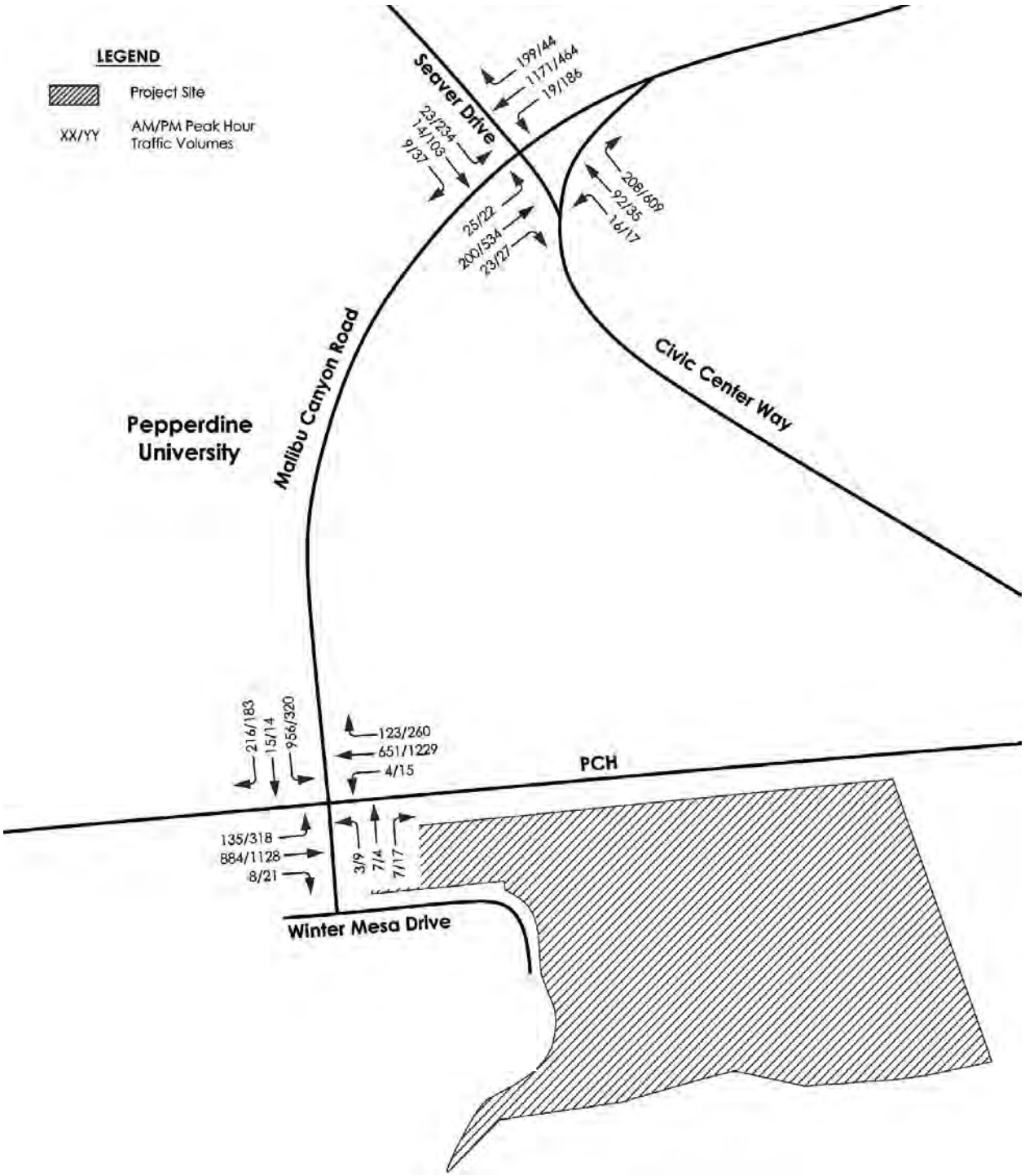
The existing lane configuration and roadway characteristics on the study area roadways and at the intersections are shown on Figure 5.11-1.

Existing Baseline Traffic Volumes

Existing weekday peak hour traffic volumes were collected by the City on July 12, 2012, at both study area intersections. Saturday peak hour counts for both intersections were also collected by the City on July 14, 2012. The weekday traffic counts were taken between the hours of 7:00 and 9:00 a.m., and between 4:00 and 6:00 p.m. The weekend traffic counts were taken between the hours of 12:00 and 3:00 p.m. on a Saturday. The highest one-hour interval of traffic flow was then identified for each of the time periods to quantify the peak hour traffic volumes.

Figure 5.11-2 shows the existing weekday a.m. and p.m. peak hour traffic volumes at the study intersections, while Figure 5.11-3 shows the existing Saturday midday peak hour volumes. The raw traffic volume count sheets are provided in Traffic Study Appendix A (Appendix P of this FEIR).

Existing Weekday Peak Hour Traffic

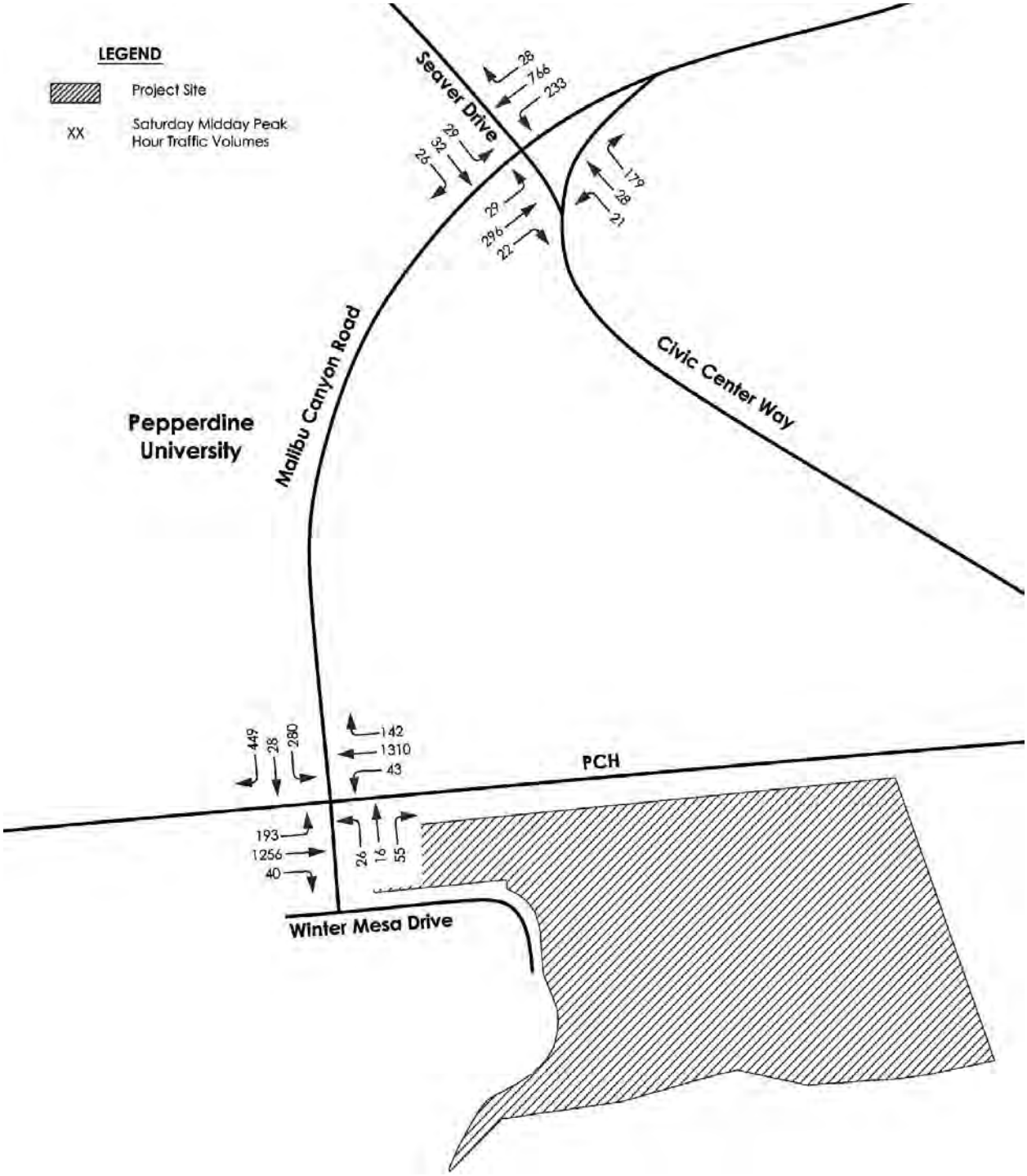


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Existing Saturday Peak Hour Traffic



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Source: Arch Beach Consulting 2012

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Intersection Levels of Service

To quantify the existing baseline traffic conditions, the two study area intersections were analyzed to determine their operating conditions during the weekday morning and afternoon peak hours and the weekend midday peak hour. Based on the peak hour traffic volumes, the turning movement counts, and the existing number of lanes at each intersection, V/C ratios and LOS have been determined at each intersection, as summarized in Table 5.11-4. The LOS calculation sheets are provided in Traffic Study Appendix B (Appendix P of this DEIR)

Table 5.11-4
Existing Intersection Levels of Service

Intersection	Control	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		V/C	LOS	V/C	LOS	V/C	LOS
1. Malibu Canyon Road/PCH	signal	0.785	C	0.738	C	0.824	D
2. Malibu Canyon Rd/Civic Center Way	signal	0.563	A	0.729	C	0.481	A

Note: LOS determined using ICU method.

As shown on Table 5.11-4, the two study area intersections currently operate at levels of service A, B, C, or D during the morning, afternoon, and weekend peak hours.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-5 presents the results of the existing roadway segment LOS analysis, while the LOS calculation sheets are provided in Traffic Study Appendix C.

Table 5.11-5
Existing Roadway Segment Level of Service

Intersection	# Lanes and Median	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS
1. PCH, John Tyler Dr to Malibu Cyn Rd							
- eastbound	2D	9.6	A	13.7	B	13.9	B
- westbound	2D	8.1	A	13.2	B	16.6	B
2. PCH, Malibu Cyn Rd to Webb Way							
- eastbound	2D	17.3	B	13.7	B	14.9	B
- westbound	2D	7.5	A	14.5	B	14.4	B
3. Malibu Cyn Rd, PCH to Civic Center							
- northbound	2U	3.1	A	6.7	A	4.0	A
- southbound	2U	13.7	B	6.0	A	8.7	A

Notes: LOS determined using HCM Multilane Highways Operations method.
# lanes and median: 2D = two lanes divided with median; 2U = two lanes undivided
pcplpm = Roadway segment density expressed in passenger cars per lane per mile.

5.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project could:

T-1 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).

T-2 Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

T-3 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.

T-4 Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

T-5 Result in inadequate emergency access.

T-6 Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

According to the City of Malibu, a project could also have a significant effect on the environment if the project could:

T-7 Result in inadequate parking capacity.

The 2012 Initial Study, included as Appendix C, substantiates that impacts associated with the following thresholds would be less than significant:

- Thresholds T-3, T-5, and T-6

These impacts will not be addressed in the following analysis.

5.11.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the 2012 Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

IMPACT 5.11-1:	The proposed project with dedicated Lot 7 developed with a baseball field option would result in the most substantial increase in traffic in Opening Year 2017 and Future Year 2030. [Threshold T-1]

Impact Analysis:

The project includes the development of 5 single –family homes and the dedication of Lot 7 to the City of Malibu to expand the portion of Malibu Bluffs Park owned by the City by 1.74 acres to the east and northeast. The City-owned portion of Malibu Bluffs Park currently has two baseball fields, a multipurpose field, the Michael Landon Center, picnic

benches, viewing areas, and an 81-space parking lot. The proposed project will dedicate Lot 7 to the City; however, no physical development related to the recreational use of Lot 7 is proposed at this time. The recreational area has yet to be designed and would not be developed as part of this project.

Although no recreational improvements would be permitted as part of the applicant's current proposal, the land dedication is intended to expand Malibu Bluffs Park. Furthermore, the LCPA and corollary zoning text amendment being requested—including language that specifies the type, density, and intensity of development permitted in the PD zoning designation—applies to all seven lots.

Once Lot 7 is dedicated to the City, active recreation areas, passive recreation areas, and an expanded parking lot are all foreseeable future uses. Based on the community's needs, the City believes that Lot 7 may be developed as a baseball field (expansion of existing organized sport uses) or a skate park (the City's Skate Park Committee is working with a skate park design firm).

As a result, the DEIR analyzes the following possible development scenarios: :

1. Five single-family detached homes (proposed project).
2. Five single-family detached homes and use of Lot 7 for a future baseball field.
3. Five single-family detached homes and use of Lot 7 for a future skate park.

Future recreational uses on Lot 7 such as a baseball field or skate park would be available for use by the public. Access to the residential units would be provided by a private street that would intersect with Winter Mesa Drive, which is a continuation of Malibu Canyon Road south of PCH. This private street would be equipped with a security gate and kiosk. Future access to Lot 7 (if developed with baseball field or skate park) would be provided from Winter Mesa Drive. All three project options are analyzed in this DEIR section.

Proposed Project –5 Single –Family Detached Homes

Project Trip Generation

For the purpose of disclosing the approximate number of trips generated by the proposed project based on land use, trip rates contained in the Institute of Transportation Engineers' (ITE) *Trip Generation* (8th ed.) were used to calculate the potential trip generation of the proposed project. More specifically, trip generation estimates for the proposed single-family homes were generated using weekday daily a.m. and p.m. peak hour data along with Saturday daily and midday peak hour data. Table 5.11-6 shows the potential trip generation of the proposed single-family homes option.

Proposed Project with Lot 7 Use – Baseball Field

Project Trip Generation

There are no ITE trip rates for a baseball field recreational land use. Therefore, the trip generation estimates for the baseball field were determined using an "operational trip generation analysis" based on the assumptions outlined below. The patronage estimates for the baseball field were obtained from the City (see Table 5.11-6).

- Two games per day on weekdays, and ten games per day on Saturdays.
- Up to 14 players per team at a Little League game.
- A game would generate an average of one vehicle per player.
- Two teams at 14 players per team would generate 28 vehicle trips (one-way).

- For weekdays and Saturdays, two additional trips (one-way) were assumed for officials and miscellaneous spectators.
- No games or practice during the weekday morning peak hour.
- For weekends only, 16 additional trips (one-way) were assumed for 32 additional spectators with a 2.0 average vehicle occupancy.
- Total weekday trip generation of 60 trips (30 inbound and 30 outbound per game).
- Total Saturday trip generation of 92 trips (46 inbound and 46 outbound per game).

Proposed Project with Lot 7 Use–Skate Park

Project Trip Generation

There are no ITE trip rates for a skate park recreational land use. Therefore, the trip generation estimates for the skate park were determined using an "operational trip generation analysis" based on the assumptions outlined below. The patronage estimates for the skate park were obtained from the City (see Table 5.11-6).

- 30 people per day on weekdays, 60 people per day on weekends.
- 10 people during the afternoon peak hour on weekdays, 20 people during the peak hour on weekends, and negligible usage during the weekday morning peak hour.
- One vehicle for every two participants.
- Five vehicles arriving, five vehicles departing during the weekday peak hours.
- 10 vehicles arriving, 10 vehicles departing during the weekend mid-day peak hour.

Table 5.11-6
Weekday Project Trip Generation

Land Use	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Rates								
Single-Family Detached (ITE 210)[1]	per DU	9.57	0.19	0.56	0.75	0.64	0.37	1.01
Baseball Field[2]	per game	60	0	0	0	15	15	30
Skate Park[2]	per park	30	0	0	0	5	5	10
Trip Generation								
Proposed Project Single-Family Detached Homes	5 DUs	48	1	3	4	3	2	5
TOTAL TRIP GENERATION		48	1	3	4	3	2	5
Proposed Project with Lot 7 Use	5 DUs	48	1	3	4	3	2	5
Single-Family Detached Homes and a Baseball Field	2 games	120	0	0	0	30	30	60
TOTAL TRIP GENERATION		168	1	3	4	33	32	65
Proposed Project with Lot 7 Use	5 DUs	48	1	3	4	3	2	5

	1 park	30	0	0	0	5	5	10
TOTAL TRIP GENERATION		78	1	3	4	8	7	15

Note: DU = dwelling unit
[1] Trip rates for single-family detached homes are from *Trip Generation* (8th ed.), Institute of Transportation Engineers, 2008.
[2] Trip generation for baseball field and skate park based on operational data provided by City of Malibu staff.

As shown in Table 5.11-6, the proposed project of five single-family homes is forecast to generate approximately 48 daily trips, with 4 AM peak hour trips (one inbound and three outbound), and 5 PM peak hour trips (three inbound and two outbound).

The proposed project of single-family homes with Lot 7 developed a baseball field in the future would potentially generate 168 daily trips, with 4 trips (1 inbound, 3 outbound) produced in the AM peak hour and 65 trips (33 inbound, 32 outbound) produced in the PM peak hour. The proposed project of single-family homes and Lot 7 developed as a skate park in the future may generate 78 daily trips, with 4 AM peak hour trips (one inbound, three outbound), and 15 PM peak hour trips (eight inbound, seven outbound).

According to Table 5.11-7, during Saturdays, the proposed project would generate approximately 50 daily trips, and five midday peak hour trips (3 inbound, 2 outbound).

The proposed project with future use of Lot 7 as a baseball field would potentially generate 970 daily trips, and 97 midday peak hour trips (49 inbound and 48 outbound). The proposed project with future use of Lot 7 as a skate park would generate approximately 110 daily trips, and 25 midday peak hour trips (13 inbound, 12 outbound).

Table 5.11-7
Saturday Project Trip Generation

Land Use	Size/Units	Daily	Midday Peak Hour		
			In	Out	Total
Trip Rates					
Single-Family Detached (ITE 210) [1]	per DU	10.08	0.49	0.44	0.93
Baseball Field [2]	per game	92	4.60	4.60	9.20
Skate Park[2]	per park	60	10	10	20
Trip Generation					
Proposed Project Single-Family Detached Homes	5 DUs	50	3	2	5
TOTAL TRIP GENERATION	5	50	3	2	5
Proposed Project with Lot 7 Use	5 DUs	50	3	2	5
Single-Family Detached Homes and a Baseball Field	10 games	920	46	46	92
TOTAL TRIP GENERATION		970	49	48	97
Proposed Project with Lot 7 Use	5 DUs	50	3	2	5
Single-Family Detached Homes and a Skate Park	per park	60	10	10	20
TOTAL TRIP GENERATION		110	13	12	25

Note: DU = dwelling unit
[1] Trip rates for single-family detached homes are from *Trip Generation* (8th ed.), Institute of Transportation Engineers, 2008.
[2] Trip generation for baseball field and skate park based on operational data provided by City of Malibu staff.

Trip Distribution and Assignment

Local trip distribution percentages for the proposed project were provided by the City's Traffic Engineer and were based on observed peak hour travel patterns in the study area. The trip distribution percentages at each intersection were applied to the proposed project's weekday and Saturday peak hour trip generation estimates to calculate the project trip assignment (i.e., turn movement volumes that the project would generate at each study area intersection). Figures 5.11-4 and 5.11-5 illustrate the weekday and Saturday, respectively, trip distribution and assignment for the single-family home design option. Figures 5.11-6 and 5.11-7 illustrate the weekday and Saturday trip distribution and assignment for the single-family home and baseball field design option, while figures 5.11-8 and 5.11-9 illustrate the weekday and Saturday trip distribution and assignment for the single-family home and skater park design option.

EXISTING PLUS PROJECT

Traffic Volumes

The proposed project, proposed project with Lot 7 as a baseball field, and proposed project with Lot 7 as a skate park trip assignments for the weekday and Saturday peak hours, noted in Figures 5.11-4,5.11-5, 5.11-6, 5.11-7, 5.11-8, and 5.11-9, respectively, were added to the Existing Baseline weekday and Saturday peak hour traffic volumes in Figures 5.11-2 and 5.11-3, respectively, which resulted in the Existing plus Project traffic volumes.

Levels of Service

Intersections

Table 5.11-8 presents the results of the Existing plus Project intersection LOS analysis.

Proposed Project—Single-Family Detached Homes

Based on the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections because the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Baseball Field

Based on the LOS analysis and significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Skate Park

Based on the LOS analysis and significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-9 presents the results of the Existing plus Project roadway segment LOS analysis.

Proposed Project – Single-Family Detached Homes

Based on the Existing plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Existing plus Project with Lot 7 Use – Baseball Field LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Skate Park

Based on the Existing plus Project with Lot 7 Use – Skate Park LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.



Table 5.11-8
Existing plus Project with Baseball Field Intersection Level of Service Summary

	Existing Baseline						Existing plus Project								
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		V/C Increase		
Intersection	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	Midday
Proposed Project -- Single-Family Detached Homes															
1. Malibu Cyn Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.739	C	0.825	D	+0.001	+0.001	+0.001
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.481	A	0.000	0.000	0.000
Proposed Project with Lot 7 Use – Single-Family Detached Homes and a Baseball Field															
1. Malibu Cyn Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.747	C	0.836	D	+0.001	+0.009	+0.012
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.731	C	0.484	A	0.000	+0.002	+0.003
Proposed Project with Lot 7 Use -- Single-Family Detached Homes and a Skate Park															
1. Malibu Cyn Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.740	C	0.827	D	+0.001	+0.002	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.483	A	0.000	0.000	+0.002

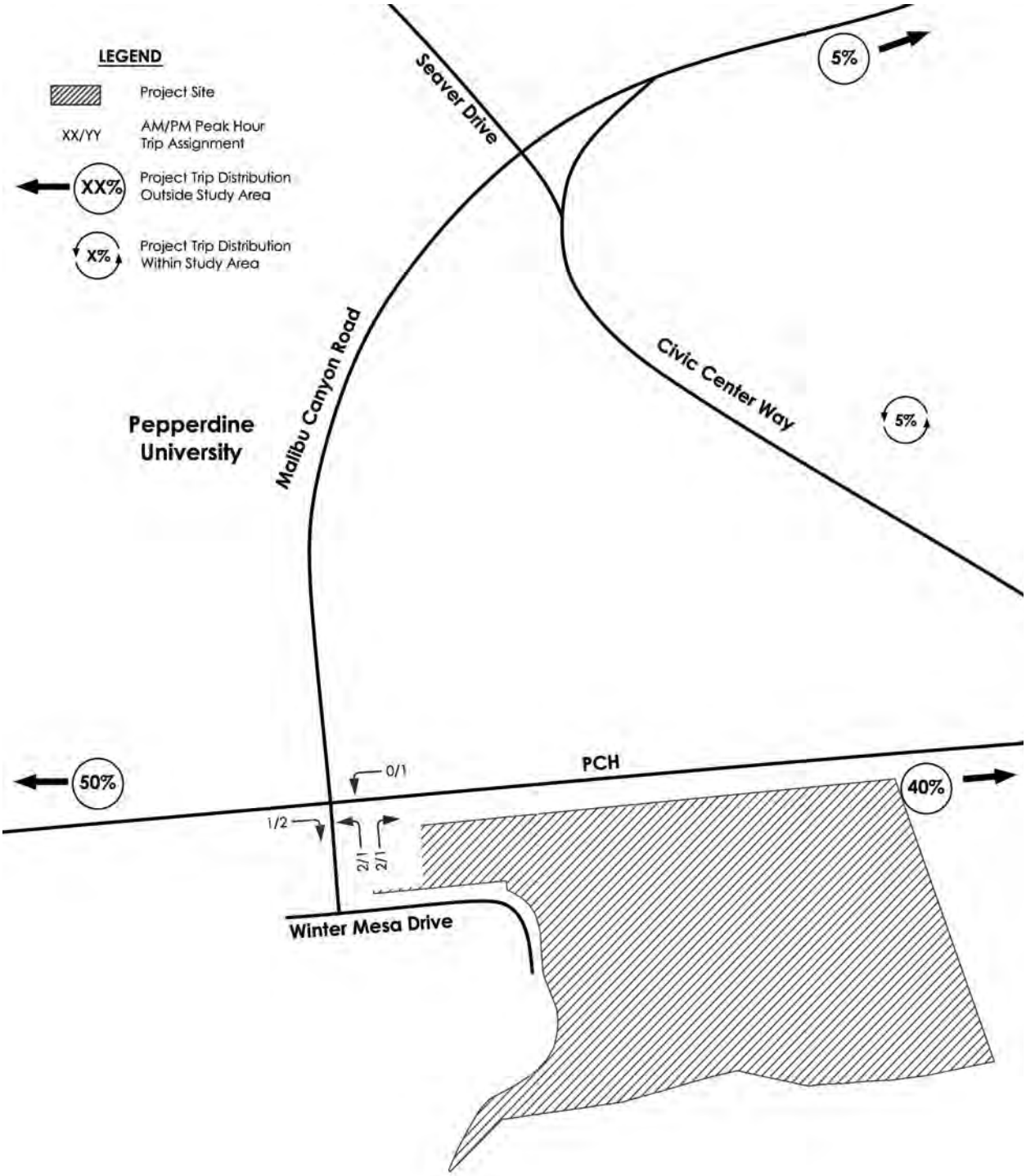
Table 5.11.9
Existing plus Project with Baseball Field Roadway Segment Level of Service Summary

	Existing Baseline						Existing plus Project								
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		Density Increase		
Intersection	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	AM	PM	Midday
Proposed Project – Single-Family Detached Homes															
1. PCH, John Tyler Dr to Malibu Cyn Rd															
- eastbound	9.6	A	13.7	B	13.9	B	9.6	A	13.7	B	13.9	B	0.0	0.0	0.0
- westbound	8.1	A	13.2	B	16.6	B	8.1	A	13.2	B	16.6	B	0.0	0.0	0.0
2. PCH, Malibu Cyn Rd to Webb Way															
- eastbound	17.3	B	13.7	B	14.9	B	17.3	B	13.8	B	15.1	B	0.0	+0.1	+0.2
- westbound	7.5	A	14.5	B	14.4	B	7.5	A	14.7	B	14.6	B	0.0	+0.2	+0.2

3. Malibu Cyn Rd, PCH to Civic Center														
- northbound	3.1	A	6.7	A	4.0	A	3.1	A	6.8	A	4.1	A	0.0	+0.1	+0.1
- southbound	13.7	B	6.0	A	8.7	A	13.7	B	6.0	A	8.8	A	0.0	0.0	+0.1
Proposed Project with Lot 7 Use – Single-Family Detached Homes and a Baseball Field														
1. PCH, John Tyler Dr to Malibu Cyn Rd														
- eastbound	9.6	A	13.7	B	13.9	B	9.6	A	13.8	B	14.1	B	0.0	+0.1	+0.2
- westbound	8.1	A	13.2	B	16.6	B	8.1	A	13.4	B	16.9	B	0.0	+0.2	+0.3
2. PCH, Malibu Cyn Rd to Webb Way														
- eastbound	17.3	B	13.7	B	14.9	B	17.3	B	13.8	B	15.1	B	0.0	+0.1	+0.2
- westbound	7.5	A	14.5	B	14.4	B	7.5	A	14.7	B	14.6	B	0.0	+0.2	+0.2
3. Malibu Cyn Rd, PCH to Civic Center														
- northbound	3.1	A	6.7	A	4.0	A	3.1	A	6.8	A	4.1	A	0.0	+0.1	+0.1
- southbound	13.7	B	6.0	A	8.7	A	13.7	B	6.0	A	8.8	A	0.0	0.0	+0.1
Proposed Project with Lot 7 Use – Single-Family Detached Homes and a Skate Park														
1. PCH, John Tyler Dr to Malibu Cyn Rd														
- eastbound	9.6	A	13.7	B	13.9	B	9.6	A	13.7	B	13.9	B	0.0	0.0	0.0
- westbound	8.1	A	13.2	B	16.6	B	8.1	A	13.3	B	16.7	B	0.0	+0.1	+0.1
2. PCH, Malibu Cyn Rd to Webb Way														
- eastbound	17.3	B	13.7	B	14.9	B	17.3	B	13.7	B	14.9	B	0.0	0.0	0.0
- westbound	7.5	A	14.5	B	14.4	B	7.5	A	14.6	B	14.5	B	0.0	+0.1	+0.1
3. Malibu Cyn Rd, PCH to Civic Center														
- northbound	3.1	A	6.7	A	4.0	A	3.1	A	6.7	A	4.1	A	0.0	0.0	+0.1
- southbound	13.7	B	6.0	A	8.7	A	13.7	B	6.0	A	8.8	A	0.0	0.0	+0.1

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Project Weekday Peak Hour Trips

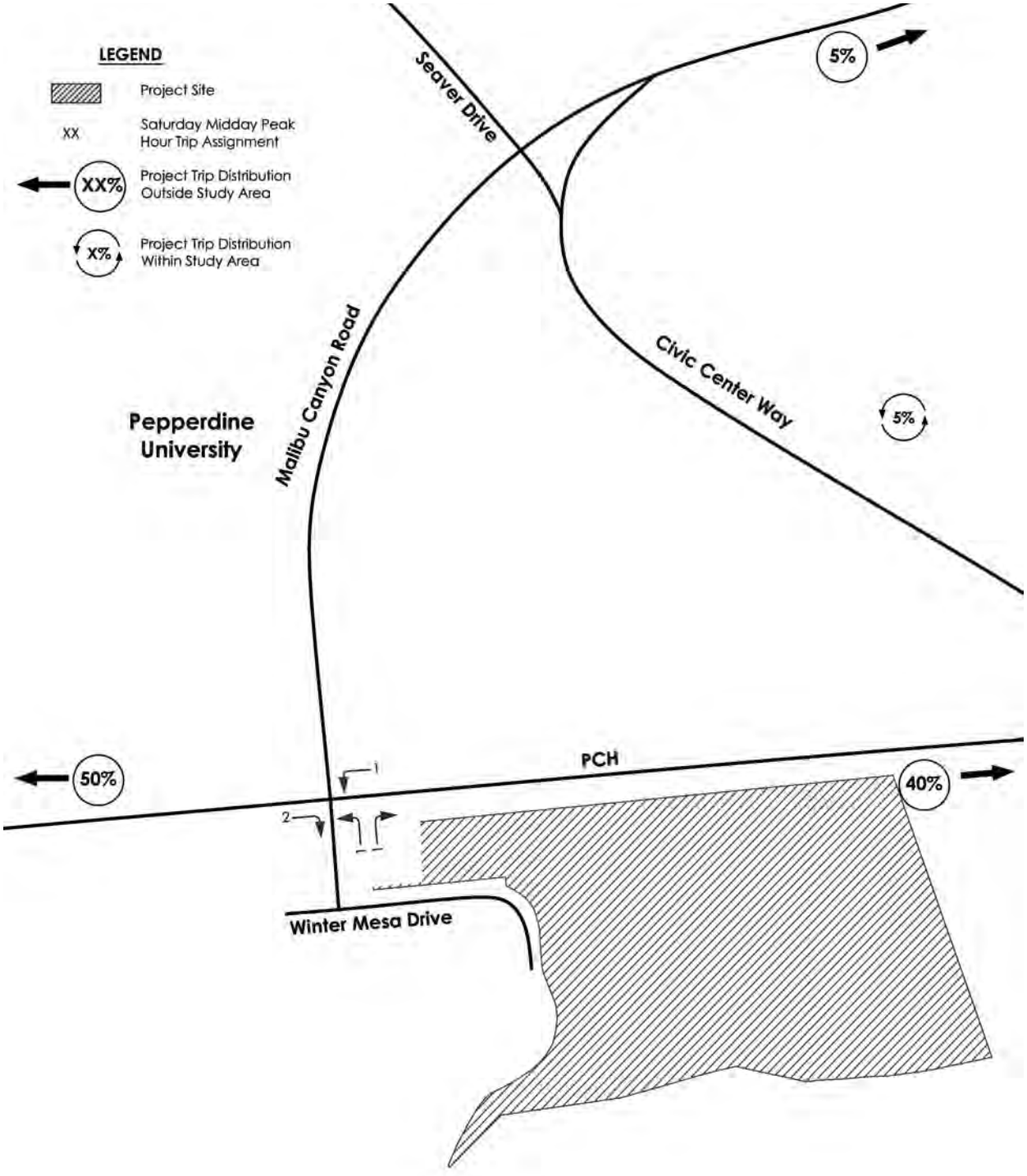


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Project Saturday Peak Hour Trips

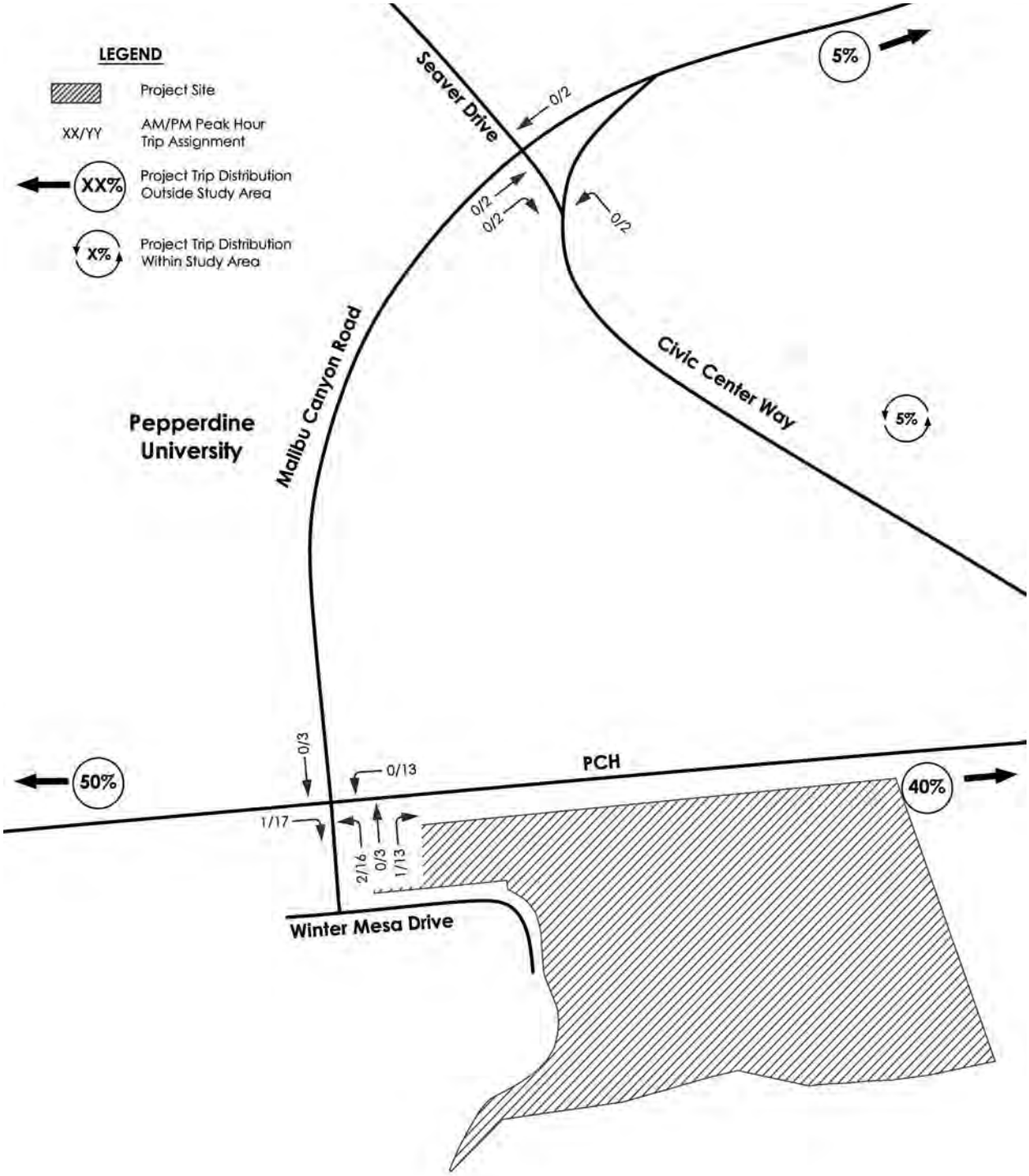


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Project with Lot 7 Use - Baseball Field, Weekday Peak Hour Traffic

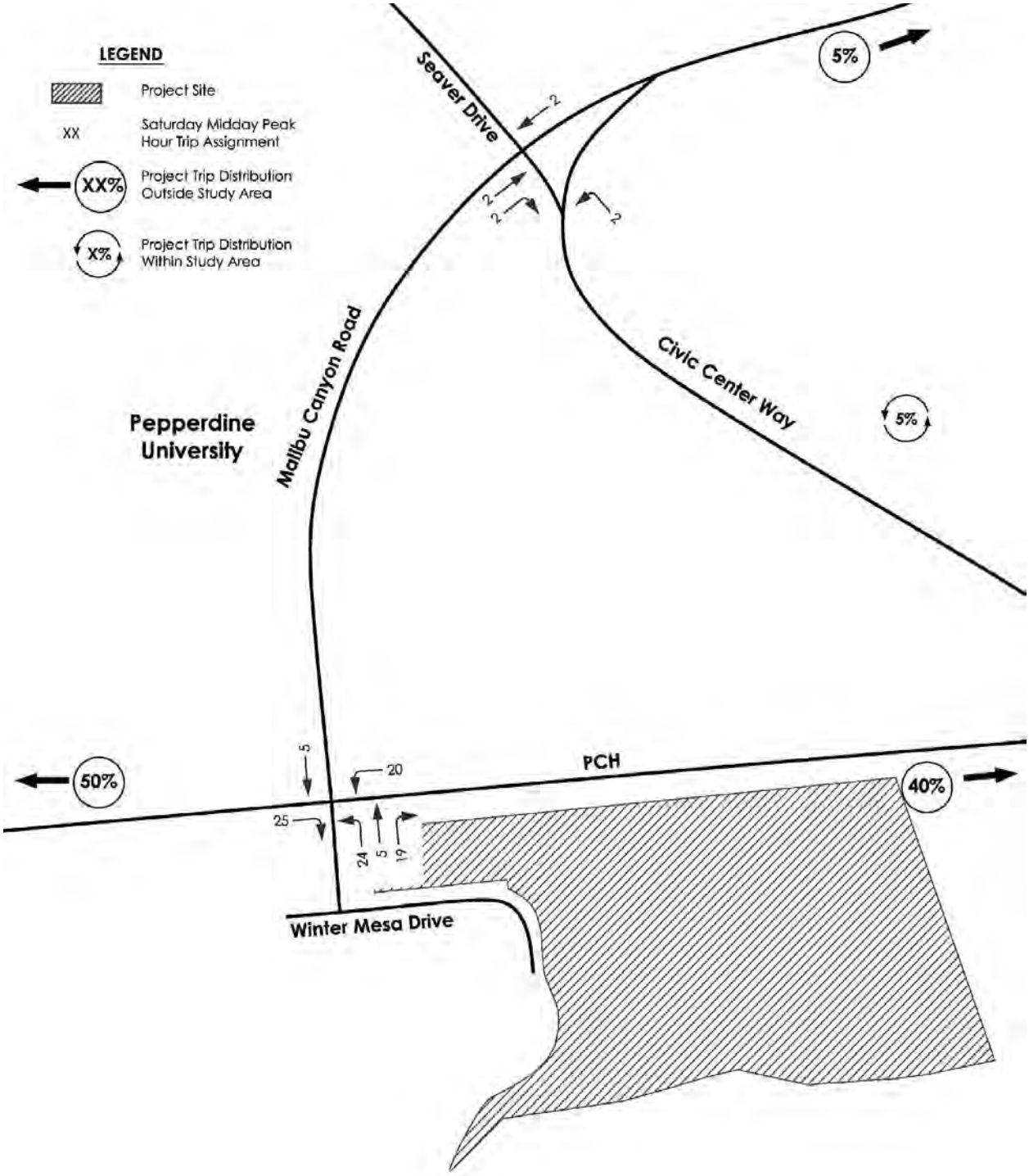


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Project with Lot 7 Use - Baseball Field, Saturday Peak Hour Traffic

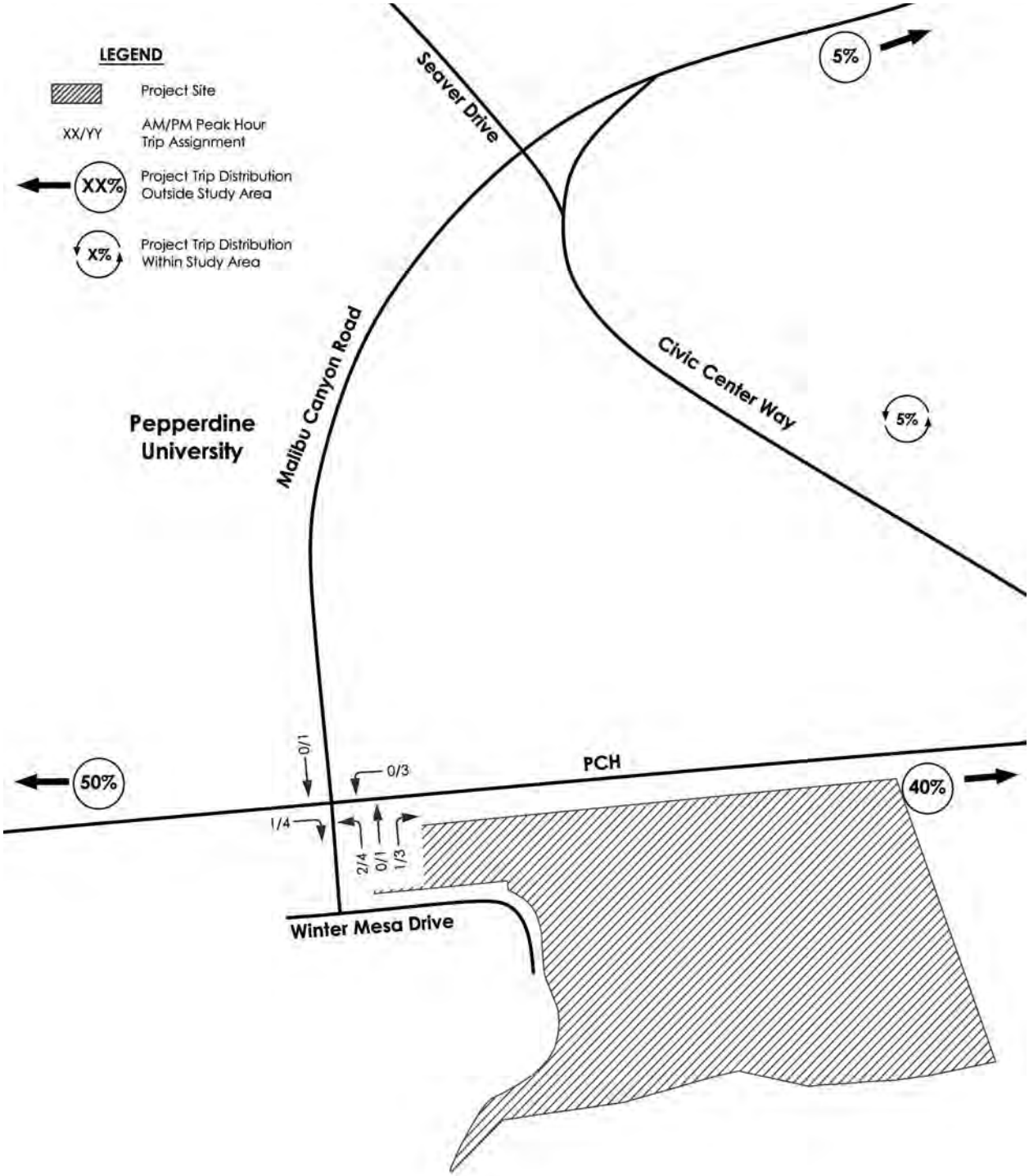


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Project with Lot 7 Use - Skate Park, Weekday Peak Hour Traffic

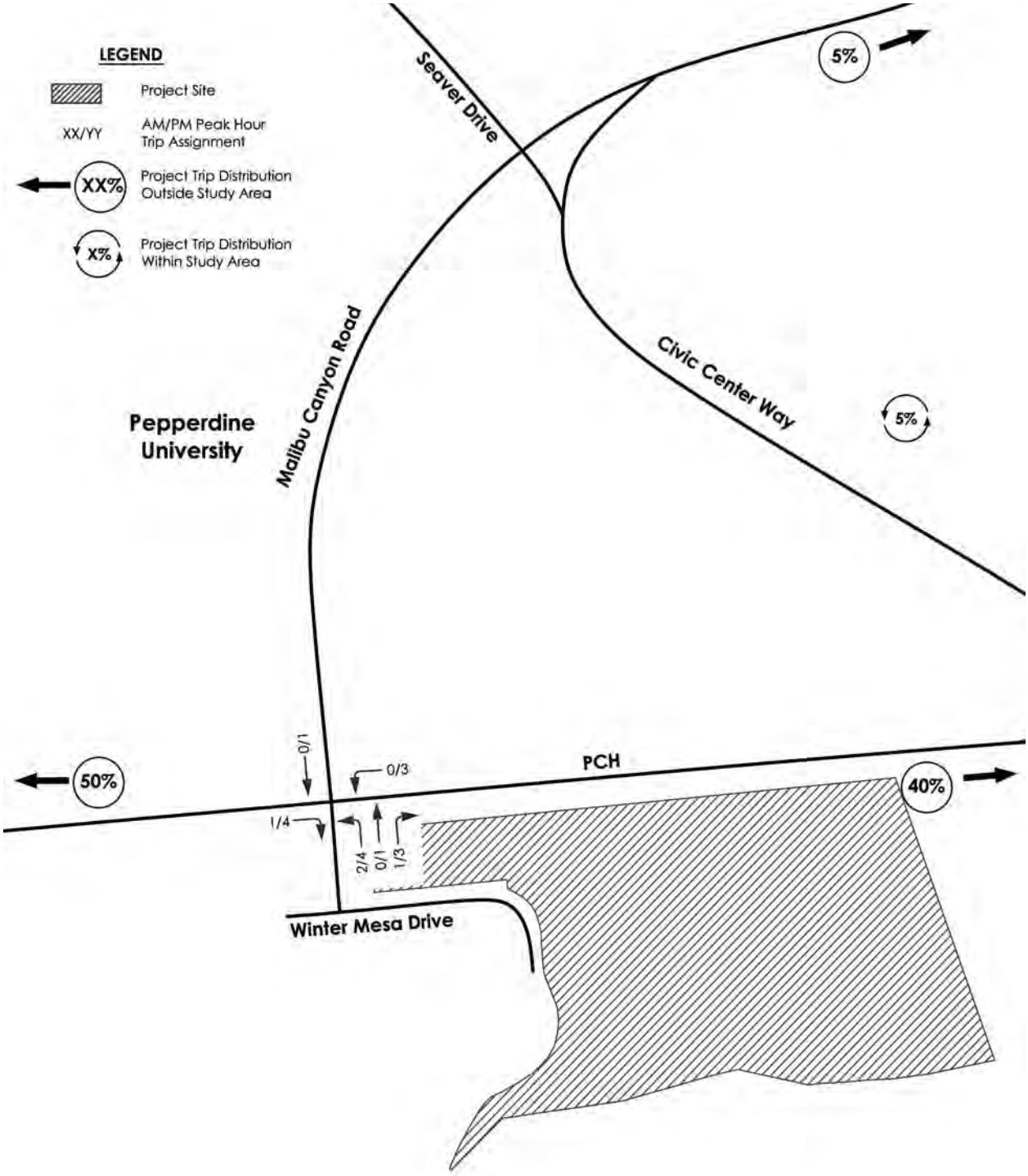


NOT TO SCALE

Source: Arch Beach Consulting 2013

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Project with Lot 7 Use - Skate Park, Saturday Peak Hour Traffic



NOT TO SCALE

Source: Arch Beach Consulting 2013

OPENING YEAR 2017

This section describes the future traffic conditions related to the following traffic scenarios:

- Opening Year 2017 Baseline
- Opening Year 2017 plus Project

Opening Year 2017 Baseline Condition

This scenario comprises existing traffic conditions, plus ambient traffic growth (2012 to 2017), plus traffic from cumulative (approved and/or pending) developments in the study area. These cumulative projects are located in the project study area and have not yet been constructed, but have been approved or are pending approval through a discretionary action or building permit issuance.

Traffic Controls and Intersection Geometrics

Per the City, no improvements are planned for the study area roadways and intersections in their current Capital Improvement Program. Therefore, the existing intersection traffic controls and geometrics were assumed for those intersections in the 2017 level of service analysis.

Traffic Volumes

The Opening Year 2017 baseline traffic in this scenario was forecast by applying an ambient growth rate of 1.5 percent per year over five years to the existing traffic volumes at both study area intersections. This growth rate was provided by City staff.

In addition, traffic from cumulative (approved and/or pending) developments in the study area was added to this scenario. These cumulative projects have not yet been constructed, but have been approved or are pending approval through a discretionary action or building permit issuance. Tables 5.11-10 and 5.11-11 present the list of cumulative projects in the study area, as well as their estimated trip generation for the weekday and Saturday peak hours, respectively. Both tables show trip generation estimates for the Opening Year 2017 and Future Year 2030 (buildout) conditions, as some of the projects may not be active by 2017 (construction or fully operational), or may just be under construction in 2017. The Future Year 2030 trip generation estimates assume that all projects would be constructed and in operation.

According to the tables, the cumulative projects would have a total weekday trip generation of 13,148 daily trips, 617 a.m. peak hour trips (407 inbound and 210 outbound), and 1,133 p.m. peak hour trips (570 inbound and 563 outbound). The total Saturday trip generation for the cumulative projects is 14,172 daily trips and 1,386 midday peak hour trips (739 inbound and 648 outbound). Figure 5.11-10, Map of Cumulative Projects shows the locations of the cumulative projects. Figures 5.11-11 and 5.11-12 illustrate the cumulative projects' total trip assignment at the study area intersections for the weekday and Saturday peak hours, respectively. The list of cumulative projects currently being processed in the City and their trip assignments are in Traffic Study Appendix D.

The ambient growth rate and trips from cumulative projects were applied to the existing traffic volumes to derive the Opening Year 2017 Baseline traffic volumes. Figures 5.11-13 and Figures 5.11-14 illustrate the resulting Opening Year 2017 Baseline weekday a.m. and p.m. peak hour, and Saturday midday peak hour traffic volumes, respectively.

Table 5-11-10 Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 AM Peak Hour In	Opening Year 2017 AM Peak Hour Out	Opening Year 2017 AM Peak Hour Total	Opening Year 2017 PM Peak Hour In	Opening Year 2017 PM Peak Hour Out	Opening Year 2017 PM Peak Hour Total	Future Year 2030 Daily	Future Year 2030 AM Peak Hour In	Future Year 2030 AM Peak Hour Out	Future Year 2030 AM Peak Hour Total	Future Year 2030 PM Peak Hour In	Future Year 2030 PM Peak Hour Out	Future Year 2030 PM Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]																
- Single-Family Detached Housing (210)	per DU	9.52	0.19u	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per TSF	*ITE*	*ITE equation*			*ITE equation*			*ITE*	*ITE equation*			*ITE equation*			
- General Office Buildling (710)	per TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																
1. 5905 and 5909 Latigo Canyon Road																
Single-Family Detached Housing	2 Dus	10	0	0	0	0	0	0	19	0	1	2	1	1	2	Under construction in 2017; construction traffic would occur before both peak hours.
Total		**10**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**1**	**2**	**1**	**1**	**2**	
2. 27535 PCH																
Single-Family Detached Housing	1 DU	10	0	1	1	1	0	1	10	0	1	1	1	0	1	Asssumed to be built-out by 2017.
Total		**10**	**0**	**1**	**1**	**1**	**0**	**1**	**10**	**0**	**1**	**1**	**1**	**0**	**1**	
3. Hajian Office																
General Office	9.685 TSF	107	13	2	15	2	12	14	107	13	2	15	2	12	14	Asssumed to be built-out by 2017.
Total		**107**	**13**	**2**	**15**	**2**	**12**	**14**	**107**	**13**	**2**	**15**	**2**	**12**	**14**	
4. Towing Subdivision																
Single-Family Detached Housing	4 DUs	38	1	2	3	3	1	4	38	1	2	3	3	1	4	Asssumed to be built-out by 2017.
Total		**38**	**1**	**2**	**3**	**3**	**1**	**4**	**38**	**1**	**2**	**3**	**3**	**1**	**4**	
5. Rancho Malibu Hotel																
trip generation per April 2012 TIA prepared by Overland Consultants		2,182	63	44	107	101	84	185	2,182	63	44	107	101	84	185	Per TIA, project asssumed to be built-out by 2016.
Total		**2,182**	**63**	**44**	**107**	**101**	**84**	**185**	**2,182**	**63**	**44**	**107**	**101**	**84**	**185**	

Table 5-11-10 Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 AM Peak Hour In	Opening Year 2017 AM Peak Hour Out	Opening Year 2017 AM Peak Hour Total	Opening Year 2017 PM Peak Hour In	Opening Year 2017 PM Peak Hour Out	Opening Year 2017 PM Peak Hour Total	Future Year 2030 Daily	Future Year 2030 AM Peak Hour In	Future Year 2030 AM Peak Hour Out	Future Year 2030 AM Peak Hour Total	Future Year 2030 PM Peak Hour In	Future Year 2030 PM Peak Hour Out	Future Year 2030 PM Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]																
- Single-Family Detached Housing (210)	per DU	9.52	0.19u	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per TSF	*ITE*	*ITE equation*			*ITE equation*			*ITE*	*ITE equation*			*ITE equation*			
- General Office Buildling (710)	per TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																
6. La Paz Shopping Center																
Shopping Center	77.110 TSF	5,735	81	52	133	247	257	503	5,735	81	52	133	247	257	503	Asssumed to be built-out by 2017.
General Office	34.948 TSF	385	48	7	55	9	43	52	385	48	7	55	9	43	52	
Junior/Community College	20.000 TSF	550	44	16	60	29	21	51	550	44	16	60	29	21	51	
pass-by for Shopping Center (42%)[2]		*-2,414*	*-34*	*-22*	*-56*	*-104*	*-108*	*-212*	*-2,414*	*-34*	*-22*	*-56*	*-104*	*-108*	*-212*	
Total		**4,256**	**139**	**52**	**191**	**181**	**213**	**394**	**4,256**	**139**	**52**	**191**	**181**	**213**	**394**	
7. Whole Foods Shopping Center																
trip generation per May 2011 TIA prepared by Overland Consultants		2,296	61	42	103	79	77	156	2,296	61	42	103	79	77	156	Per TIA, project asssumed to be built-out by 2015.
Total		**2,296**	**61**	**42**	**103**	**79**	**77**	**156**	**2,296**	**61**	**42**	**103**	**79**	**77**	**156**	
8. City of Malibu Civic Center Wastewater Treatment Facility																
Wastewater Treatment Facility		20	0	0	0	0	0	0	2	0	0	0	0	0	0	Asssumed to be under construction in 2017 with 1 truck and 9 workers per day with cons-truction traffic occurring before both peak hours; at build-out, only 1 truck per day.
Total		**20**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	
9. Santa Monica College																
Junior/Community College	200 students	246	20	4	24	15	9	24	246	20	4	24	15	9	24	Project under construction; asssumed to be built-out by 2017.
Total		**246**	**20**	**4**	**24**	**15**	**9**	**24**	**246**	**20**	**4**	**24**	**15**	**9**	**24**	

Table 5-11-10 Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 AM Peak Hour In	Opening Year 2017 AM Peak Hour Out	Opening Year 2017 AM Peak Hour Total	Opening Year 2017 PM Peak Hour In	Opening Year 2017 PM Peak Hour Out	Opening Year 2017 PM Peak Hour Total	Future Year 2030 Daily	Future Year 2030 AM Peak Hour In	Future Year 2030 AM Peak Hour Out	Future Year 2030 AM Peak Hour Total	Future Year 2030 PM Peak Hour In	Future Year 2030 PM Peak Hour Out	Future Year 2030 PM Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]																
- Single-Family Detached Housing (210)	per DU	9.52	0.19u	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per TSF	*ITE*	*ITE equation*			*ITE equation*			*ITE*	*ITE equation*			*ITE equation*			
- General Office Buildling (710)	per TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																
10. Housing Element Update																
28455 PCH (apartments @ 20 DUs/acre)	102 DUs	0	0	0	0	0	0	0	681	10	42	52	41	22	63	Project under Planning review and no action
28401 PCH (apartments @ 20 DUs/acre)	65 DUs	0	0	0	0	0	0	0	432	7	27	33	26	14	40	is anticipated to occur by 2017.
3700 La Paz Lane (apartments @ 20 DUs/acre)	46 DUs	0	0	0	0	0	0	0	306	5	19	23	19	10	29	
		0	**0**	**0**	**0**	**0**	**0**	**0**	**1,419**	**22**	**87**	**109**	**86**	**46**	**132**	
11. Malibu Sycamore Village																
trip generation per August 2013 TIA prepared by Overland Consultants		3,083	120	70	190	128	141	269	3,083	120	70	190	128	141	269	Per TIA, project asssumed to be built-out by
Total		**3,083**	**120**	**70**	**190**	**128**	**141**	**269**	**3,083**	**120**	**70**	**190**	**128**	**141**	**269**	2015; assumed 0.20 FAR project.
12. Pepperdine Campus Life Project																
trip generation per September 3, 2010 TIA prepared by ATE																Phase I built-out by 2017; Phase II
Phase I		-477	-22	-22	-44	-16	-16	-32								built-out by 2030.
Phases I & II									-744	-34	-33	-67	-26	-26	-52	
Total		**-477**	**-22**	**-22**	**-44**	**-16**	**-16**	**-32**	**-744**	**-34**	**-33**	**-67**	**-26**	**-26**	**-52**	
13. Pierview Restaurant																
Quality Restaurant	7.100 TSF	639	3	3	6	36	18	53	639	3	3	6	36	18	53	Asssumed to be built-out by 2017.
Total		**639**	**3**	**3**	**6**	**36**	**18**	**53**	**639**	**3**	**3**	**6**	**36**	**18**	**53**	
14. Windsail Restaurant																
Quality Restaurant	5.904 TSF	531	2	2	5	30	15	44	531	2	2	5	30	15	44	Asssumed to be built-out by 2017.
Total		**531**	**2**	**2**	**5**	**30**	**15**	**44**	**531**	**2**	**2**	**5**	**30**	**15**	**44**	

Table 5-11-10 Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 AM Peak Hour In	Opening Year 2017 AM Peak Hour Out	Opening Year 2017 AM Peak Hour Total	Opening Year 2017 PM Peak Hour In	Opening Year 2017 PM Peak Hour Out	Opening Year 2017 PM Peak Hour Total	Future Year 2030 Daily	Future Year 2030 AM Peak Hour In	Future Year 2030 AM Peak Hour Out	Future Year 2030 AM Peak Hour Total	Future Year 2030 PM Peak Hour In	Future Year 2030 PM Peak Hour Out	Future Year 2030 PM Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]																
- Single-Family Detached Housing (210)	per DU	9.52	0.19u	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per TSF	*ITE*	*ITE equation*			*ITE equation*			*ITE*	*ITE equation*			*ITE equation*			
- General Office Buildling (710)	per TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																
15. 22959 PCH Office																
Shopping Center	4.517 TSF	0	0	0	0	0	0	0	907	14	9	24	37	38	75	Project under Planning review and no action
General Office	2.630 TSF	0	0	0	0	0	0	0	29	4	0	4	1	3	4	is anticipated to occur by 2017.
- pass-by for Shopping Center (55%)[3]		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*-499*	*-8*	*-5*	*-13*	*-20*	*-21*	*-41*	
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**437**	**10**	**5**	**15**	**17**	**21**	**38**	
16. 22729 PCH Office																
General Office	2.499 TSF	28	3	0	4	1	3	4	28	3	0	4	1	3	4	Asssumed to be built-out by 2017.
Total		**28**	**3**	**0**	**4**	**1**	**3**	**4**	**28**	**3**	**0**	**4**	**1**	**3**	**4**	
17. Carbon Condominiums																
Residential Condominium/Townhouse	8 DUs	46	1	3	4	3	1	4	46	1	3	4	3	1	4	Asssumed to be built-out by 2017.
Total		**46**	**1**	**3**	**4**	**3**	**1**	**4**	**46**	**1**	**3**	**4**	**3**	**1**	**4**	
18. 18805, 18807 and 18809 PCH																
Single-Family Detached Housing	3 DUs	29	1	2	2	2	1	3	29	1	2	2	2	1	3	Asssumed to be built-out by 2017.
Total		**29**	**1**	**2**	**2**	**2**	**1**	**3**	**29**	**1**	**2**	**2**	**2**	**1**	**3**	
19. 22301, 22303, 22305 and 22309 PCH																
Single-Family Detached Housing	4 DUs	38	1	2	3	3	1	4	38	1	2	3	3	1	4	Asssumed to be built-out by 2017.
Total		**38**	**1**	**2**	**3**	**3**	**1**	**4**	**38**	**1**	**2**	**3**	**3**	**1**	**4**	
20. 21997 and 22003 PCH																
Single-Family Detached Housing	2 DUs	19	0	1	2	1	1	2	19	0	1	2	1	1	2	Asssumed to be built-out by 2017.
Total		**19**	**0**	**1**	**2**	**1**	**1**	**2**	**19**	**0**	**1**	**2**	**1**	**1**	**2**	

Table 5-11-10 Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 AM Peak Hour In	Opening Year 2017 AM Peak Hour Out	Opening Year 2017 AM Peak Hour Total	Opening Year 2017 PM Peak Hour In	Opening Year 2017 PM Peak Hour Out	Opening Year 2017 PM Peak Hour Total	Future Year 2030 Daily	Future Year 2030 AM Peak Hour In	Future Year 2030 AM Peak Hour Out	Future Year 2030 AM Peak Hour Total	Future Year 2030 PM Peak Hour In	Future Year 2030 PM Peak Hour Out	Future Year 2030 PM Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]																
- Single-Family Detached Housing (210)	per DU	9.52	0.19u	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per TSF	*ITE*	*ITE equation*			*ITE equation*			*ITE*	*ITE equation*			*ITE equation*			
- General Office Buildling (710)	per TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																
21. 3314 Serra Road Subdivision																
Single-Family Detached Housing	3 DUs	29	1	2	2	2	1	3	29	1	2	2	2	1	3	Asssumed to be built-out by 2017.
Total		**29**	**1**	**2**	**2**	**2**	**1**	**3**	**29**	**1**	**2**	**2**	**2**	**1**	**3**	
22. 20624 and 20630 PCH																
Single-Family Detached Housing	2 DUs	10	0	0	0	0	0	0	19	0	1	2	1	1	2	Under construction in 2017; construction traffic would occur before both peak hours.
Total		**10**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**1**	**2**	**1**	**1**	**2**	
23. Seaboard																
Single-Family Detached Housing	1 DU	10	0	0	0	0	0	0	10	0	1	1	1	0	1	Under construction in 2017; construction traffic would occur before both peak hours.
Total		**10**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**1**	**1**	**1**	**0**	**1**	
TOTAL CUMULATIVE PROJECTS TRIP GENERATION		**13,148**	**407**	**210**	**617**	**570**	**563**	**1,133**	**14,737**	**428**	**294**	**721**	**667**	**622**	**1,288**	

Notes: Trip rates based on Institute of Transportation Engineers (ITE) *Trip Generation, 9th Edition*, 2012 and *Trip Generation Handbook*, 2004.
[1] TSF = Thousand Square Feet
[2] Pass By Trip Reduction percentage based logrithmic equation for Shopping Center land use in ITE *Trip Generation Handbook*, 2004.

Table 5.11-11 Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 Midday Peak Hour In	Opening Year 2017 Midday Peak Hour Out	Opening Year 2017 Midday Peak Hour Total	Future Year 2030 Daily	Future Year 2030 Midday Peak Hour In	Future Year 2030 Midday Peak Hour Out	Future Year 2030 Midday Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]										
- Single-Family Detached Housing (210)	per DU	9.91	0.50	0.43	0.93	9.91	0.50	0.43	0.93	
- Residential Condominium/Townhouse (230)	per DU	5.67	0.25	0.22	0.47	5.67	0.25	0.22	0.47	
- Apartment (220)	per DU	6.39	0.26	0.26	0.52	6.39	0.26	0.26	0.52	
- Shopping Center (820)	per TSF	*ITE*		*ITE equation*		*ITE*		*ITE equation*		
- General Office Buildling (710)	per TSF	2.46	0.23	0.20	0.43	2.46	0.23	0.20	0.43	
- Junior/Community College (540)	per TSF	11.23	0.81	0.61	1.42	11.23	0.81	0.61	1.42	
- Junior/Community College (540)	per student	0.42	0.03	0.02	0.05	0.42	0.03	0.02	0.05	
- Recrecational Community Center (495)	per TSF	9.10	0.58	0.49	1.07	9.10	0.58	0.49	1.07	
- Quality Restaurant (931)	per TSF	94.36	6.38	4.44	10.82	94.36	6.38	4.44	10.82	
TRIP GENERATION										
1. 5905 and 5909 Latigo Canyon Road										
Single-Family Detached Housing	2 Dus	10	0	0	0	20	1	1	2	Under construction in 2017; construction traffic would occur before midday peak hour.
Total		**10**	**0**	**0**	**0**	**20**	**1**	**1**	**2**	
2. 27535 PCH										
Single-Family Detached Housing	1 DU	10	1	0	1	10	1	0	1	Assumed to be built-out by 2017.
Total		**10**	**1**	**0**	**1**	**10**	**1**	**0**	**1**	
3. Hajian Office										
General Office	9.685 TSF	24	2	2	4	24	2	2	4	Assumed to be built-out by 2017.
Total		**24**	**2**	**2**	**4**	**24**	**2**	**2**	**4**	
4. Towing Subdivision										
Single-Family Detached Housing	4 DUs	40	2	2	4	40	2	2	4	Assumed to be built-out by 2017.
Total		**40**	**2**	**2**	**4**	**40**	**2**	**2**	**4**	
5. Rancho Malibu Hotel										
trip generation per April 2012 TIA prepared by Overland Consultants		2,120	112	97	209	2,120	112	97	209	Per TIA, project assumed to be built-out by 2016.
Total		**2,120**	**112**	**97**	**209**	**2,120**	**112**	**97**	**209**	
6. La Paz Shopping Center										
Shopping Center	77.110 TSF	7,844	384	354	738	7,844	384	354	738	Assumed to be built-out by 2017.
General Office	34.948 TSF	86	8	7	15	86	8	7	15	
Junior/Community College	20.000 TSF	225	16	12	28	225	16	12	28	
pass-by for Shopping Center (42%)[2]		*-3,302*	*-162*	*-149*	*-311*	*-3,302*	*-162*	*-149*	*-311*	
Total		**4,853**	**247**	**224**	**471**	**4,853**	**247**	**224**	**471**	
7. Whole Foods Shopping Center										
trip generation per May 2011 TIA prepared by Overland Consultants		2,528	117	111	228	2,528	117	111	228	Per TIA, project assumed to be built-out by 2015.
Total		**2,528**	**117**	**111**	**228**	**2,528**	**117**	**111**	**228**	

Table 5.11-11 Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]		Opening Year 2017 Daily	Opening Year 2017 Midday Peak Hour In	Opening Year 2017 Midday Peak Hour Out	Opening Year 2017 Midday Peak Hour Total	Future Year 2030 Daily	Future Year 2030 Midday Peak Hour In	Future Year 2030 Midday Peak Hour Out	Future Year 2030 Midday Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]											
- Single-Family Detached Housing (210)	per	DU	9.91	0.50	0.43	0.93	9.91	0.50	0.43	0.93	
- Residential Condominium/Townhouse (230)	per	DU	5.67	0.25	0.22	0.47	5.67	0.25	0.22	0.47	
- Apartment (220)	per	DU	6.39	0.26	0.26	0.52	6.39	0.26	0.26	0.52	
- Shopping Center (820)	per	TSF	*ITE*	*ITE equation*			*ITE*	*ITE equation*			
- General Office Buildling (710)	per	TSF	2.46	0.23	0.20	0.43	2.46	0.23	0.20	0.43	
- Junior/Community College (540)	per	TSF	11.23	0.81	0.61	1.42	11.23	0.81	0.61	1.42	
- Junior/Community College (540)	per	student	0.42	0.03	0.02	0.05	0.42	0.03	0.02	0.05	
- Recrecational Community Center (495)	per	TSF	9.10	0.58	0.49	1.07	9.10	0.58	0.49	1.07	
- Quality Restaurant (931)	per	TSF	94.36	6.38	4.44	10.82	94.36	6.38	4.44	10.82	
TRIP GENERATION											
8. City of Malibu Civic Center Wastewater Treatment Facility											
Wastewater Treatment Facility			20	0	0	0	2	0	0	0	Assumed to be under construction in 2017 with 1 truck and 9 workers per day with construction traffic occurring before the midday peak hour; at build-out, only 1 truck per day.
Total			**20**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	
9. Santa Monica College											
Junior/Community College	200	students	84	6	4	10	84	6	4	10	Project under construction; assumed to be built-out by 2017.
Total			**84**	**6**	**4**	**10**	**84**	**6**	**4**	**10**	
10. Housing Element Update											
28455 PCH (apartments @ 20 DUs/acre)	102	DUs	0	0	0	0	654	27	27	53	Project under Planning review and no action is anticipated to occur by 2017.
28401 PCH (apartments @ 20 DUs/acre)	65	DUs	0	0	0	0	415	17	17	34	
3700 La Paz Lane (apartments @ 20 DUs/acre)	46	DUs	0	0	0	0	294	12	12	24	
			0	**0**	**0**	**0**	**1,364**	**55**	**55**	**111**	
11. Malibu Sycamore Village											
trip generation per August 2013 TIA prepared by Overland Consultants			3,305	172	153	325	3,305	172	153	325	Per TIA, project assumed to be built-out by 2015; assumed 0.20 FAR project.
Total			**3,305**	**172**	**153**	**325**	**3,305**	**172**	**153**	**325**	
12. Pepperdine Campus Life Project											
trip generation per September 3, 2010 TIA prepared by ATE [3]											Phase I built-out by 2017; Phase II built-out by 2030.
Phase I			-239	-11	-11	-22					
Phases I & II							-372	-17	-17	-34	
Total			**-239**	**-11**	**-11**	**-22**	**-372**	**-17**	**-17**	**-34**	
13. Pierview Restaurant											
Quality Restaurant	7.100	TSF	670	45	31	77	670	45	31	77	Assumed to be built-out by 2017.
Total			**670**	**45**	**31**	**77**	**670**	**45**	**31**	**77**	

Table 5.11-11 Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]		Opening Year 2017 Daily	Opening Year 2017 Midday Peak Hour In	Opening Year 2017 Midday Peak Hour Out	Opening Year 2017 Midday Peak Hour Total	Future Year 2030 Daily	Future Year 2030 Midday Peak Hour In	Future Year 2030 Midday Peak Hour Out	Future Year 2030 Midday Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]											
- Single-Family Detached Housing (210)	per	DU	9.91	0.50	0.43	0.93	9.91	0.50	0.43	0.93	
- Residential Condominium/Townhouse (230)	per	DU	5.67	0.25	0.22	0.47	5.67	0.25	0.22	0.47	
- Apartment (220)	per	DU	6.39	0.26	0.26	0.52	6.39	0.26	0.26	0.52	
- Shopping Center (820)	per	TSF	*ITE*	*ITE equation*			*ITE*	*ITE equation*			
- General Office Buildling (710)	per	TSF	2.46	0.23	0.20	0.43	2.46	0.23	0.20	0.43	
- Junior/Community College (540)	per	TSF	11.23	0.81	0.61	1.42	11.23	0.81	0.61	1.42	
- Junior/Community College (540)	per	student	0.42	0.03	0.02	0.05	0.42	0.03	0.02	0.05	
- Recrecational Community Center (495)	per	TSF	9.10	0.58	0.49	1.07	9.10	0.58	0.49	1.07	
- Quality Restaurant (931)	per	TSF	94.36	6.38	4.44	10.82	94.36	6.38	4.44	10.82	
TRIP GENERATION											
14. Windsail Restaurant											
Quality Restaurant	5.904	TSF	557	38	26	64	557	38	26	64	Assumed to be built-out by 2017.
Total			**557**	**38**	**26**	**64**	**557**	**38**	**26**	**64**	
15. 22959 PCH Office											
Shopping Center	4.517	TSF	0	0	0	0	1,313	61	56	117	Project under Planning review and no action
General Office	2.630	TSF	0	0	0	0	6	1	1	1	is anticipated to occur by 2017.
- pass-by for Shopping Center (55%)[3]			*0*	*0*	*0*	*0*	*-722*	*-33*	*-31*	*-64*	
Total			**0**	**0**	**0**	**0**	**597**	**28**	**26**	**54**	
16. 22729 PCH Office											
General Office	2.499	TSF	6	1	0	1	6	1	0	1	Assumed to be built-out by 2017.
Total			**6**	**1**	**0**	**1**	**6**	**1**	**0**	**1**	
17. Carbon Condominiums											
Residential Condominium/Townhouse	8	DUs	45	2	2	4	45	2	2	4	Assumed to be built-out by 2017.
Total			**45**	**2**	**2**	**4**	**45**	**2**	**2**	**4**	
18. 18805, 18807 and 18809 PCH											
Single-Family Detached Housing	3	DUs	30	2	1	3	30	2	1	3	Assumed to be built-out by 2017.
Total			**30**	**2**	**1**	**3**	**30**	**2**	**1**	**3**	
19. 22301, 22303, 22305 and 22309 PCH											
Single-Family Detached Housing	4	DUs	40	2	2	4	40	2	2	4	Assumed to be built-out by 2017.
Total			**40**	**2**	**2**	**4**	**40**	**2**	**2**	**4**	
20. 21997 and 22003 PCH											
Single-Family Detached Housing	2	DUs	20	1	1	2	20	1	1	2	Assumed to be built-out by 2017.
Total			**20**	**1**	**1**	**2**	**20**	**1**	**1**	**2**	
21. 3314 Serra Road Subdivision											
Single-Family Detached Housing	3	DUs	30	2	1	3	30	2	1	3	Assumed to be built-out by 2017.
Total			**30**	**2**	**1**	**3**	**30**	**2**	**1**	**3**	

Table 5.11-11 Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 Midday Peak Hour In	Opening Year 2017 Midday Peak Hour Out	Opening Year 2017 Midday Peak Hour Total	Future Year 2030 Daily	Future Year 2030 Midday Peak Hour In	Future Year 2030 Midday Peak Hour Out	Future Year 2030 Midday Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]										
- Single-Family Detached Housing (210)	per DU	9.91	0.50	0.43	0.93	9.91	0.50	0.43	0.93	
- Residential Condominium/Townhouse (230)	per DU	5.67	0.25	0.22	0.47	5.67	0.25	0.22	0.47	
- Apartment (220)	per DU	6.39	0.26	0.26	0.52	6.39	0.26	0.26	0.52	
- Shopping Center (820)	per TSF	*ITE*	*ITE equation*			*ITE*	*ITE equation*			
- General Office Buildling (710)	per TSF	2.46	0.23	0.20	0.43	2.46	0.23	0.20	0.43	
- Junior/Community College (540)	per TSF	11.23	0.81	0.61	1.42	11.23	0.81	0.61	1.42	
- Junior/Community College (540)	per student	0.42	0.03	0.02	0.05	0.42	0.03	0.02	0.05	
- Recrecational Community Center (495)	per TSF	9.10	0.58	0.49	1.07	9.10	0.58	0.49	1.07	
- Quality Restaurant (931)	per TSF	94.36	6.38	4.44	10.82	94.36	6.38	4.44	10.82	
TRIP GENERATION										
22. 20624 and 20630 PCH										
Single-Family Detached Housing	2 DUs	10	0	0	0	20	1	1	2	Under construction in 2017; construction
Total		**10**	**0**	**0**	**0**	**20**	**1**	**1**	**2**	traffic would occur before midday peak hour.
23. Seaboard										
Single-Family Detached Housing	1 DU	10	0	0	0	10	1	0	1	Under construction in 2017; construction
Total		**10**	**0**	**0**	**0**	**10**	**1**	**0**	**1**	traffic would occur before midday peak hour.
TOTAL CUMULATIVE PROJECTS TRIP GENERATION		**14,172**	**739**	**648**	**1,386**	**16,001**	**819**	**726**	**1,544**	

Notes: Trip rates based on Institute of Transportation Engineers (ITE) *Trip Generation, 9th Edition*, 2012 and *Trip Generation Handbook*, 2004.
[1] TSF = Thousand Square Feet
[2] Pass By Trip Reduction percentage based logrithmic equation for Shopping Center land use in ITE *Trip Generation Handbook*, 2004.
[3] No Saturday trip generation estimates were provided in the ATE traffic study, therefore generation was assumed to be half of the weekday trip generation as there is less student activity during the weekends.

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Levels of Service

Intersections

Table 5.11-12 presents the results of the Opening Year 2017 Baseline intersection LOS analysis.

Table 5.11-12
Opening Year 2017 Baseline Intersection Level of Service

Intersection	Control	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		V/C	LOS	V/C	LOS	V/C	LOS
1. Malibu Canyon Road/PCH	signal	0.879	D	0.880	D	0.956	E
2. Malibu Canyon Rd/Civic Center Way	signal	0.638	B	0.954	E	0.722	C
Note: LOS determined using ICU method.							

Based on the Opening Year 2017 Baseline LOS analysis, Malibu Canyon Road/PCH is forecast to operate at LOS E during the Saturday midday peak hour. Malibu Canyon Road/Civic Center Way is forecast to operate at LOS E during the weekday p.m. peak hour.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-13 presents the results of the Opening Year 2017 Baseline roadway segment LOS analysis. Based on the existing LOS analysis, all three study area roadway segments are forecast to operate with satisfactory LOS at LOS C or better during the weekday and Saturday peak hours.

Table 5.11-13
Opening Year 2017 Baseline Roadway Segment Level of Service Summary

Intersection	# Lanes and Median	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS
1. PCH, John Tyler Dr to Malibu Cyn Rd							
- eastbound	2D	11.2	B	16.0	B	16.8	B
- westbound	2D	9.1	A	15.6	B	19.5	C
2. PCH, Malibu Cyn Rd to Webb Way							
- eastbound	2D	19.4	C	16.9	B	18.7	C
- westbound	2D	9.2	A	17.7	B	18.1	C
3. Malibu Cyn Rd, PCH to Civic Center							
- northbound	2U	5.0	A	9.3	A	7.1	A
- southbound	2U	15.5	B	8.8	A	12.1	B

Note: LOS determined using HCM Multilane Highways Operations method.
# lanes and median: 2D = two lanes divided with median; and, 2U = two lanes undivided
pcplpm = Roadway segment density expressed in passenger cars per lane per mile.

OPENING YEAR 2017 PLUS PROJECT

Traffic generated by the proposed project was added to the Opening Year 2017 Baseline scenario, and the project impacts on the circulation system were analyzed. This scenario would determine project-specific impacts and mitigation measures (if required).

Traffic Volumes

The proposed project, proposed project and baseball field, and proposed project and skate park trip assignments for weekday and Saturday peak hours were added to the Opening Year 2017 Baseline weekday and Saturday peak hour traffic volumes, which resulted in the Opening Year 2017 plus Project traffic volumes. Figures 5.11-15and 5.11-16 illustrate the Opening Year 2017 plus Project weekday and Saturday peak hour traffic volumes, respectively. Figures 5.11-17 and 5.11-18 illustrate the Opening Year 2017 plus Project and baseball field weekday and Saturday peak hour traffic volumes, respectively. Figures 5.11-19 and 5.11-20 illustrate the Opening Year 2017 plus Project and skate park weekday and Saturday peak hour traffic volumes, respectively.

Levels of Service

Intersections

Table 5.11-14 presents the results of the Opening Year 2017 plus Project intersection LOS analysis.

Proposed Project – Single-Family Detached Homes

Based on the Opening Year 2017 plus Project LOS analysis and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds. **Proposed Project with Lot 7 Use –Baseball Field**

Based on the Opening Year 2017 plus Project with use of Lot 7 (Baseball Field) LOS analysis, and the significance criteria of the City, the proposed Project would create a significant impact at Malibu Canyon Road/PCH during the Saturday midday peak hour as this intersection is forecast to continue to operate at LOS E (0.968 V/C) and the proposed Project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).

The proposed project with Lot 7 Use (Baseball Field) would not create any significant impacts to the other study area intersections since the project-added V/C increases are less than the City's thresholds.

Proposed Project with Lot 7 Use –Skate Park

Based on the Opening Year 2017 plus Project with Lot 7 Use (Skate Park) LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-15 presents the results of the Opening Year 2017 plus Project roadway segment LOS analysis.

Proposed Project – Single-Family Detached Homes

Based on the Opening Year 2017 plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments because the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use –Baseball Field

Based on the Opening Year 2017 plus Project with Use of Lot 7 (Baseball Field) LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use –Skate Park

Based on the Opening Year 2017 plus Project with Use of Lot 7 (Skate Park) LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments because the roadway segments are forecast to operate at LOS C or better with project-added traffic.



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Table 5.11-14 Opening Year 2017 plus Project Intersection Level of Service Summary

	Existing Baseline						Existing plus Project						V/C Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
Intersection	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	Midda
PROPOSED PROJECT – Single-Family Detached Homes															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.739	C	0.825	D	+0.001	+0.001	+0.00
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.481	A	0.000	0.000	0.000
PROPOSED PROJECT WITH LOT 7 USE (BASEBALL FIELD) – Single-Family Detached Homes and a Baseball Field															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.747	C	0.836	D	+0.001	+0.009	+0.012
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.731	C	0.484	A	0.000	+0.002	+0.003
PROPOSED PROJECT WITH LOT 7 USE (SKATE PARK) – Single-Family Detached Homes and a Skate Park															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.740	C	0.827	D	+0.001	+0.002	+0.003
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.483	A	0.000	0.000	+0.002
OPOSED PROJECT – Single-Family Detached Homes															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.739	C	0.825	D	+0.001	+0.001	+0.00
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.481	A	0.000	0.000	0.000
PROPOSED PROJECT WITH LOT 7 USE (BASEBALL FIELD) – Single-Family Detached Homes and a Baseball Field															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.747	C	0.836	D	+0.001	+0.009	+0.01
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.731	C	0.484	A	0.000	+0.002	+0.00
PROPOSED PROJECT WITH LOT 7 USE (SKATE PARK) – Single-Family Detached Homes and a Skate Park															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.740	C	0.827	D	+0.001	+0.002	+0.00
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.483	A	0.000	0.000	+0.00
PROPOSED PROJECT – Single-Family Detached Homes															
1. Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.739	C	0.825	D	+0.001	+0.001	+0.001
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.481	A	0.000	0.000	0.000
PROPOSED PROJECT WITH LOT 7 USE (BASEBALL FIELD) – Single-Family Detached Homes and a Baseball Field															
1. Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.747	C	0.836	D	+0.001	+0.009	+0.012

2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.731	C	0.484	A	0.000	+0.002	+0.003
PROPOSED PROJECT WITH LOT 7 USE (SKATE PARK) – Single-Family Detached Homes and a Skate Park															
1. Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.740	C	0.827	D	+0.001	+0.002	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.483	A	0.000	0.000	+0.002

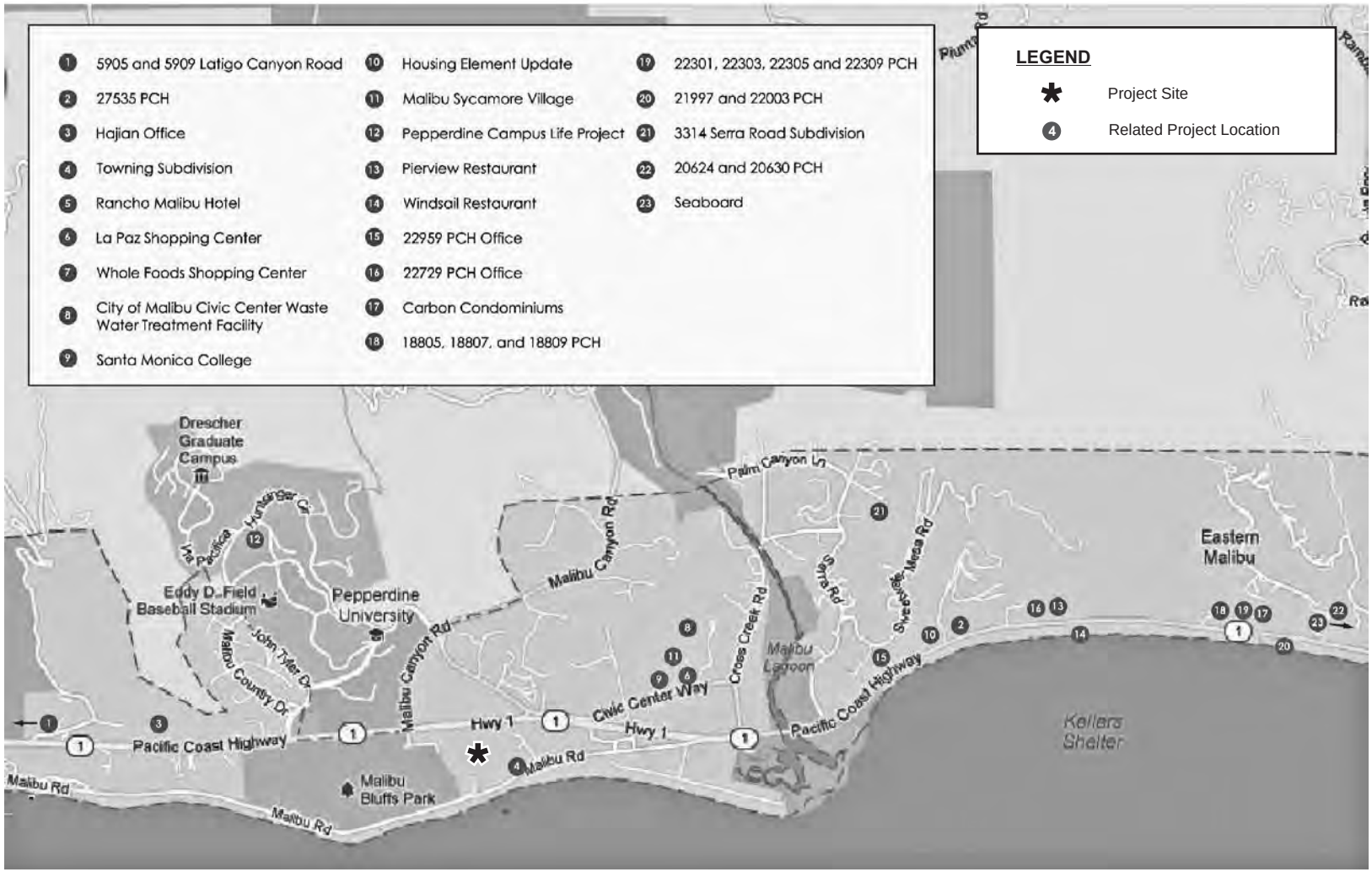
Table 5.11-15 Opening Year 2017 plus Project Roadway Segment Level of Service Summary

	Opening Year 2017 Baseline						Opening Year 2017 plus Project						Density Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
Intersection	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	AM	PM	**Midday**
PROPOSED PROJECT – Single-Family Detached Homes															
1. PCH, John Tyler to Malibu Cnyn															
Eastbound	11.2	B	16.0	B	16.8	B	11.2	B	16.0	B	16.8	B	0.0	0.0	0.0
Westbound	9.1	A	15.6	B	19.5	C	9.1	A	15.6	B	19.5	B	0.0	0.0	0.0
2. PCH, Malibu Cnyn to Webb Wy															
Eastbound	19.4	C	16.9	B	18.7	C	19.4	C	16.9	B	18.7	B	0.0	0.0	0.0
Westbound	9.2	A	17.7	B	18.1	C	9.2	A	17.7	B	18.1	B	0.0	0.0	0.0
W3. Malibu Cnyn, PCH to Civic Cntr															
Northbound	5.0	A	9.3	A	7.1	A	5.0	A	9.3	A	7.1	A	0.0	0.0	0.0
Soutbound	15.5	B	8.8	A	12.1	B	15.5	B	8.8	A	12.1	A	0.0	0.0	0.0
PROPOSED PROJECT WITH LOT 7 USE – Single-Family Detached Homes and a Baseball Field															
1. PCH, John Tyler to Malibu Cnyn															
Eastbound	11.2	B	16.0	B	16.8	B	11.2	B	16.2	B	17.0	B	0.0	+0.2	+0.2

Westbound	9.1	A	15.6	B	19.5	C	9.1	A	15.8	B	19.7	C	0.0	+0.2	+0.2
2. PCH, Malibu Cnyn to Webb Wy															
Eastbound	19.4	C	16.9	B	18.7	C	19.4	C	17.0	B	18.8	C	0.0	+0.1	+0.1
Westbound	9.2	A	17.7	B	18.1	C	9.2	A	17.8	B	18.3	C	0.0	+0.1	+0.2
3. Malibu Cnyn, PCH to Civic Cntr															
Northbound	5.0	A	9.3	A	7.1	A	5.0	A	9.4	A	7.1	A	0.0	+0.1	0.0
Southbound	15.5	B	8.8	A	12.1	B	15.5	B	8.8	A	12.1	B	0.0	0.0	0.0
PROPOSED PROJECT WITH LOT 7 USE – Single-Family Detached Homes and a Skate Park															
1. PCH, John Tyler to Malibu Cnyn															
Eastbound	11.2	B	16.0	B	16.8	B	11.2	B	16.1	B	16.8	B	0.0	+0.1	0.0
Westbound	9.1	A	15.6	B	19.5	C	9.1	A	15.7	B	19.5	C	0.0	+0.1	0.0
2. PCH, Malibu Cnyn to Webb Wy															
Eastbound	19.4	C	16.9	B	18.7	C	19.4	C	16.9	B	18.7	C	0.0	0.0	0.0
Wesbound	9.2	A	17.7	B	18.1	C	9.2	A	17.7	B	18.1	C	0.0	0.0	0.0
3. Malibu Cnyn, PCH to Civic Cntr															
Northbound	5.0	A	9.3	A	7.1	A	5.0	A	9.3	A	7.1	A	0.0	0.0	0.0
Southbound	15.5	B	8.8	A	12.1	B	15.5	B	8.8	A	12.1	B	0.0	0.0	0.0

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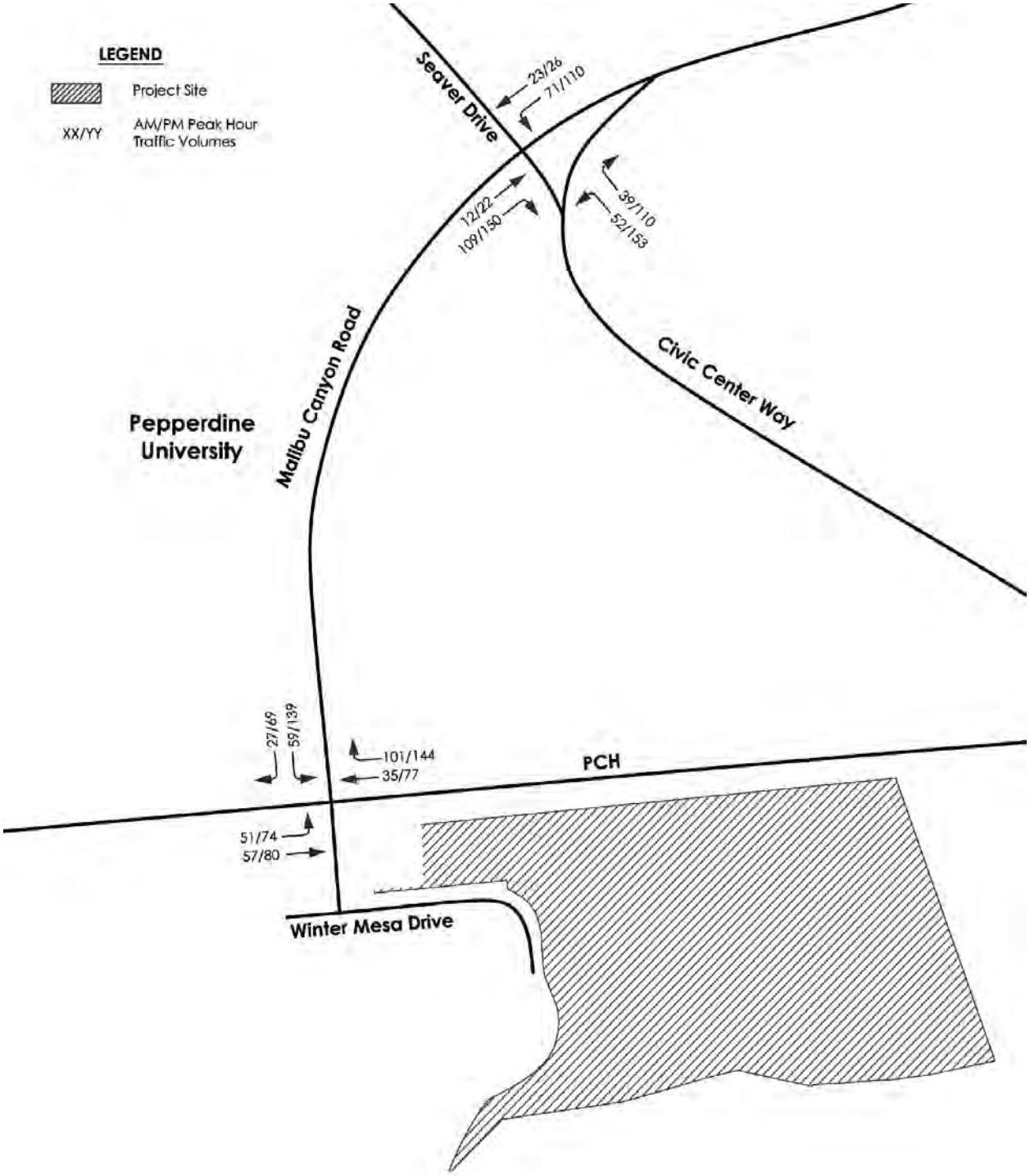
Map of Cumulative Projects



Source: Arch Beach Consulting 2012

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Cumulative Projects, Weekday Peak Hour Trips

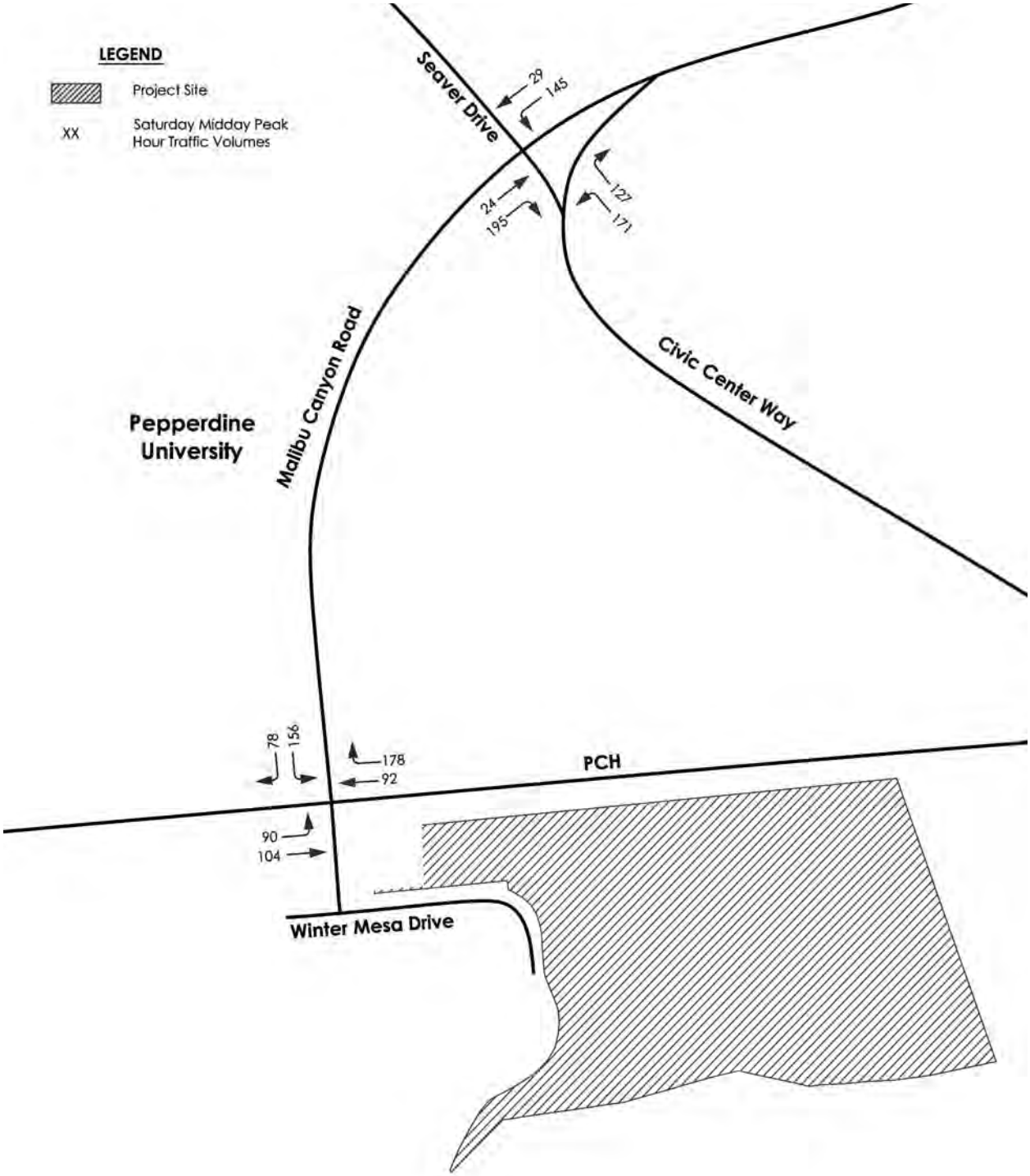


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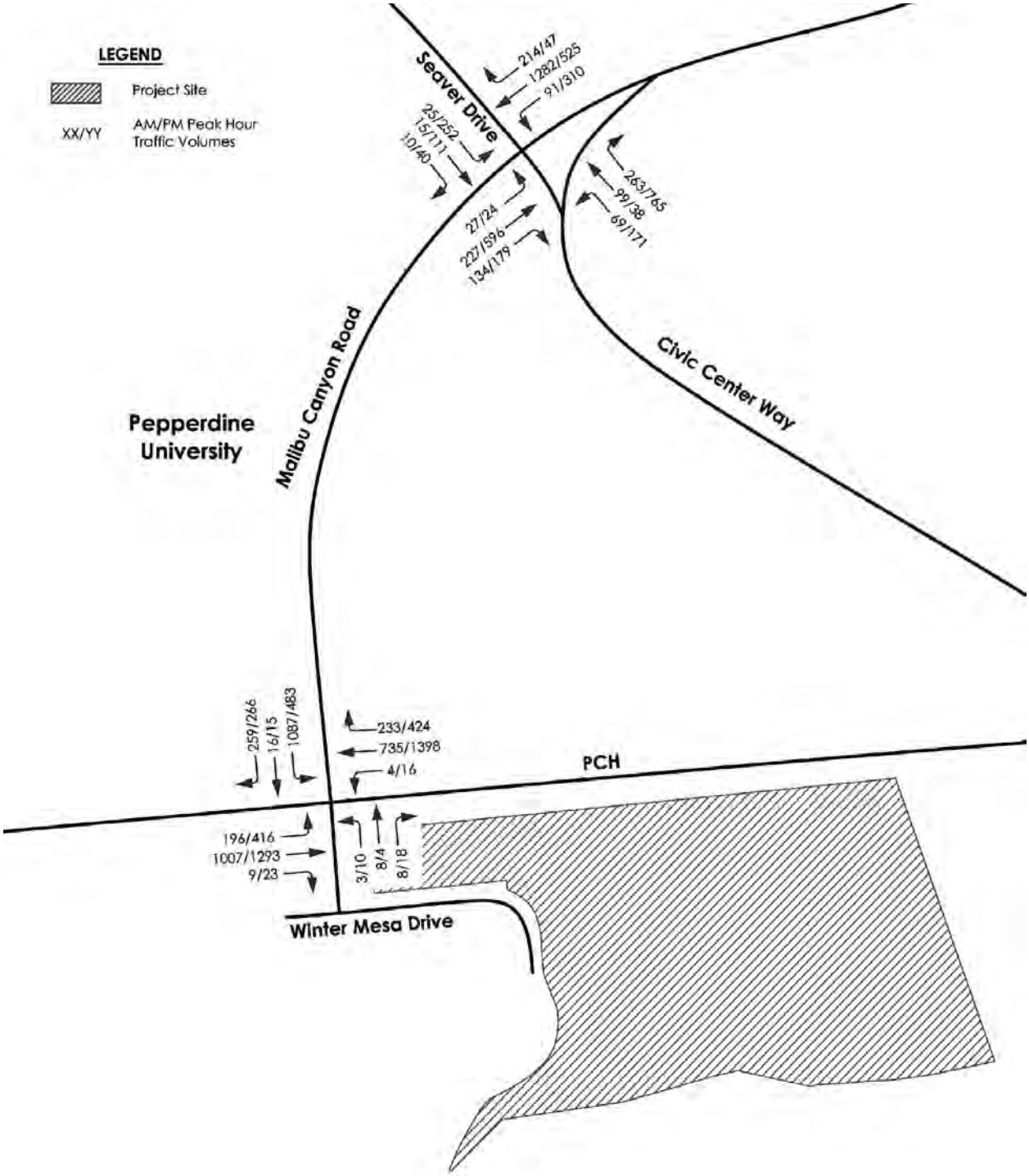
Cumulative Projects, Saturday Peak Hour Trips



Source: Arch Beach Consulting 2013

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Opening Year 2017 Baseline, Weekday Peak Hour Traffic

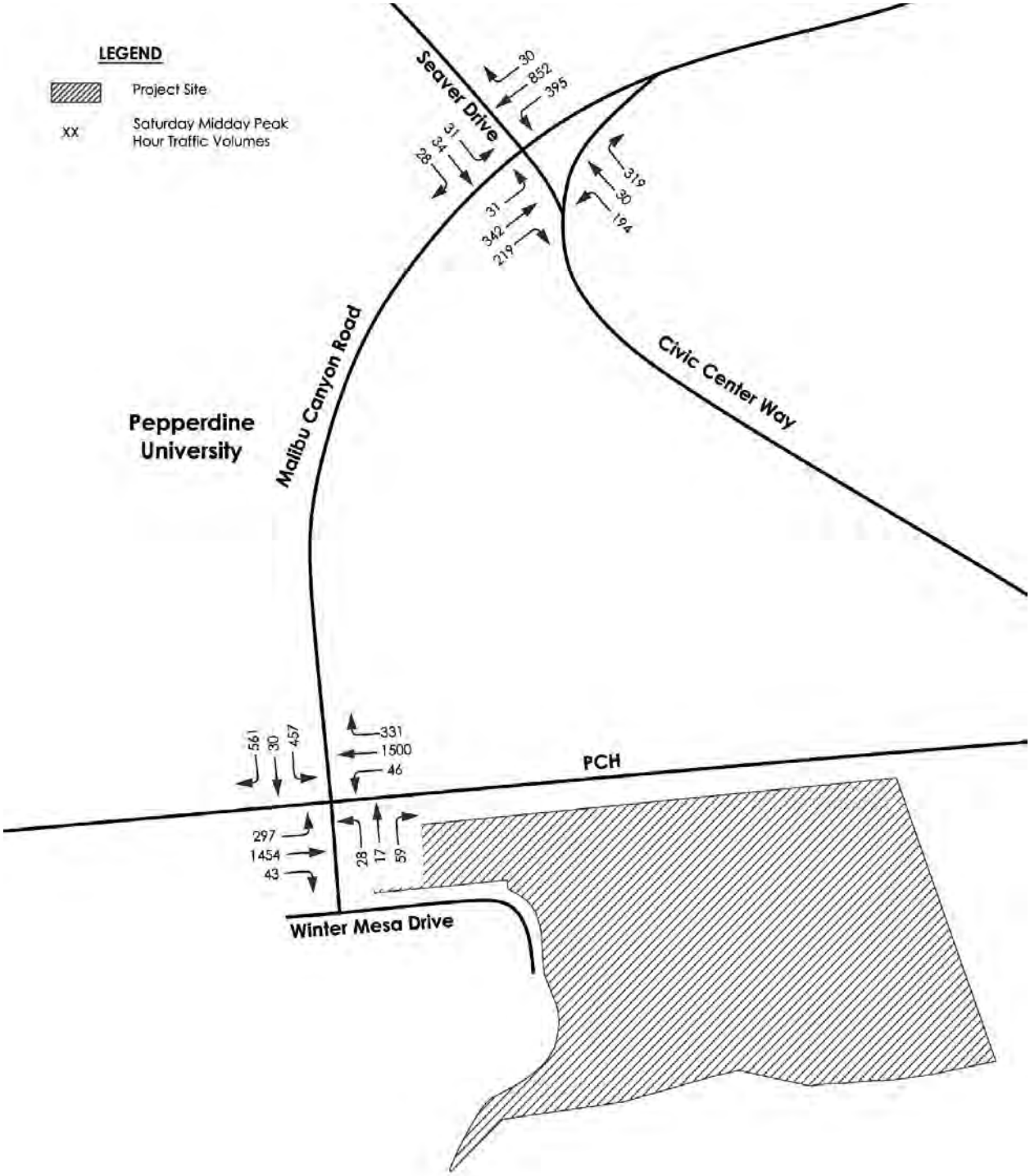


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Opening Year 2017 Baseline, Saturday Peak Hour Traffic

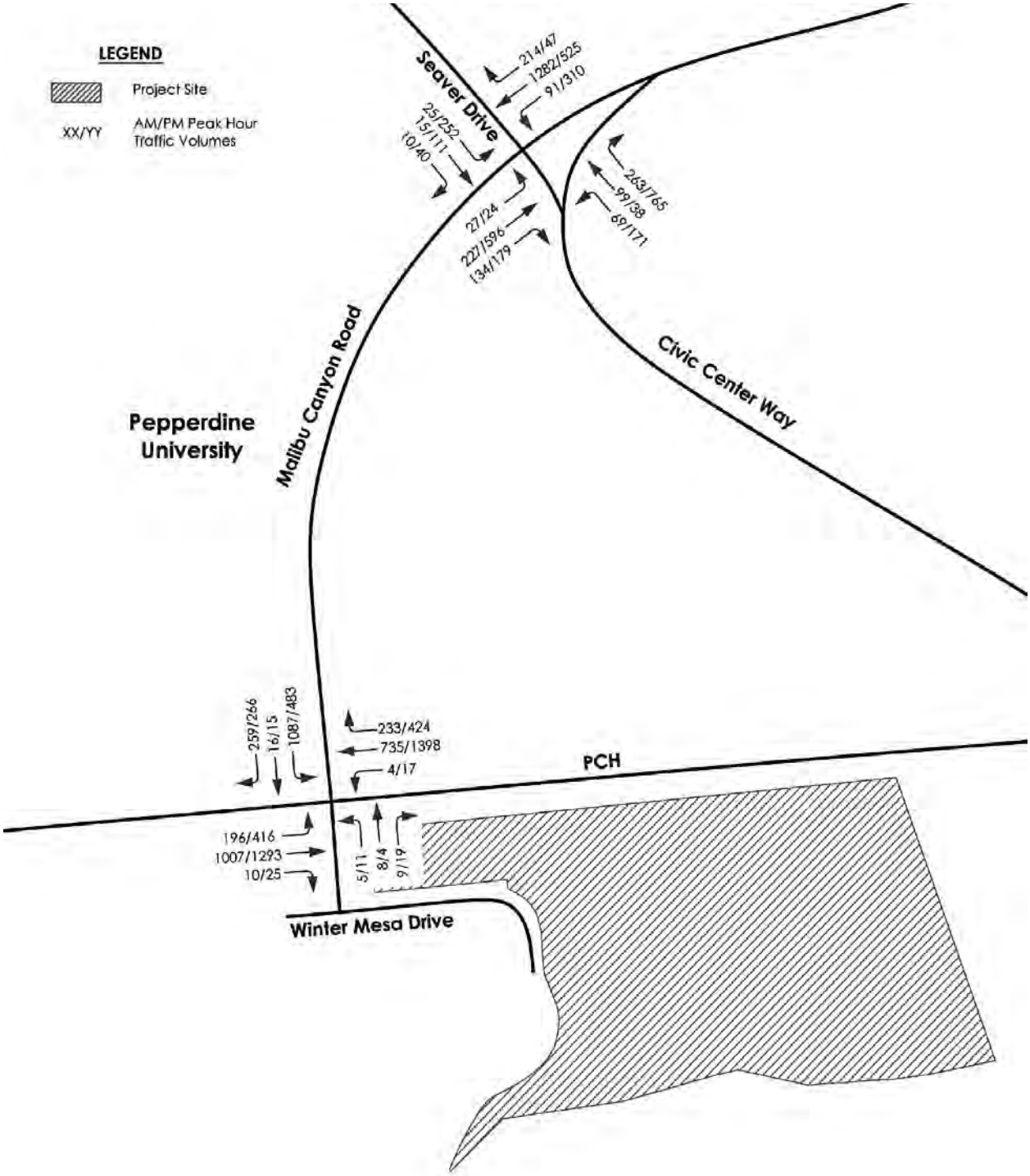


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Opening Year 2017 plus Project, Weekday Peak Hour Traffic

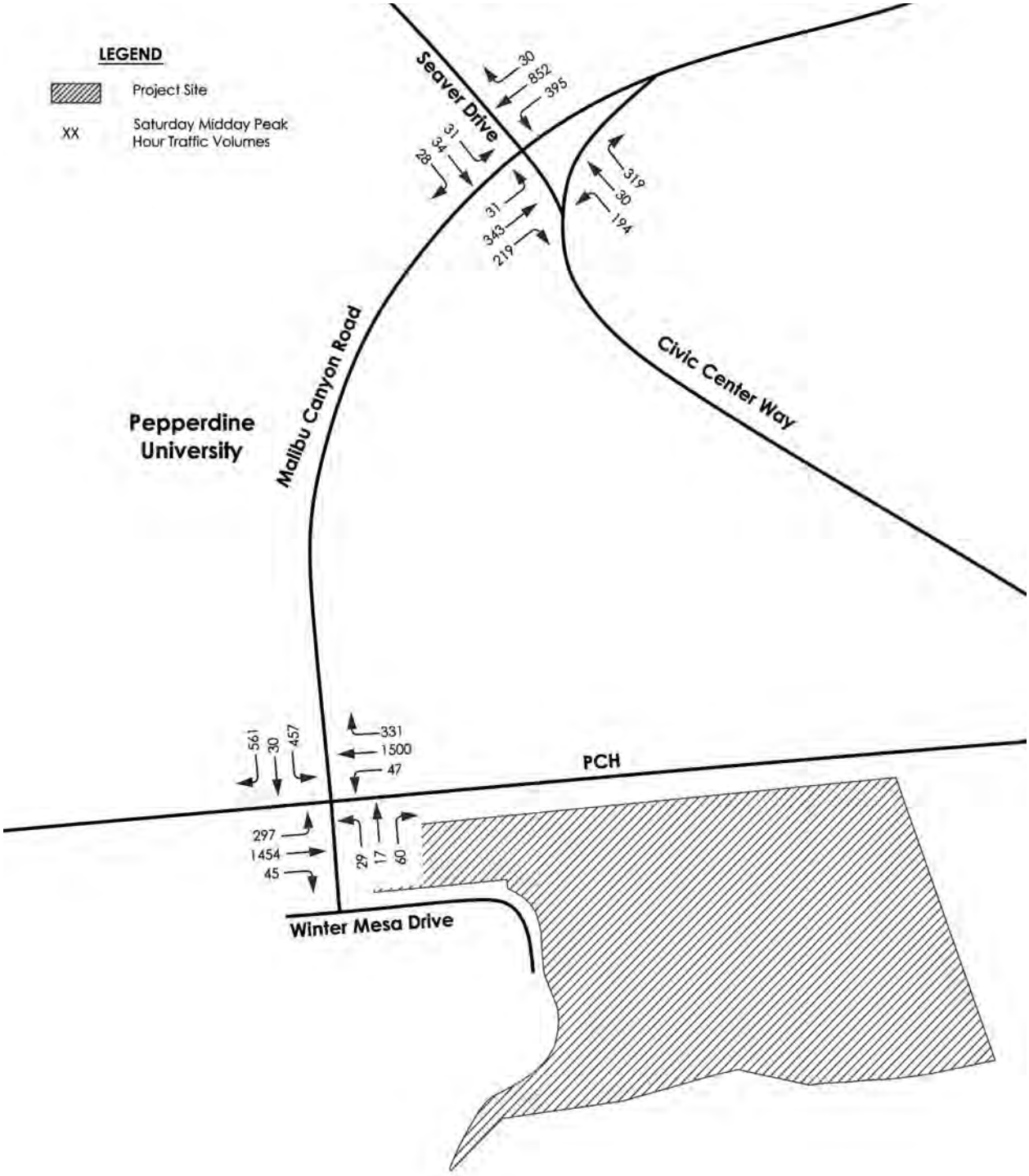


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Opening Year 2017 plus Project, Saturday Peak Hour Traffic



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FUTURE YEAR 2030 GENERAL PLAN BUILDOUT

This section describes the future traffic conditions related to the following traffic scenarios:

- Future Year 2030 Baseline
- Future Year 2030 plus Project

Future Year 2030 Baseline Condition

This General Plan buildout scenario comprises existing traffic conditions, plus ambient traffic growth (2012 to 2030), plus traffic from cumulative (approved and/or pending) developments in the study area. These cumulative projects have not yet been constructed, but have been approved or are pending approval through a discretionary action or building permit issuance.

Traffic Controls and Intersection Geometrics

Per the City, there are no improvements planned for the study area roadways and intersections in their current Capital Improvement Program. Therefore, the existing intersection traffic controls and geometrics were assumed for those intersections in the 2030 level of service analysis.

Traffic Volumes

The Future Year 2030 baseline traffic in this scenario was forecast by applying an ambient growth rate of 0.48 percent per year over 18 years (2012–2030) to the existing traffic volumes at both study area intersections. This growth rate was provided by City staff. In addition, traffic from cumulative (approved and/or pending) developments in the study area was added to this scenario. These cumulative projects are listed in Table 5.11-10, and Figure 5.11-12 (above) shows the locations of the cumulative projects. The ambient growth rate and trips from cumulative projects were applied to the existing traffic volumes to derive the Future Year 2030 Baseline traffic volumes. Figures 5.11-17 and 5.11-18 illustrate the resulting Future Year 2030 Baseline weekday a.m. and p.m. peak hour, and Saturday midday peak hour traffic volumes, respectively.

Levels of Service

Intersections

Table 5.11-16 presents the results of the Future Year 2030 Baseline intersection LOS analysis.

Table 5.11-16
Future Year 2030 Baseline Intersection Level of Service Summary

Intersection	Control	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		V/C	LOS	V/C	LOS	V/C	LOS
1. Malibu Canyon Road/PCH	signal	0.897	D	0.899	D	0.976	E
2. Malibu Canyon Rd/Civic Center Way	signal	0.645	B	0.964	E	0.731	C

Note: LOS determined using ICU method.

Based on the Future Year 2030 Baseline LOS analysis, Malibu Canyon Road/PCH is forecast to continue to operate at LOS E during the Saturday midday peak hour. Malibu Canyon Road/Civic Center Way is forecast to continue to operate at LOS E during the weekday p.m. peak hour.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-17 presents the results of the Future Year 2030 Baseline roadway segment LOS analysis. Based on the existing LOS analysis, all three study area roadway segments are forecast to operate with satisfactory LOS at LOS C or better during the weekday and Saturday peak hours.

Table 5.11-17
Future Year 2030 Baseline Roadway Segment Level of Service Summary

Intersection	# lanes and median	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS
1. PCH, John Tyler Dr to Malibu Cyn Rd							
- eastbound	2D	11.2	B	16.0	B	16.8	B
- westbound	2D	9.1	A	15.6	B	19.5	C
2. PCH, Malibu Cyn Rd to Webb Way							
- eastbound	2D	19.4	C	16.9	B	18.7	C
- westbound	2D	9.2	A	17.7	B	18.1	C
3. Malibu Cyn Rd, PCH to Civic Center							
- northbound	2U	5.0	A	9.3	A	7.1	A
- southbound	2U	15.5	B	8.8	A	12.1	B

Note: LOS determined using HCM Multilane Highways Operations method.
# lanes and median: 2D = two lanes divided with median; and, 2U = two lanes undivided
pcplpm = Roadway segment density expressed in passenger cars per lane per mile.

Future Year 2030 plus Project

Traffic generated by the proposed project was added to the Future Year 2030 Baseline scenario and the project impacts on the circulation system were analyzed. This scenario would determine project-specific impacts and mitigation measures (if required).

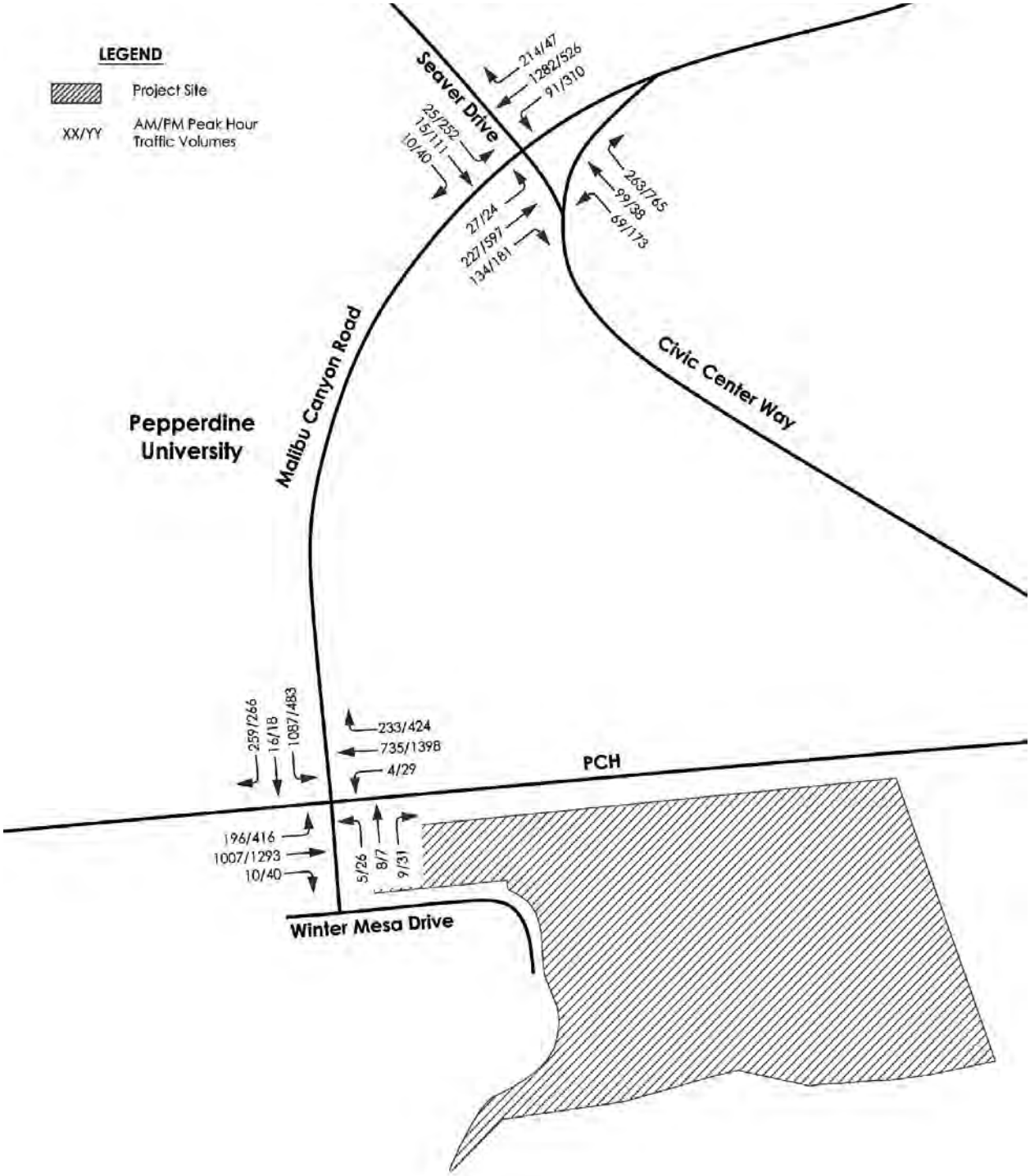
Traffic Volumes

The proposed project trip assignments for the weekday and Saturday peak hours, noted in Figures 5.11-4, 5.11-5, 5.11-6, 5.11-7, 5.11-8, and 5.11-9, were added to the Future Year 2030 Baseline weekday and Saturday peak hour traffic volumes, which resulted in the Future Year 2030 plus Project traffic volumes. Figures 5.11-19 and 5.11-20 illustrate the Future Year 2030 plus Project weekday and Saturday peak hour traffic volumes, respectively.

Figures 5.11-25 and 5.11-26 illustrate the Future Year 2030 plus Project with Lot 7 Use (Baseball Field) weekday and Saturday peak hour traffic volumes, respectively.

Figures 5.11-27 and 5.11-28 illustrate the Future Year 2030 plus Project with Lot 7 Use (Skate Park) weekday and Saturday peak hour traffic volumes, respectively.

Opening Year 2017 plus Project with Lot 7 Use-Baseball Field, Weekday Peak Hour Traffic

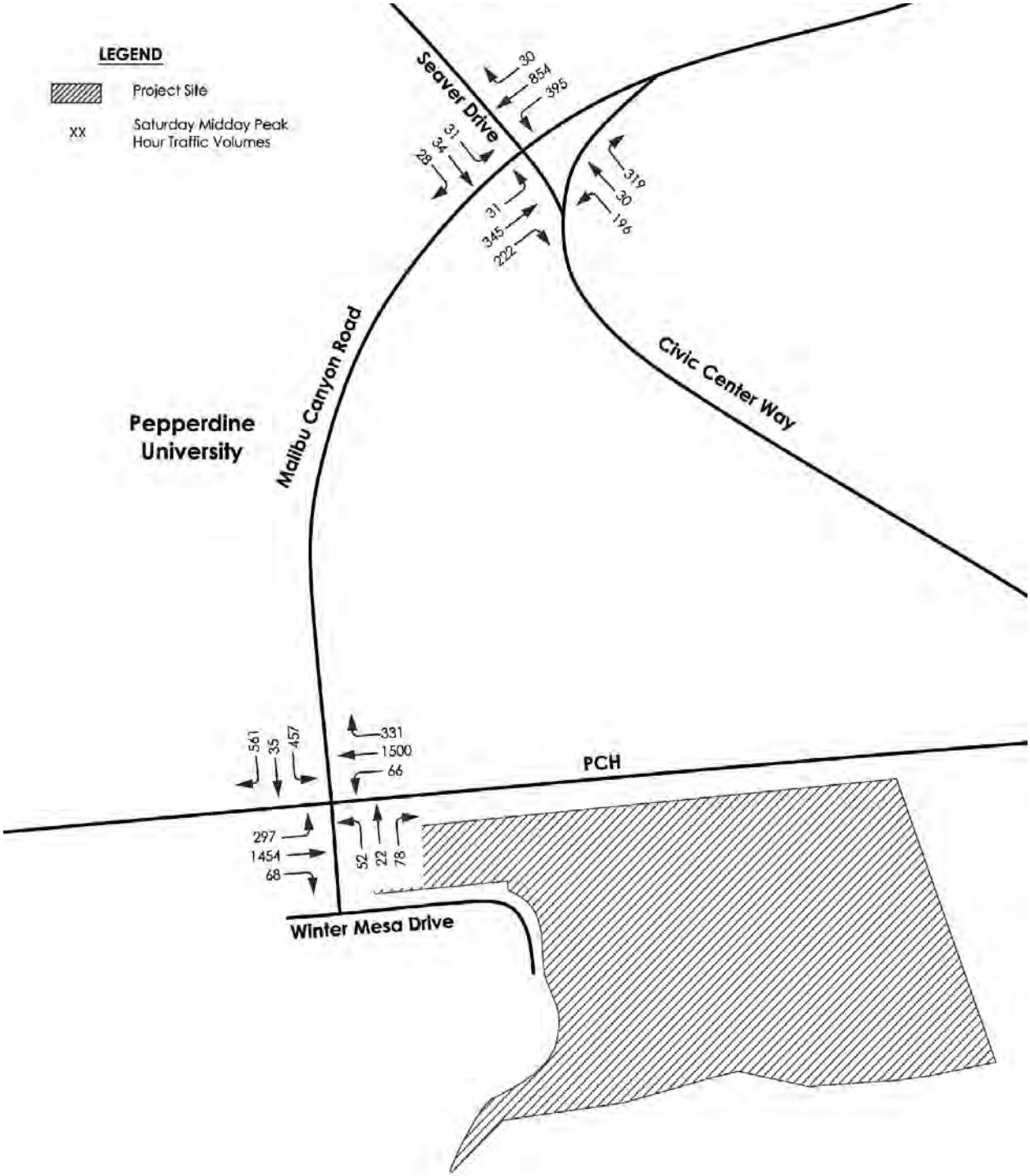


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Source: Arch Beach Consulting 2013

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Opening Year 2017 plus Project with Lot 7 Use-Baseball Field, Saturday Peak Hour Traffic

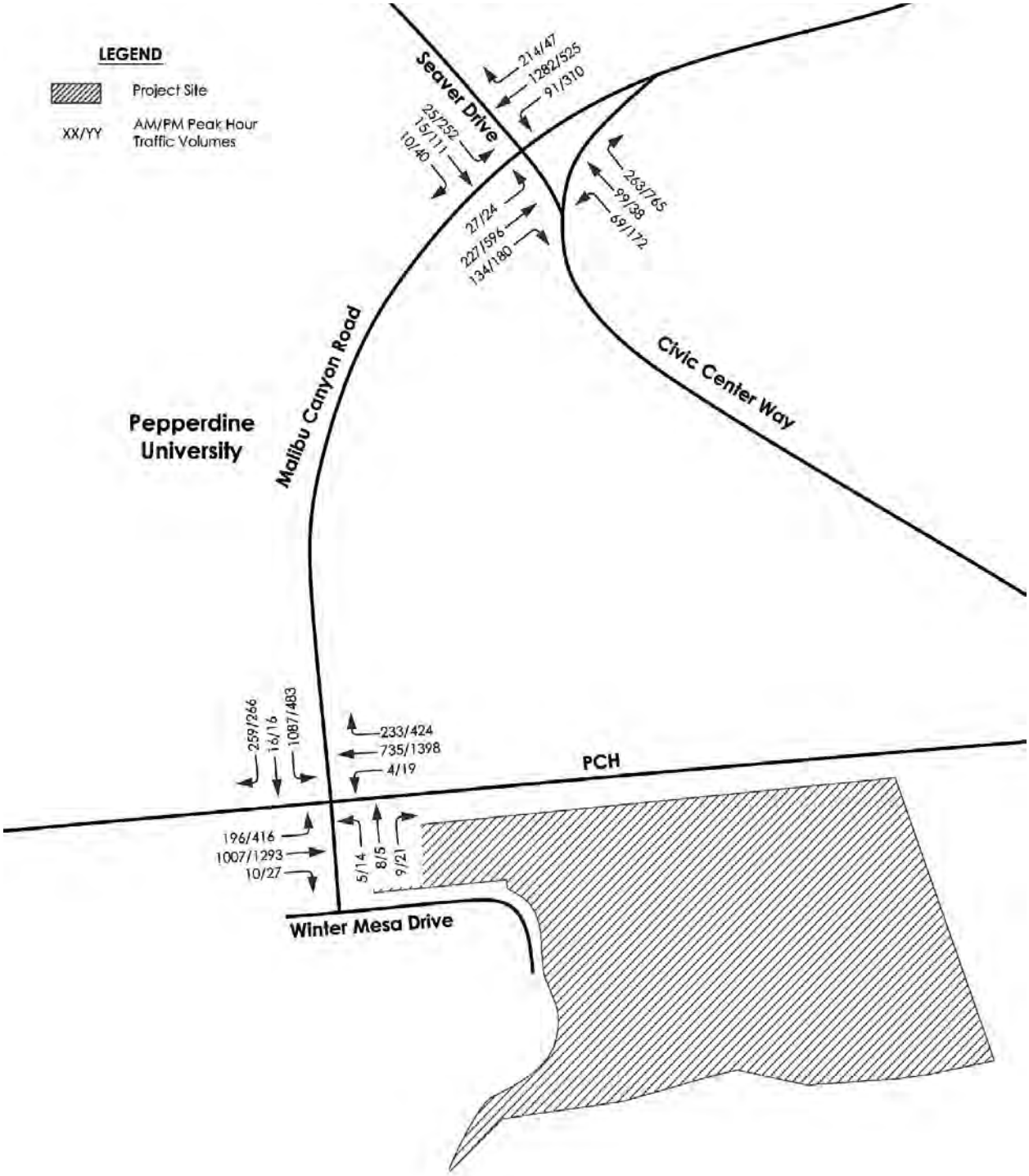


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Opening Year 2017 plus Project with Lot 7 Use-Skate Park, Weekday Peak Hour Traffic

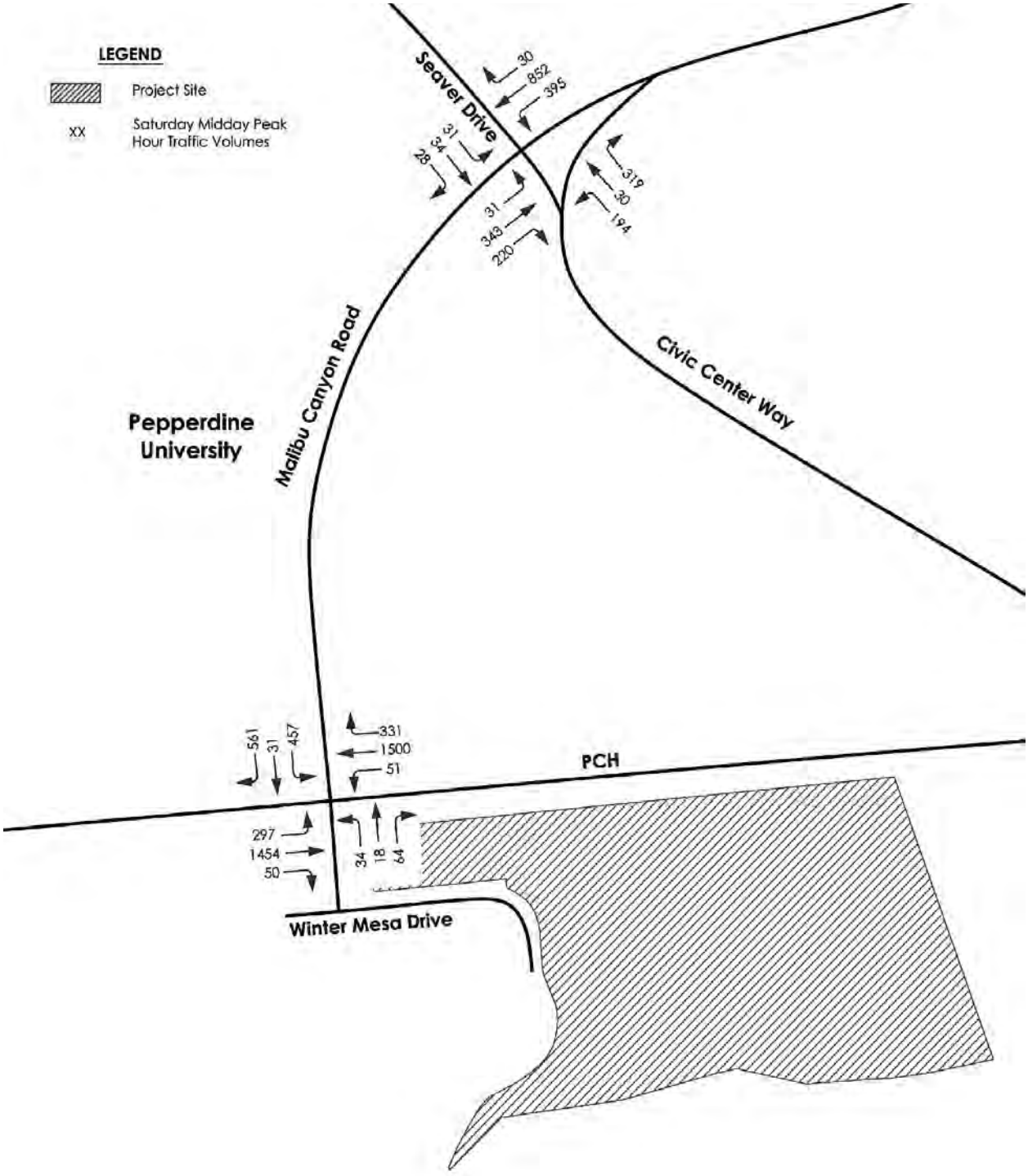


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Opening Year 2017 plus Project with Lot 7 Use-Skate Park, Saturday Peak Hour Traffic



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Levels of Service

Intersections

Table 5.11-18 presents the results of the Future Year 2030 plus Project intersection LOS analysis.

Proposed Project – Single-Family Detached Homes

Based on the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections because the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use –Baseball Field

Based on the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City, the proposed project would create a significant impact at Malibu Canyon Road/PCH as this intersection is forecast to continue to operate at LOS E (0.988 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).

If a baseball field is developed on Lot 7 in the future, with mitigation, impacts would be less than significant.

The proposed project and dedicated Lot 7 developed as a baseball field would not create any significant impacts to the other study area intersections as the project-added V/C increases are less than the City's thresholds.

Proposed Project with Lot 7 Use –Skate Park

Based on the Future Year 2030 plus Project with Lot 7 Use (Skate Park) LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections because the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-19 presents the results of the Future Year 2030 plus Project roadway segment LOS analysis. Based on this analysis, the proposed project would not create any significant impacts to the study area roadway segments because the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project – Single-Family Detached Homes

Based on the Future Year 2030 plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments because the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use –Baseball Field

Based on the Future Year 2030 plus Project with Lot 7 Use (Baseball Field) LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use –Skate Park

Based on the Future Year 2030 plus Project with Lot 7 Use (Skate Park) LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

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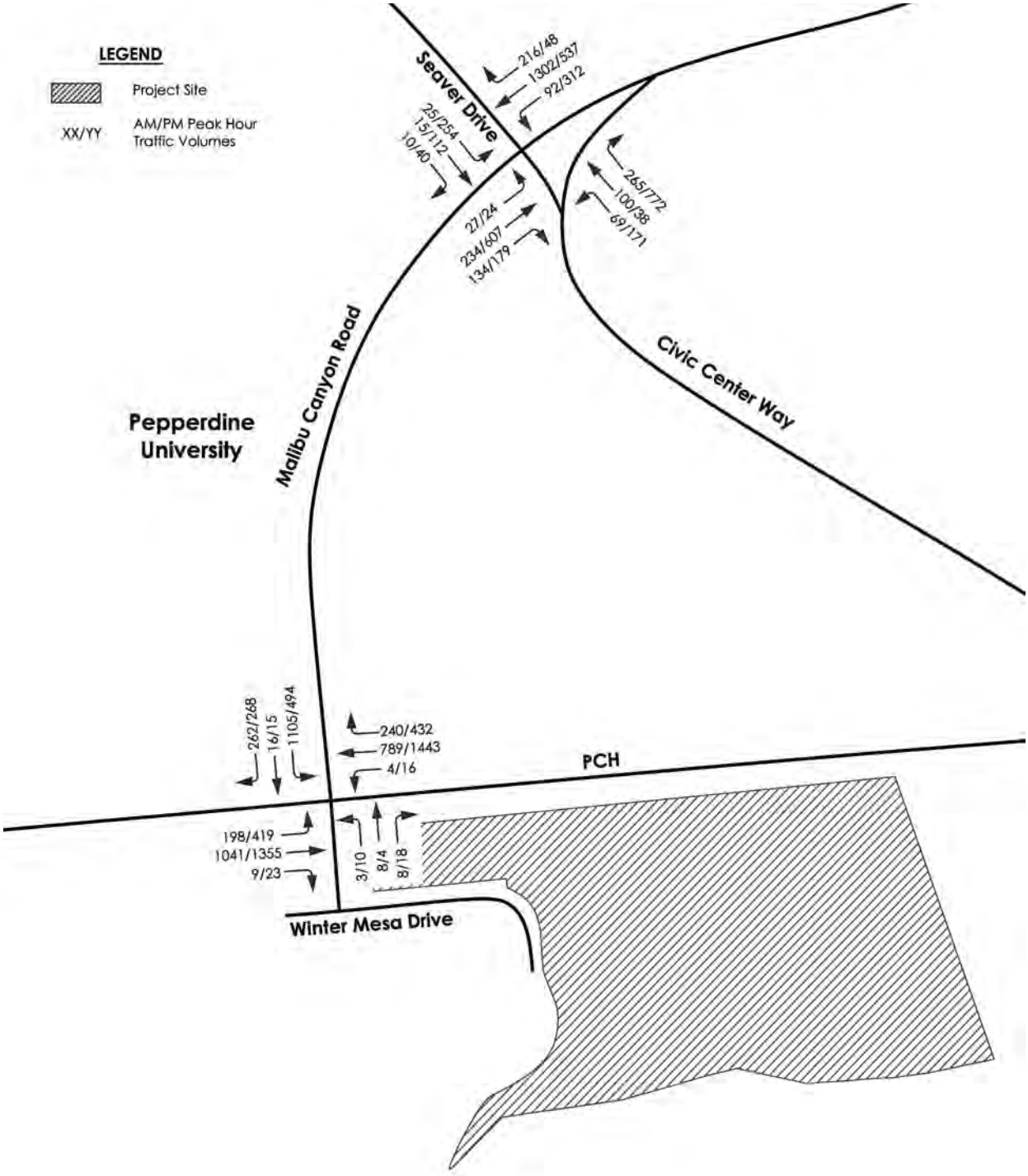
Table 5.11-18 Future Year 2030 plus Project Intersection Level of Service Summary

	Opening Year 2017 Baseline						Opening Year 2017 plus Project						V/C Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
Intersection	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	Midday
PROPOSED PROJECT (five single family homes)															
1. Malibu Canyon Rd/PCH	0.879	D	0.880	D	0.956	E	0.880	D	0.880	D	0.957	E	+0.001	0.000	+0.001
2. Malibu Cyn Rd/Civic Cntr Way	0.638	B	0.954	E	0.722	C	0.638	B	0.954	E	0.723	C	0.000	0.000	+0.001
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD															
1. Malibu Canyon Rd/PCH	0.879	D	0.880	D	0.956	E	0.880	D	0.888	D	0.968	E	+0.001	+0.008	+0.012
2. Malibu Cyn Rd/Civic Cntr Way	0.638	B	0.954	E	0.722	C	0.638	B	0.956	E	0.725	C	0.000	+0.002	+0.003
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK															
1. Malibu Canyon Rd/PCH	0.879	D	0.880	D	0.956	E	0.880	D	0.881	D	0.959	E	+0.001	+0.001	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.638	B	0.954	E	0.722	C	0.638	B	0.955	E	0.723	C	0.000	+0.001	+0.001
	Future Year 2030 Baseline						Future Year 2030 plus Project						V/C Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
Intersection	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	**PM**	**Midday**
PROPOSED PROJECT (five single family homes)															
1. Malibu Canyon Rd/PCH	0.897	D	0.899	D	0.976	E	0.898	D	0.900	D	0.977	E	+0.001	+0.001	+0.001
2. Malibu Cyn Rd/Civic Cntr Way	0.645	B	0.964	E	0.731	C	0.645	B	0.965	E	0.731	C	0.000	+0.001	+0.001
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD															
1. Malibu Canyon Rd/PCH	0.897	D	0.899	D	0.976	E	0.898	D	0.908	E	0.988	E	+0.001	+0.008	**+0.012**
2. Malibu Cyn Rd/Civic Cntr Way	0.645	B	0.964	E	0.731	C	0.645	B	0.967	E	0.734	C	0.000	+0.003	+0.003
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK															
1. Malibu Canyon Rd/PCH	0.897	D	0.899	D	0.976	E	0.898	D	0.901	D	0.979	E	+0.001	+0.002	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.645	B	0.964	E	0.731	C	0.645	B	0.966	E	0.732	C	0.000	+0.002	+0.001

Table 5.11-19 Future Year 2030 plus Project Roadway Segment Level of Service Summary

Intersection		Future Year 2030 Baseline						Future Year 2030 plus Project						Density Increase		
		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	AM	PM	Midday
PROPOSED PROJECT – Single-Family Detached Homes																
1. PCH, John Tyler to Malibu Cnyn	EB	11.3	B	16.2	B	16.9	B	11.3	B	16.2	B	16.9	B	0.0	0.0	0.0
	WB	9.1	A	15.8	B	19.6	C	9.1	A	15.8	B	19.6	C	0.0	0.0	0.0
2. PCH, Malibu Cnyn to Webb Wy	EB	19.6	C	17.0	B	18.8	C	19.6	C	17.0	B	18.8	C	0.0	0.0	0.0
	WB	9.2	A	17.8	B	18.2	C	9.2	A	17.8	B	18.2	C	0.0	0.0	0.0
3. Malibu Cnyn, PCH to Civic Cntr	NB	5.1	A	9.4	A	7.1	A	5.1	A	9.4	A	7.1	A	0.0	0.0	0.0
	SB	15.7	B	8.8	A	12.1	B	15.7	B	8.8	A	12.1	B	0.0	0.0	0.0
PROPOSED PROJECT WITH LOT 7 USE – Single-Family Detached Homes and a Baseball Field																
1. PCH, John Tyler to Malibu Cnyn	EB	11.3	B	16.2	B	16.9	B	11.3	B	16.3	B	17.2	B	0.0	+0.1	+0.3
	WB	9.1	A	15.8	B	19.6	C	9.2	A	15.9	B	19.9	C	+0.1	+0.1	+0.3
2. PCH, Malibu Cnyn to Webb Wy	EB	19.6	C	17.0	B	18.8	C	19.6	C	17.1	B	19.0	C	0.0	+0.1	+0.2
	WB	9.2	A	17.8	B	18.2	C	9.2	A	18.0	B	18.4	C	0.0	+0.2	+0.2
3. Malibu Cnyn, PCH to Civic Cntr	NB	5.1	A	9.4	A	7.1	A	5.1	A	9.4	A	7.2	A	0.0	0.0	+0.1
	SB	15.7	B	8.8	A	12.1	B	15.7	B	8.9	A	12.1	B	0.0	+0.1	0.0
PROPOSED PROJECT WITH LOT 7 USE – Single-Family Detached Homes and a Skate Park																
1. PCH, John Tyler to Malibu Cnyn	EB	11.3	B	16.2	B	16.9	B	11.3	B	16.3	B	17.2	B	0.0	+0.1	+0.3
	WB	9.1	A	15.8	B	19.6	C	9.2	A	15.9	B	19.9	C	+0.1	+0.1	+0.3
2. PCH, Malibu Cnyn to Webb Wy	EB	19.6	C	17.0	B	18.8	C	19.6	C	17.0	B	18.9	C	0.0	0.0	+0.1
	WB	9.2	A	17.8	B	18.2	C	9.2	A	17.9	B	18.3	C	0.0	+0.1	+0.1
3. Malibu Cnyn, PCH to Civic Cntr	NB	5.1	A	9.4	A	7.1	A	5.1	A	9.4	A	7.1	A	0.0	0.0	0.0
	SB	15.7	B	8.8	A	12.1	B	15.7	B	8.8	A	12.2	B	0.0	0.0	+0.1

Year 2030 Baseline, Weekday Peak Hour Traffic

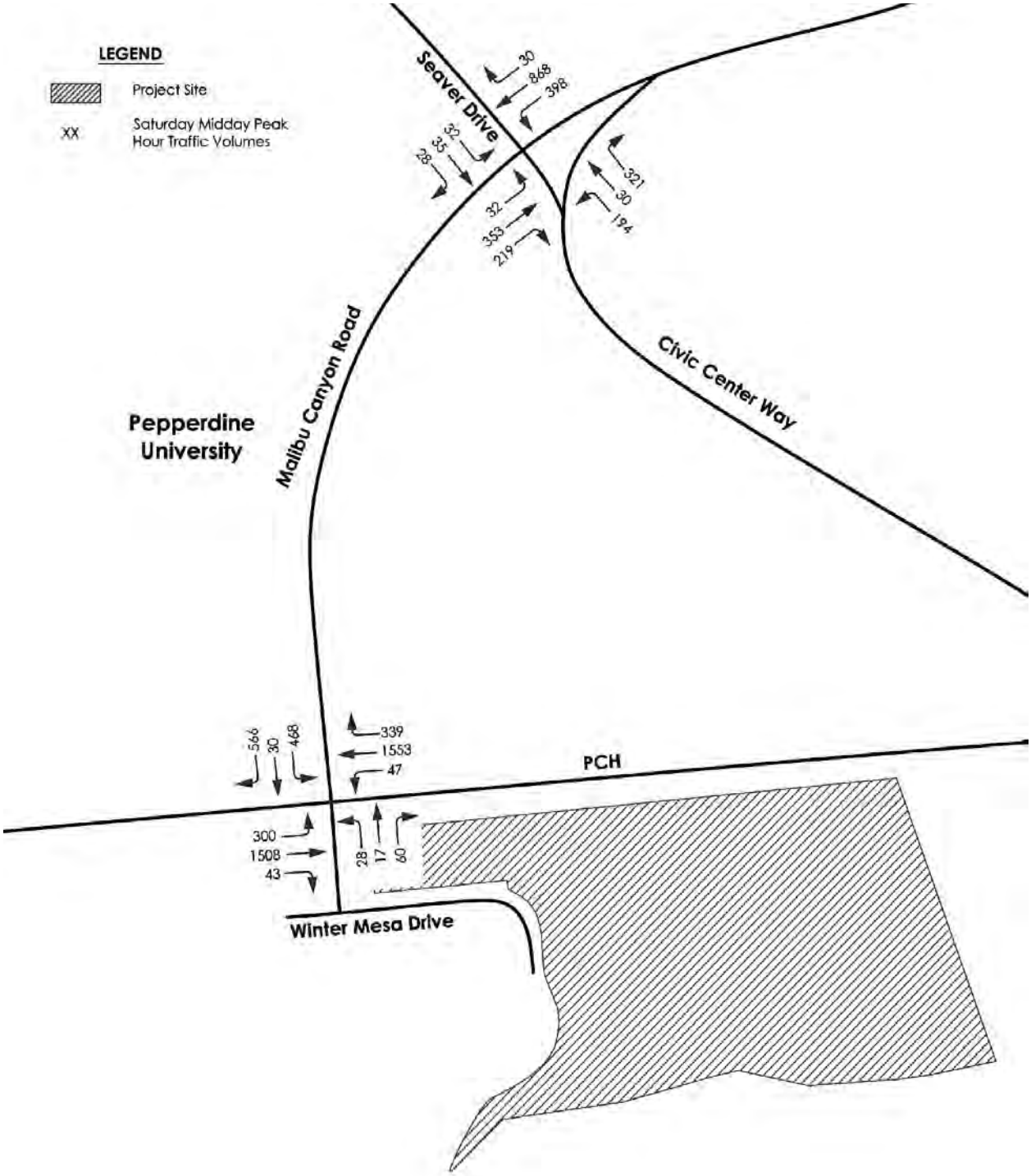


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Year 2030 Baseline, Saturday Peak Hour Traffic

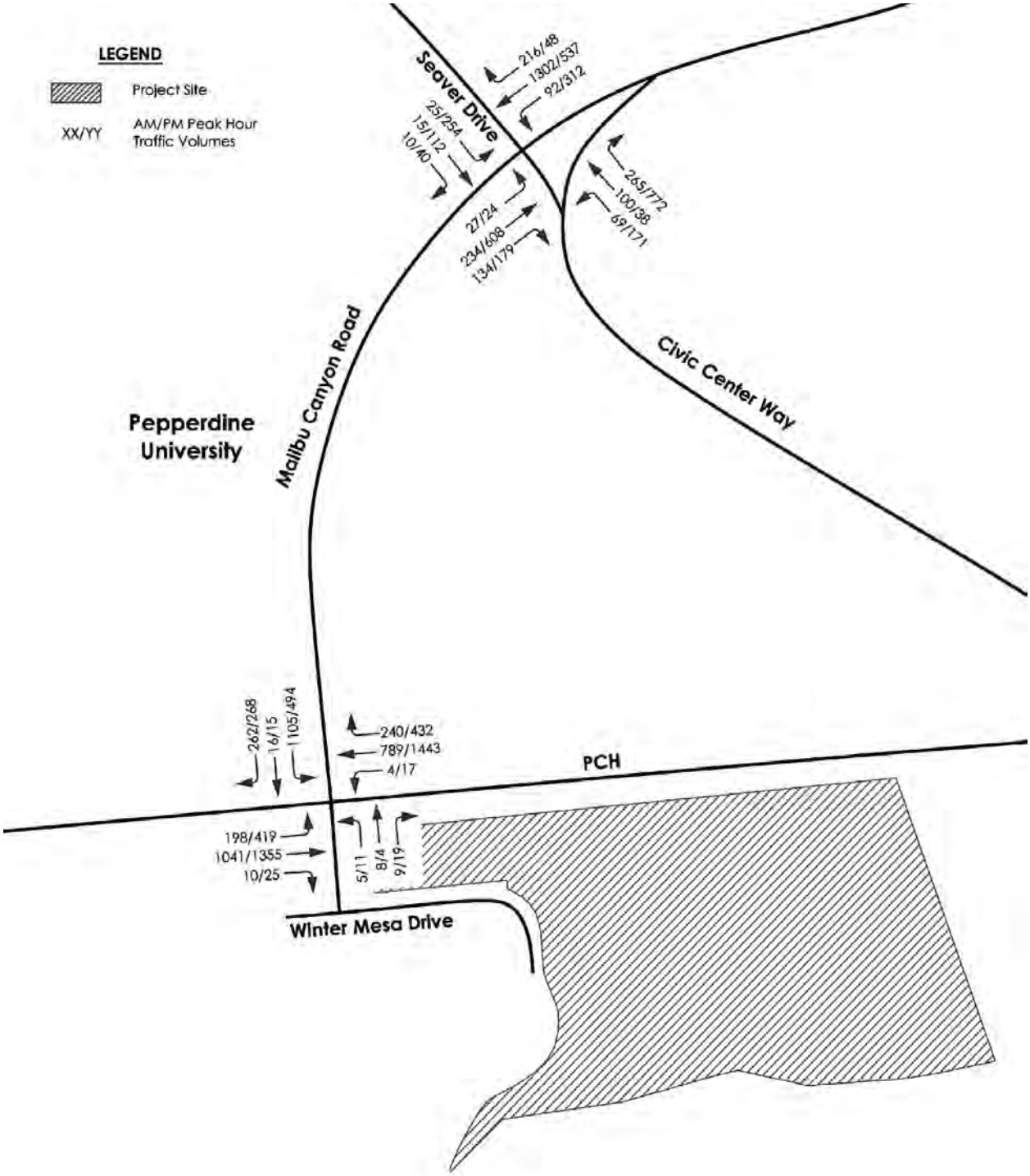


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Year 2030 plus Project, Weekday Peak Hour Traffic

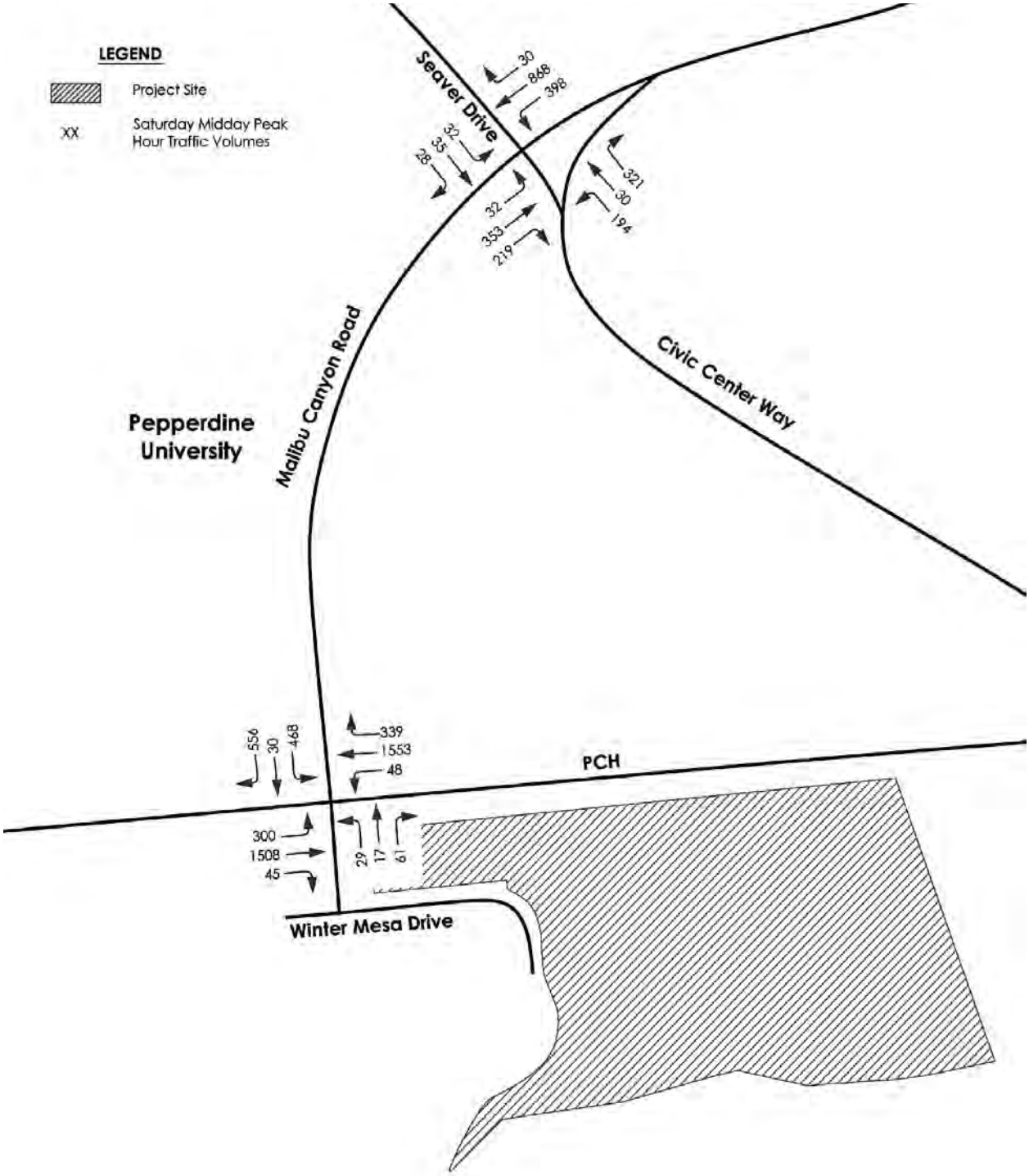


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Year 2030 plus Project, Saturday Peak Hour Traffic

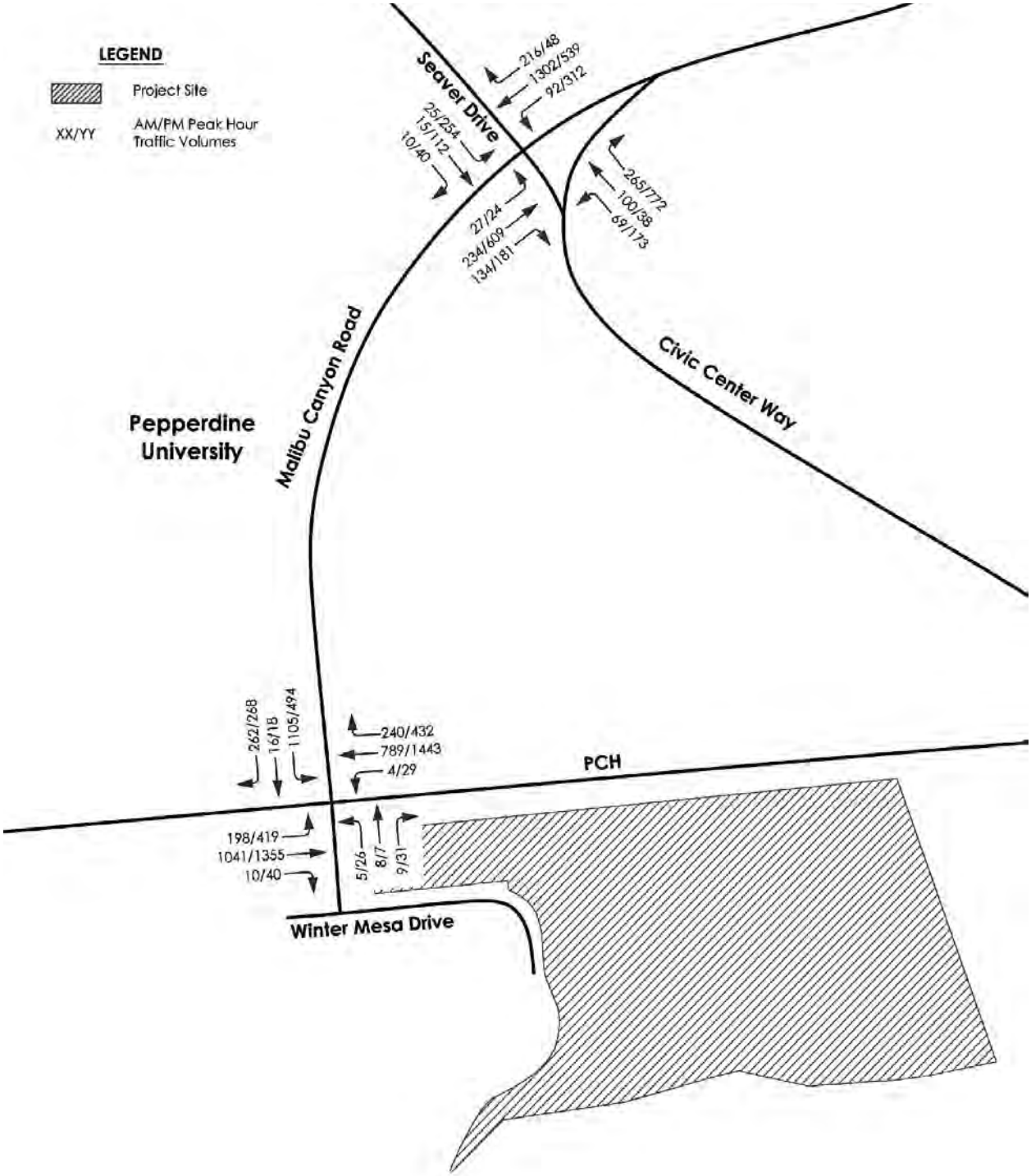


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Source: Arch Beach Consulting 2013

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Year 2030 plus Project with Lot 7 Use-Baseball Field, Weekday Peak Hour Traffic

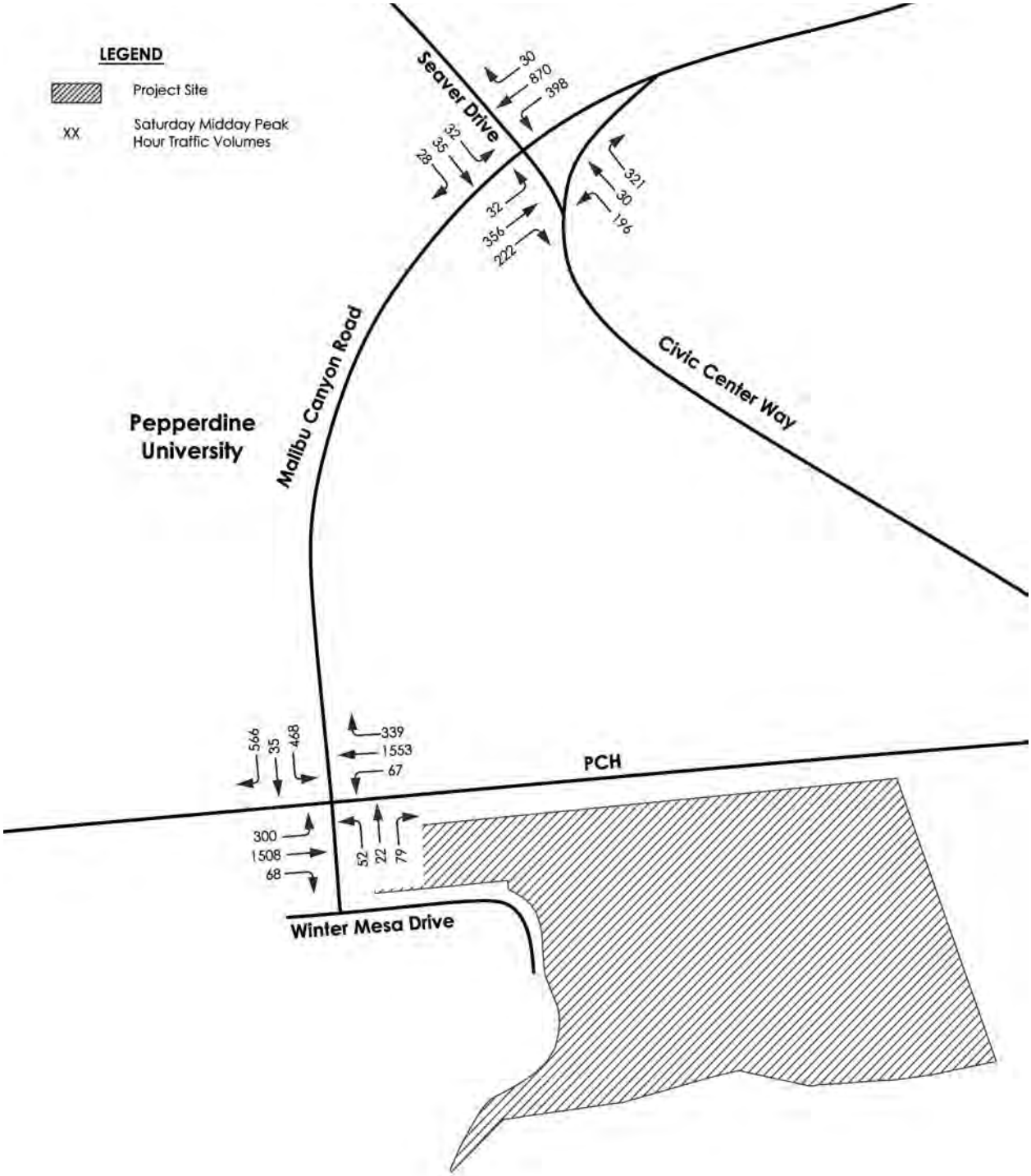


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Year 2030 plus Project with Lot 7 Use-Baseball Field, Saturday Peak Hour Traffic

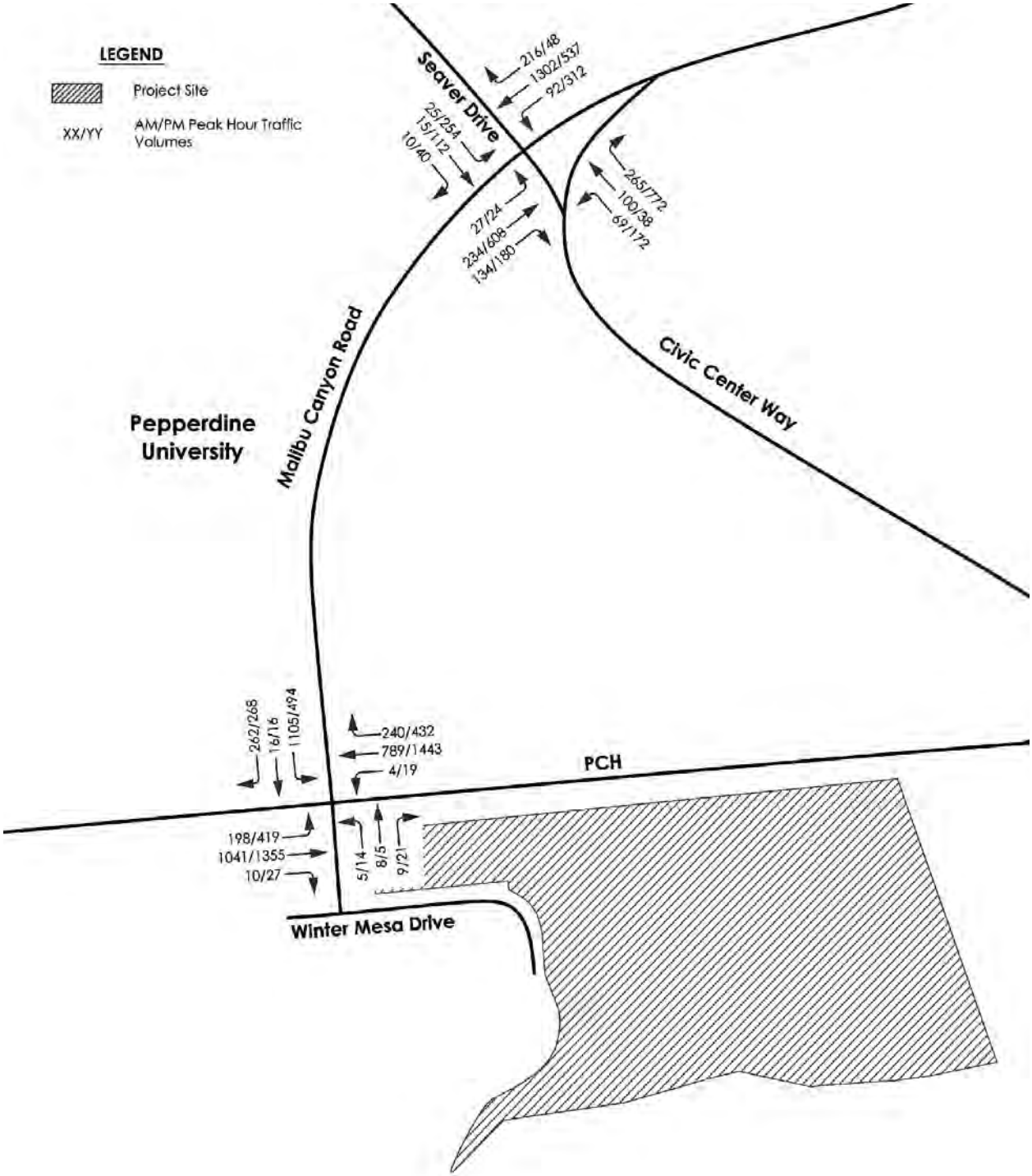


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Year 2030 plus Project with Lot 7 Use-Skate Park, Weekday Peak Hour Traffic

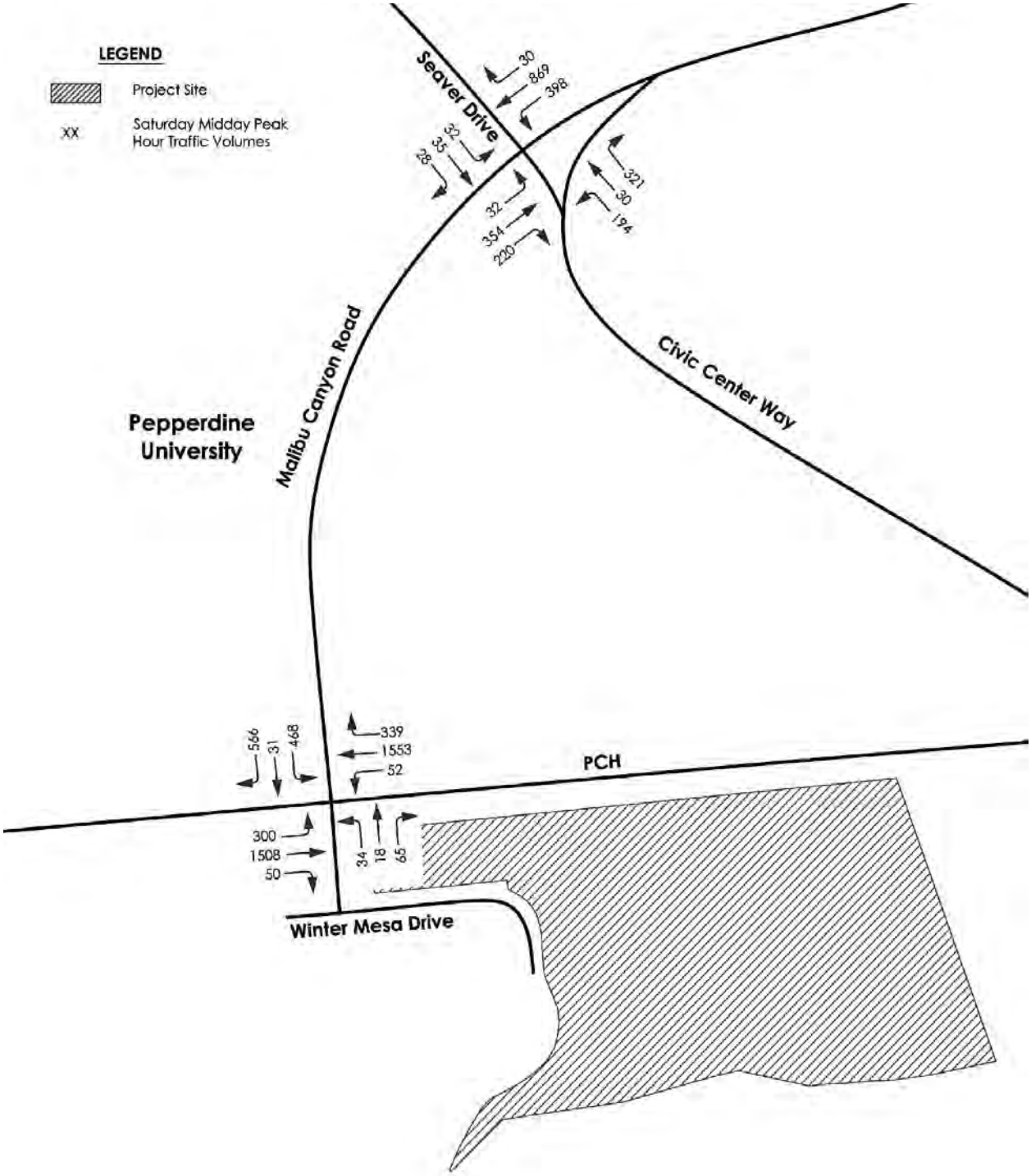


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Year 2030 plus Project with Lot 7 Use-Skate Park, Saturday Peak Hour Traffic



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IMPACT 5-11-2: Project-related trip generation in combination with existing and proposed cumulative development would not result in designated road and/or highways exceeding county congestion management agency service standards. [Threshold T-2]

Impact Analysis: Based on the City's TIA Guidelines, the traffic analysis must study all CMP facilities that may be substantially affected by the project in a manner consistent with current CMP guidelines. According to the Guidelines for CMP Transportation Impact Analysis, a traffic analysis shall address all CMP arterial monitoring intersections where the proposed project would add 50 or more trips during the weekday peak hour and any mainline freeway monitoring locations where the project would add 150 or more trips in either direction during the peak hour. The only CMP arterial roadway in the vicinity of the project site is PCH (SR 1), which runs along the north edge of the project site. Because the intersection of Malibu Canyon Road/PCH is a CMP arterial monitoring location, this intersection was evaluated in the traffic impact analysis. According to the CMP criteria for determining a significant impact, a CMP intersection would be significantly impacted if the project would result in an increase in the V/C ratio of 0.02 or greater at an intersection that is projected to operate at LOS F. Other CMP intersections in the project vicinity are PCH at Decker Canyon Road, Kanan Dune Road, and Las Flores Canyon Road.

Based on the assumed distribution of project-generated traffic, a maximum of 50 percent of the project traffic would travel through any of these intersections, which equates to less than 50 trips during the peak hours. Because the resulting project trip assignment would be below the CMP threshold of 50 peak hour trips, a CMP traffic analysis was not required for these other arterial monitoring intersections. With regard to freeways, there are no freeways in the project area. The project would not, therefore, add 150 or more trips to a freeway, and a CMP freeway analysis would not be required.

The project's impacts are well below the CMP thresholds cited above, and the project would not exceed a level of service standard established by the county congestion management agency. No impacts would occur.

IMPACT 5.11-3: Project circulation improvements have been designed to adequately address potentially hazardous conditions (sharp curves, etc.), potential conflicting uses, and emergency access. [Threshold T-4]

Impact Analysis: The proposed project would use the same access and circulation features that are already in place at the project site, which were designed in conformance with the City of Malibu, Los Angeles County, and Caltrans standards. The project would require a new intersection on Winter Mesa Road south of Pacific Coast Highway; this would be designed in conformance with the City of Malibu's standards. The project would not result in any sharp curves or dangerous intersections. The proposed residential units and recreation facilities are essentially an expansion or intensification of existing uses in the site vicinity, so the proposed uses would be compatible. The proposed project would not, therefore, substantially increase hazards due to a design feature or incompatible uses, and no impacts would occur as a result of the project.

IMPACT 5.11-4: Adequate parking would be provided for the proposed project . [Threshold T-6]

Impact Analysis:

Project with Baseball Field Alternative

Parking for the proposed residential units would be provided in the driveways and garages and along the private access road that serves the five residential units. Parking for the baseball field would be provided in a new parking lot that is proposed to be constructed between the new baseball field and Winter Mesa Drive.

As currently envisioned, a future new parking lot on dedicated Lot 7 would have 94 parking stalls (90 standard stalls and 4 handicapped spaces). In conjunction with the development of the project, the existing east–west segment of Winter Mesa Drive and the north–south segment of Winter Mesa Drive that ends in a cul-de-sac would be eliminated. Parallel parking is currently accommodated along both sides of Winter Mesa Drive, and an estimated 40 cars can be parked at this location. With 94 parking spaces provided in the proposed parking lot and 40 existing parallel spaces eliminated, the net increase in the overall number of parking spaces would be 54. The estimate of 40 existing parallel parking spaces was calculated by dividing the length of the available parking area (875 linear feet) by an average length of 22 feet per parking space (875 ÷ 22 = 40 vehicles).

The existing parking lot at Malibu Bluffs Park contains 81 spaces, with an additional 40 vehicles that can be parallel parked along both sides of Winter Mesa Drive. As shown in Table 5.11-28, the total number of parking spaces to serve the existing Malibu Bluffs Park and any future recreational uses would be 175 spaces (81 existing spaces plus 94 proposed spaces).

Table 5.11-28
Public Parking Space Summary

Type	Existing	Proposed	New Grand Total
Standard	77	90	167
Handicapped	4	4	8
Parallel	40	0	0
Total	121	94	175

Weekday Peak Parking Demand

The projected weekday peak parking demand for a future new baseball field on dedicated Lot 7 would be 30 vehicles per game, which is based on the assumptions outlined previously in Impact 5.11-1. If the scheduling of the games is closely spaced, the parking demand could be as high as 60 vehicles during the interval when the participants of a game arrive at the site while the participants of a preceding game have not yet departed. The peak weekday parking demand for the baseball field (assuming 60 vehicles) would not be totally accommodated by the proposed 54 (net) additional parking stalls; however, the deficiency of six spaces would not constitute a significant parking impact because the demand of 60 vehicles represents a worst-case scenario where all 30 vehicles associated with a completed game would overlap with all 30 vehicles associated with the next game. The six vehicles would likely be waiting in the drive aisles of the parking lot for spaces to become available as people from the previous games leave the baseball field, or would park along Malibu Canyon Road and walk to the baseball field. The analysis does not take into account the 81 existing parking spaces that will remain in place. Since this worst-case scenario would occur infrequently and would have a short duration (10 to 15 minutes), the deficiency of six spaces would not constitute a significant parking impact.

Saturday Peak Parking Demand

The projected Saturday peak parking demand for a future new baseball field on dedicated Lot 7 would be 46 vehicles per game, which is based on the assumptions outlined previously in Impact 5.11-1. If the scheduling of the games is

closely spaced, the parking demand could be as high as 92 vehicles during the interval when the participants of a game arrive at the site while the participants of a preceding game have not yet departed. The peak Saturday parking demand for the baseball field (assuming 92 vehicles) would also not be accommodated by the proposed 54 additional parking stalls. This deficiency of 38 spaces may constitute a significant parking impact, however, it assumes a worst-case scenario where all 46 vehicles associated with a completed game would overlap with all 46 vehicles associated with the next game. The 38 vehicles would likely be waiting in the drive aisles of the parking lot for spaces to become available as people from the previous games leave the baseball field, or would park along Malibu Canyon Road and walk to the baseball field. This worst-case scenario would occur infrequently and would have a short duration (10 to 15 minutes).

The conclusion of the parking analysis is that the proposed project (5 single-family homes) would have no impacts. The proposed project with the future baseball field on dedicated Lot 7 would not result in a significant impact during typical weekday operations because the proposed increase in the number of parking spaces (54 spaces) would accommodate the anticipated parking demand of 30 vehicles during a baseball game and would only be six spaces deficient of accommodating the worst-case parking demand of 60 vehicles (when all of the vehicles from two consecutive games were to be on site at the same time). During typical Saturday operations, the proposed project would not result in a significant impact because the proposed increase in the number of parking spaces (54 spaces) would accommodate the anticipated parking demand of 46 vehicles during a baseball game. However, assuming worst-case conditions, when all of the vehicles from two consecutive games were to be on site at the same time (92 vehicles), there would be a deficiency of 38 spaces onsite.

Malibu Bluffs Park Parking Demand

According to staff at the City of Malibu, up to 250 people use the existing Malibu Bluffs Park at any given time, which results in a parking demand of 125 vehicles. This parking demand can be accommodated by the 125 existing parking spaces at the park. However, during special events or during times when the patronage at the park is particularly heavy, the parking demands cannot be accommodated onsite.

The impacts would not be particularly problematic on days when Malibu Bluffs Park operates at typical conditions because the deficiency of six parking spaces would have a short duration and could be accommodated at other locations within the park. The increase in parking demand associated with the baseball field would, however, aggravate a situation that is already impacted during special events at the park and during times of peak park utilization.

Project with Skate Park Alternative

Parking for the proposed residential units would be provided in the driveways and garages and along the private access road that serves the five residential units. Parking for a future skate park on dedicated Lot 7 would be provided in a new parking lot that would be constructed between the new skate park and Winter Mesa Drive.

As described above, 94 parking spaces (90 standard stalls and four handicapped spaces) would be provided and 40 existing parallel spaces would be eliminated, for a net increase of 54 parking spaces. In conjunction with this possible development , the existing east-west segment of Winter Mesa Drive and the north-south segment of Winter Mesa Drive that ends in a cul-de-sac would be eliminated. Parallel parking is currently accommodated for along both sides of Winter Mesa Drive and an estimated 40 cars can be parked at this location. As 94 parking spaces would be provided in the proposed parking lot and as 40 existing parallel spaces would be eliminated, the net increase in the overall number of parking spaces would be 54 spaces. The estimate of 40 existing parallel parking spaces was calculated by dividing the length of the available parking area (875 linear feet) by an average length of 22 feet per parking space (875 ÷ 22 = 40 vehicles).

The projected parking demand for a future skate park on dedicated lot 7 would be 10 vehicles, which is based on the assumption that up to 20 people would be using the skate park at any given time and that the average vehicle occupancy would be two persons per vehicle. The parking demand for a future skate park alternative (10 vehicles) would be accommodated by 54 additional parking stalls, and parking impacts would be less than significant.

The parking impacts of a future skate park alternative for dedicated Lot 7 would be less than significant because the proposed increase in the number of parking spaces (54 spaces) would accommodate the anticipated parking demand of the skate park (10 vehicles).

5.11.4 Cumulative Impacts

As discussed in Impact 5.11-1, the traffic analysis that was conducted for the proposed project included a cumulative analysis of the impacts of other proposed development projects. The future baseline traffic conditions without the project for the target year of completion (2017) as well and General Plan Buildout (2030) were estimated by considering the effects of general ambient regional growth as well as the cumulative increase in traffic volumes that would be generated by other development projects proposed in the area. The future baseline traffic volume projections included the increased levels of traffic that would occur at the study area roadways and intersections as a result of the cumulative traffic that would be generated by other proposed development projects, which were provided by staff at the City of Malibu.

Proposed Project (five single family homes)

Based on the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Opening Year 2017 plus Project and the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City, the proposed project with the future development of dedicated Lot 7 as a baseball field would create a significant impact at Malibu Canyon Road/PCH as this intersection is forecast to continue to operate at LOS E (0.988 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).**Proposed Project with Lot 7 Use – Skate Park**

Based on the Future Year 2030 plus Project with Lot 7 Use – Skate Park LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project with future development of Lot 7 would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Up to 250 people use the existing Malibu Bluffs Park at any given time, which results in a parking demand of 125 vehicles. With future development of dedicated Lot 7 as baseball field, a peak demand of 217 spaces could occur under maximum usage of the Malibu Bluffs Park and the new (third) baseball field (125 existing demand plus 92 new demand during overlapping games on Saturday). This would result in an overall park parking shortfall of 42 spaces (217 spaces minus 175 spaces).

The impacts would not be particularly problematic on weekdays days when Malibu Bluffs Park operates at typical conditions because the deficiency of six parking spaces would have a short duration and could be accommodated at other locations within the park. The increase in parking demand associated with the baseball field would, however, aggravate a situation that is already impacted during special events at the park and during times of peak park utilization.

Without mitigation, the cumulative impacts would be significant.

5.11.5 Existing Regulations and Standard Conditions

- Los Angeles County CMP
- City of Malibu General Plan
- City TIA Guidelines

5.11.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant:

- Impact 5.11-2 The proposed project would not exceed a level of service standard established by the county congestion management agency.
- Impact 5.11-3 The proposed project would not result in any traffic hazards.

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.11-1 The proposed project with development of dedicated Lot 7 as a baseball field option would result in a substantial increase in traffic in Opening Year 2017 and Future Year 2030.
- Impact 5.11-4 Development of dedicated Lot 7 with recreational uses would increase the need for parking, which, in combination with special events at Malibu Bluffs Park, or times of peak park use, could result in inadequate parking at the site.
- Cumulative Impacts The proposed project and future development of dedicated Lot 7 with active recreational uses would contribute to a cumulatively significant parking demand impact and to a cumulatively considerable impact to the level of service of the intersection of PCH and Malibu Canyon Road.

5.11.7 Mitigation Measures

Impact 5.11-1

11-1 Prior to recordation of the final map, the Project Applicant(s) shall construct the following improvements at the intersection of Malibu Canyon Road/PCH (See Draft EIR Figure 5.11-29, *Depiction of Mitigation Measure 11-1*):

- Re-stripe the existing southbound through plus left-turn lane on Malibu Canyon Road (at its intersection with Pacific Coast Highway) to a through plus left- and right-turn lane.
- Either modify the existing traffic signal to remove the right-turn overlap phase to a standard right-turn-on-red (RTOR) permissive phase resulting in LOS E at 0.930 V/C OR;
- Keep right turn overlap phase for existing #2 (outside) dedicated right-turn lane on Malibu Canyon Road (at its intersection with Pacific Coast Highway) resulting in LOS E at 0.901 V/C.

Impact 5.11-4

11-2 Prior to obtaining the last Building Permit for the recreational facilities, the City Parks and Recreation Department shall prepare and implement a Parking Management Plan that demonstrates that adequate onsite and/or offsite parking shall be provided during special events and/or other times when it is anticipated that Malibu Bluffs Park would operate at over-capacity conditions relative to parking demand. The Parking Management Plan shall preclude the use of the proposed baseball field when Malibu Bluffs Park would operate at over-capacity conditions relative to parking demand. In addition, the Parking Management Plan will require the City Parks and Recreation Department to schedule baseball games with at least a half-hour to 45 minute interval between games so that the parking demand of two consecutive games would not overlap. To accommodate this longer interval between games, less than 10 games per day would be permitted.

5.11.8 Level of Significance After Mitigation

Proposed Project with Lot 7 Use – Baseball Field

Based on the Opening Year 2017 and the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City, the proposed project with the future development of dedicated Lot 7 as a baseball field would create a significant impact at Malibu Canyon Road/PCH as this intersection is forecast to continue to operate at LOS E (0.988 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).However, the impact is less than significant based on the County of Los Angeles CMP criteria. The proposed project with future development of Lot 7 would not create any significant impacts to the other study area intersections as the project-added V/C increases are less than the City's thresholds.

Future development of the site with the proposed project (5 single-family homes) and Lot 7 with a baseball field would result in a substantial increase in traffic in Opening Year 2017 and Future Year 2030 if the intersection of PCH and Malibu Canyon Road/Winter Mesa Road, which is operated and maintained by Caltrans, is not improved. However, re-striping the existing southbound through plus left-turn lane on PCH to a through plus left- and right-turn lane does not require Caltrans approval because the restriping would occur on Malibu Canyon Road, and is within the City's public right-of-way. Furthermore, the City Public Works Department has determined that the preference is to keep the right turn overlap phase for the existing No. 2 Lane dedicated right-turn lane on PCH (status quo) because it will result in a higher level of service than modifying the existing traffic signal to remove the right turn overlap phase to a standard right-turn-on-red permissive phase. Therefore, the mitigation measures do not require approval from Caltrans. Implementation of mitigation measure 11-1 would reduce impacts to a less than significant level.

Parking Demand

Development of the proposed project (5 single-family homes) would not result is cumulative parking impacts. Development of the proposed project (5 single-family homes) and future development of dedicated Lot 7 as a skate park also would not result is cumulative parking impacts. With future development of dedicated Lot 7 as baseball field, a peak demand of 217 spaces could occur under maximum usage of the Malibu Bluffs Park and the new (third) baseball field (125 existing demand plus 92 new demand during overlapping games on Saturday). This would result in an overall park parking shortfall of 42 spaces (217 spaces minus 175 spaces). The impacts would not be particularly problematic on weekdays days when Malibu Bluffs Park operates at typical conditions because the deficiency of six parking spaces would have a short duration and could be accommodated at other locations within the park. The increase in parking demand associated with the baseball field would, however, aggravate a situation that is already impacted during special events at the park and during times of peak park utilization. With mitigation measure 11-2, the cumulative impacts related to parking would be less than significant.

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Depiction of Mitigation Measure 11-1



0 40
Scale (Feet)

Source: Arch Beach Consulting 2013

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5.11 TRANSPORTATION AND TRAFFIC

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Crummer Site Subdivision to result in transportation and traffic impacts in the City of Malibu. The analysis in this section is based in part on the following technical report:

~~*Traffic Impact Analysis, Crummer Site Subdivision City of Malibu*, California, Arch Beach Consulting, December 2012.~~

- Arch Beach Consulting. 2013, September. Revised Traffic Impact Analysis Crummer Site Subdivision City Of Malibu, CA.

A complete copy of ~~this~~ the study is included in Appendix ~~Q~~ G of ~~this document~~the FEIR.

5.11.1 Environmental Setting

Study Area Boundary

Figure 5.11-1, *Project Location and Study Area Intersections* illustrates the project site location, study area, and intersection traffic control and geometrics. Local access to the project site is provided by Malibu Canyon Road/Winter Mesa Drive and PCH. These intersections are shown in Figure 5.11-1, *Project Location and Study Area Intersections.*

- Malibu Canyon Road/Pacific Coast Highway – State Route 1 (PCH – SR 1)
- Malibu Canyon Road/Seaver Drive – Civic Center Way

The signalized intersection of PCH and Malibu Canyon Road/Winter Mesa Road is operated and maintained by Caltrans. The signalized intersection of Malibu Canyon Road and Civic Center Way/Seaver Drive is operated and maintained by the City of Malibu.

Methodology

Intersections

The signalized study area intersections were analyzed using the Intersection Capacity Utilization (ICU) methodology for weekday and Saturday peak hour levels of service (LOS). The ICU method determines the volume-to-capacity (V/C) ratio on a critical lane basis and determines LOS associated with each critical V/C ratio at the signalized intersection. The results of the analysis must be compared to the City's significance criteria as established in the Traffic Impact Analysis (TIA) Guidelines

Roadway Segments

The study area roadway segments were analyzed using the City's TIA Guidelines and Highway Capacity Manual (HCM) methodology as prescribed in the City's TIA Guidelines. The Highway Capacity Software (HCS) Multilane Highways module was used to calculate LOS values for each study area roadway segment. HCS calculates the density of the subject roadway segment in terms of passenger cars per lane per mile (pcplpm) and assigns a specific level of service (LOS A–F).

The degree of congestion at an intersection is described by the level of service, which ranges from LOS A to LOS F, with LOS A representing free-flow conditions with little delay and LOS F representing over-saturated traffic flow throughout the peak hour. A complete description of the meaning of level of service can be found in the Highway

Research Board Special Report 209, Highway Capacity Manual (HCM 2000). Brief descriptions of the six levels of service for signalized intersections are shown in Table 5.11-1, *Level of Service Definitions* and Table 5.11-2, *Level of Service Descriptions* provides detailed descriptions of each level of service

Table 5.11-1
Level of Service Definitions

Level of Service	V/C Ratio or ICU (signalized)	Control Delay in Seconds (unsignalized)
A	0.00 – 0.60	0.0–10.0 seconds
B	0.61 – 0.70	10.1–15.0 seconds
C	0.71 – 0.80	15.1–25.0 seconds
D	0.81 – 0.90	25.1–35.0 seconds
E	0.91 – 1.00	35.1–50.0 seconds
F	1.01 or greater	50.1 seconds or greater

Table 5.11-2
Level of Service Descriptions

LOS	Description
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

Figure 5.11-1 Project Location and Study Area Intersections

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Regulatory Setting

The roadway network in the study area that would serve as an access system for the project site is within the jurisdiction of three public agencies: Caltrans, Los Angeles County, and the City of Malibu. These agencies are responsible for the operation and maintenance of the study area roadways. The implementation of any proposed mitigation measures regarding the roadway network would, therefore, be subject to approval by the responsible public agency. With regard to the roadways that were addressed in this analysis, PCH is a Caltrans facility, Malibu Canyon Road is partially a City of Malibu facility and partially a Los Angeles County facility, and Civic Center Way and Winter Mesa Drive are City of Malibu facilities. Any modifications to the operation of a roadway by the project applicant and/or a contractor would require the issuance of an encroachment permit by the responsible agency prior to the proposed action.

City of Malibu Standards

Development projects that have the potential to substantially affect the City of Malibu's current transportation system may be required to prepare a TIA. The goal of TIA is to identify the roadway network improvements that would be required to ensure that the road network will operate efficiently upon completion of the project. The City will consider the requirement of a TIA on a case-by-case basis as development projects are brought forward for consideration. The City TIA guidelines streamline the approval process and provide a standardized framework to follow when submitting studies for review. The City TIA guidelines include specific thresholds for project related increases in the V/C of study intersections and roadways. Table 5.11-3, *City of Malibu Significance Criteria*, illustrates the V/C ratio increases that are considered significant impacts. According to the City, an intersection would be significantly impacted by a project if the project would result in an increase in the V/C ratio of 0.02 or greater at an intersection that is projected to operate at LOS F, or 0.01 at an intersection operating at LOS E or F.

Table 5.11-3
City of Malibu Significance Criteria

Level of Service (LOS)	Preproject V/C	Project Related V/C increase
C	> 0.70–0.80	equal to or greater than 0.040
D	> 0.80–0.90	equal to or greater than 0.020
E, F	> 0.90 or more	equal to or greater than 0.010

Congestion Management Program Standards

The Los Angeles County Metropolitan Transportation Authority is responsible for implementing the CMP for Los Angeles County. State statute requires that a congestion management program be developed, adopted, and updated biennially for every county that includes an urbanized area, and shall include every city and the county government within that county. The CMP sets LOS standards for specific roadways, referred to as CMP-designated roadways.

According to the Guidelines for CMP Transportation Impact Analysis, which is Appendix B of the Los Angeles County CMP, a traffic analysis shall address all CMP arterial monitoring intersections where the proposed project would add 50 or more trips during the weekday peak hour and any mainline freeway monitoring locations where the project would add 150 or more trips in either direction during the peak hour. The only CMP arterial roadway in the vicinity of the project site is PCH, which runs along the north edge of the project site.

Because the intersection of Malibu Canyon Road/PCH is a CMP arterial monitoring location, this intersection was evaluated in the traffic impact analysis. According to the CMP criteria for determining a significant impact, a CMP

intersection would be significantly impacted by a project if the project would result in an increase in the V/C ratio of 0.02 or greater at an intersection that is projected to operate at LOS F. Other CMP intersections in the project vicinity are PCH at Decker Canyon Road, Kanan Dune Road, and Las Flores Canyon Road. However, the results of the CMP analysis must be compared to the City's significance criteria as established in the TIA Guidelines. According to the City, an intersection would be significantly impacted by a 0.01 increase at an intersection operating at LOS E or F.

Existing Traffic Conditions

Roadway Network

The roadways that provide access to the project vicinity include PCH, Malibu Canyon Road, Civic Center Way, and Winter Mesa Road. PCH is a four-lane, east–west roadway that abuts the north side of the project site. It is designated a Modified Major Arterial in the Circulation Element of the City of Malibu General Plan and an Eligible Scenic Highway by the California Department of Transportation (Caltrans).

Malibu Canyon Road is a north–south roadway that intersects with PCH at the northwest corner of the project site. It has four travel lanes between PCH and Civic Center Way and two travel lanes north of Civic Center Way. Malibu Canyon Road is classified a Major Arterial in the Circulation Element.

Civic Center Way is a two-lane, east–west roadway that intersects with Malibu Canyon Road approximately one-quarter mile north of the project site. The continuation of Civic Center Way west of Malibu Canyon Road on the Pepperdine University campus is called Seaver Drive. Civic Center Way is classified a Collector in the Circulation Element.

Winter Mesa Road is a two-lane roadway that is the continuation of Malibu Canyon Road south of PCH. It is a north–south roadway immediately south of PCH, then curves to the east and runs along the south edge of the project site. Access to the project site would be provided from Winter Mesa Road.

The existing lane configuration and roadway characteristics on the study area roadways and at the intersections are shown on Figure 5.11-1.

Existing Baseline Traffic Volumes

Existing weekday peak hour traffic volumes were collected by the City on July 12, 2012, at both study area intersections. Saturday peak hour counts for both intersections were also collected by the City on July 14, 2012. The weekday traffic counts were taken between the hours of 7:00 and 9:00 a.m., and between 4:00 and 6:00 p.m. The weekend traffic counts were taken between the hours of 12:00 and 3:00 p.m. on a Saturday. The highest one-hour interval of traffic flow was then identified for each of the time periods to quantify the peak hour traffic volumes.

Figure 5.11-2 shows the existing weekday a.m. and p.m. peak hour traffic volumes at the study intersections, while Figure 5.11-3 shows the existing Saturday midday peak hour volumes. The raw traffic volume count sheets are provided in Traffic Study Appendix A (Appendix P of this ~~DEIR~~FEIR).

Figure 5.11-2 Existing Weekday Peak Hour Traffic

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Figure 5.11-3 Existing Saturday Peak Hour Traffic

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Intersection Levels of Service

To quantify the existing baseline traffic conditions, the two study area intersections were analyzed to determine their operating conditions during the weekday morning and afternoon peak hours and the weekend midday peak hour. Based on the peak hour traffic volumes, the turning movement counts, and the existing number of lanes at each intersection, V/C ratios and LOS have been determined at each intersection, as summarized in Table 5.11-4. The LOS calculation sheets are provided in Traffic Study Appendix B (Appendix P of this DEIR)

Table 5.11-4
Existing Intersection Levels of Service

Intersection	Control	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		V/C	LOS	V/C	LOS	V/C	LOS
1. Malibu Canyon Road/PCH	signal	0.785	C	0.738	C	0.824	D
2. Malibu Canyon Rd/Civic Center Way	signal	0.563	A	0.729	C	0.481	A

Note: LOS determined using ICU method.

As shown on Table 5.11-4, the two study area intersections currently operate at levels of service A, B, C, or D during the morning, afternoon, and weekend peak hours.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-5 presents the results of the existing roadway segment LOS analysis, while the LOS calculation sheets are provided in Traffic Study Appendix C.

Table 5.11-5
Existing Roadway Segment Level of Service

Intersection	# Lanes and Median	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS
1. PCH, John Tyler Dr to Malibu Cyn Rd							
- eastbound	2D	9.6	A	13.7	B	13.9	B
- westbound	2D	8.1	A	13.2	B	16.6	B
2. PCH, Malibu Cyn Rd to Webb Way							
- eastbound	2D	17.3	B	13.7	B	14.9	B
- westbound	2D	7.5	A	14.5	B	14.4	B
3. Malibu Cyn Rd, PCH to Civic Center							
- northbound	2U	3.1	A	6.7	A	4.0	A
- southbound	2U	13.7	B	6.0	A	8.7	A

Notes: LOS determined using HCM Multilane Highways Operations method.
# lanes and median: 2D = two lanes divided with median; 2U = two lanes undivided
pcplpm = Roadway segment density expressed in passenger cars per lane per mile.

5.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project could:

T-1 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).

T-2 Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

T-3 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.

T-4 Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

T-5 Result in inadequate emergency access.

T-6 Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

According to the City of Malibu, a project could also have a significant effect on the environment if the project could:

T-7 Result in inadequate parking capacity.

The 2012 Initial Study, included as Appendix C, substantiates that impacts associated with the following thresholds would be less than significant:

- Thresholds T-3, T-5, and T-6

These impacts will not be addressed in the following analysis.

5.11.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the 2012 Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

IMPACT 5.11-1:	The proposed project with dedicated Lot 7 developed with a baseball field option would result in ~~a~~ the most substantial increase in traffic in Opening Year 2017 and Future Year 2030. [Threshold T-1]

Impact Analysis:

The project includes the development of 5 single –family homes and the dedication of Lot 7 to the City of Malibu to expand the portion of Malibu Bluffs Park owned by the City by 1.74 acres to the east and northeast. The City-owned portion of Malibu Bluffs Park currently has two baseball fields, a multipurpose field, the Michael Landon Center, picnic

benches, viewing areas, and an 81-space parking lot. The proposed project will dedicate Lot 7 to the City; however, no physical development related to the recreational use of Lot 7 is proposed at this time. The recreational area has yet to be designed and would not be developed as part of this project.

Although no recreational improvements would be permitted as part of the applicant's current proposal, the land dedication is intended to expand Malibu Bluffs Park. Furthermore, the LCPA and corollary zoning text amendment being requested—including language that specifies the type, density, and intensity of development permitted in the PD zoning designation—applies to all seven lots.

Once Lot 7 is dedicated to the City, active recreation areas, passive recreation areas, and an expanded parking lot are all foreseeable future uses. Based on the community's needs, the City believes that Lot 7 may be developed as a baseball field (expansion of existing organized sport uses) or a skate park (the City's Skate Park Committee is working with a skate park design firm).

As a result, ~~The~~the ~~-~~DEIR analyzes the following possible development scenarios: ~~proposed project would allow for the development of~~ :

1. Five single-family detached homes (proposed project).
2. Five single-family detached homes and use of Lot 7 for a future baseball field.
3. Five single-family detached homes and use of Lot 7 for a future skate park.

~~five single-family homes and a baseball field. The~~ Future recreational uses on Lot 7 such as a baseball field or skate park would be available for use by the public. ~~As a project design option, the baseball field could instead be developed as a public skate park. Both project options are analyzed in this DEIR section.~~ Access to the residential units would be provided by a private street that would intersect with Winter Mesa Drive, which is a continuation of Malibu Canyon Road south of PCH. This private street would be equipped with a security gate and kiosk. Future access to Lot 7 (if ~~when~~ developed with baseball field or skate park) would be provided from Winter Mesa Drive. All three project options are analyzed in this DEIR section.

Proposed Project –5 Single –Family Detached Homes

Project Trip Generation

For the purpose of disclosing the approximate number of trips generated by the proposed project based on land use, trip rates contained in the Institute of Transportation Engineers' (ITE) *Trip Generation* (8th ed.) were used to calculate the potential trip generation of the proposed project. More specifically, trip generation estimates for the proposed single-family homes were generated using weekday daily a.m. and p.m. peak hour data along with Saturday daily and midday peak hour data. Table 5.11-6 shows the potential trip generation of the proposed single-family homes option.

~~Single-Family Homes and Baseball Field Development Option~~ Proposed Project with Lot 7 Use – Baseball Field

Project Trip Generation

~~For the purpose of disclosing the approximate number of trips generated by the proposed project based on land use, trip rates contained in the Institute of Transportation Engineers' (ITE) *Trip Generation* (8th ed.) were used to calculate the potential trip generation of the proposed project. Table 5.11-6 shows the potential trip generation of the proposed single-family homes and baseball field.~~ There are no ITE trip rates for a baseball field recreational land use. Therefore, the trip generation estimates for the baseball field were determined using an "operational trip generation analysis"

based on the assumptions outlined below. The patronage estimates for the baseball field were obtained from the City (see Table 5.11-6).

- Two games per day on weekdays, and ten games per day on Saturdays.
- Up to 14 players per team at a Little League game.
- A game would generate an average of one vehicle per player.
- Two teams at 14 players per team would generate 28 vehicle trips (one-way).
- For weekdays and Saturdays, two additional trips (one-way) were assumed for officials and miscellaneous spectators.
- No games or practice during the weekday morning peak hour.
- For weekends only, 16 additional trips (one-way) were assumed for 32 additional spectators with a 2.0 average vehicle occupancy.
- Total weekday trip generation of 60 trips (30 inbound and 30 outbound per game).
- Total Saturday trip generation of 92 trips (46 inbound and 46 outbound per game).

Proposed Project with Lot 7 Use–Skate Park

Project Trip Generation

There are no ITE trip rates for a skate park recreational land use. Therefore, the trip generation estimates for the skate park were determined using an "operational trip generation analysis" based on the assumptions outlined below. The patronage estimates for the skate park were obtained from the City (see Table 5.11-6).

- 30 people per day on weekdays, 60 people per day on weekends.
- 10 people during the afternoon peak hour on weekdays, 20 people during the peak hour on weekends, and negligible usage during the weekday morning peak hour.
- One vehicle for every two participants.
- Five vehicles arriving, five vehicles departing during the weekday peak hours.
- 10 vehicles arriving, 10 vehicles departing during the weekend mid-day peak hour.

Table 5.11-6
Weekday Project Trip Generation

Land Use	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Rates								
Single-Family Detached (ITE 210)[1]	per DU	9.57	0.19	0.56	0.75	0.64	0.37	1.01
Baseball Field[2]	per game	60	0	0	0	15	15	30
Skate Park[2]	per park	30	0	0	0	5	5	10
Trip Generation								
Proposed Project Single-Family Detached Homes	5 DUs	48	1	3	4	3	2	5
TOTAL TRIP GENERATION		48	1	3	4	3	2	5

Proposed Project with Lot 7 Use	5 DUs	48	1	3	4	3	2	5
Single-Family Detached Homes and a Baseball Field	2 games	120	0	0	0	30	30	60
TOTAL TRIP GENERATION		168	1	3	4	33	32	65
Proposed Project with Lot 7 Use	5 DUs	48	1	3	4	3	2	5
Single-Family Detached Homes and a Skate Park	1 park	30	0	0	0	5	5	10
TOTAL TRIP GENERATION		~~168~~78	1	3	4	~~33~~8	~~32~~7	~~65~~15

Note: DU = dwelling unit
[1] Trip rates for single-family detached homes are from *Trip Generation* (8th ed.), Institute of Transportation Engineers, 2008.
[2] Trip generation for baseball field and skate park based on operational data provided by City of Malibu staff.

As shown in Table 5.11-6, the proposed project of five single-family homes is forecast to generate approximately 48 daily trips, with 4 AM peak hour trips (one inbound and three outbound), and 5 PM peak hour trips (three inbound and two outbound).

The proposed project of single-family homes with Lot 7 developed a baseball field in the future would potentially generate 168 daily trips, with 4 trips (1 inbound, 3 outbound) produced in the AM peak hour and 65 trips (33 inbound, 32 outbound) produced in the PM peak hour. The proposed project of single-family homes and Lot 7 developed as a skate park in the future may generate 78 daily trips, with 4 AM peak hour trips (one inbound, three outbound), and 15 PM peak hour trips (eight inbound, seven outbound).

According to Table 5.11-7, during Saturdays, the proposed project would generate approximately 50 daily trips, and five midday peak hour trips (3 inbound, 2 outbound).

The proposed project with future use of Lot 7 as a baseball field would potentially generate 970 daily trips, and 97 midday peak hour trips (49 inbound and 48 outbound). The proposed project with future use of Lot 7 as a skate park would generate approximately 110 daily trips, and 25 midday peak hour trips (13 inbound, 12 outbound).

Table 5.11-7
Saturday Project Trip Generation

Land Use	Size/Units	Daily	Midday Peak Hour		
			In	Out	Total
Trip Rates					
Single-Family Detached (ITE 210) [1]	per DU	10.08	0.49	0.44	0.93
Baseball Field [2]	per game	92	4.60	4.60	9.20
Skate Park[2]	per park	60	10	10	20
Trip Generation					
Proposed Project Single-Family Detached Homes	5 DUs	50	3	2	5
TOTAL TRIP GENERATION	5	50	3	2	5
Proposed Project with Lot 7 Use	5 DUs	50	3	2	5
Single-Family Detached Homes and a Baseball Field	10 games	920	46	46	92
TOTAL TRIP GENERATION		970	49	48	97
Proposed Project with Lot 7 Use	5 DUs	50	3	2	5

Single-Family Detached Homes and a Skate Park	per park	60	10	10	20
TOTAL TRIP GENERATION		~~970~~110	~~49~~13	~~48~~12	~~97~~25

Note: DU = dwelling unit
[1] Trip rates for single-family detached homes are from *Trip Generation* (8th ed.), Institute of Transportation Engineers, 2008.
[2] Trip generation for baseball field and skate park based on operational data provided by City of Malibu staff.

Trip Distribution and Assignment

Local trip distribution percentages for the proposed project were provided by the City's Traffic Engineer and were based on observed peak hour travel patterns in the study area. The trip distribution percentages at each intersection were applied to the proposed project's weekday and Saturday peak hour trip generation estimates to calculate the project trip assignment (i.e., turn movement volumes that the project would generate at each study area intersection). Figures 5.11-4 and 5.11-5 illustrate the weekday and Saturday, respectively, trip distribution and assignment for the ~~proposed project~~single-family home design option. Figures 5.11-6 and 5.11-7 illustrate the weekday and Saturday trip distribution and assignment for the single-family home and baseball field design option, while figures 5.11-8 and 5.11-9 illustrate the weekday and Saturday trip distribution and assignment for the single-family home and skater park design option.

EXISTING PLUS PROJECT

Traffic Volumes

The proposed project, proposed project with Lot 7 as a baseball field, and proposed project with Lot 7 as a skate park trip assignments for the weekday and Saturday peak hours, noted in Figures 5.11-4~~, and~~ 5.11-5, 5.11-6, 5.11-7, 5.11-8, and 5.11-9, respectively, were added to the Existing Baseline weekday and Saturday peak hour traffic volumes in Figures 5.11-2 and 5.11-3, respectively, which resulted in the Existing plus Project traffic volumes.

Levels of Service

Intersections

Table 5.11-8 presents the results of the Existing plus Project intersection LOS analysis.

Proposed Project—Single-Family Detached Homes

Based on the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections because the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Baseball Field

Based on the LOS analysis and significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Skate Park

Based on the LOS analysis and significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-9 presents the results of the Existing plus Project roadway segment LOS analysis.

Proposed Project – Single-Family Detached Homes

Based on the Existing plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Existing plus Project with Lot 7 Use – Baseball Field LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use – Skate Park

Based on the Existing plus Project with Lot 7 Use – Skate Park LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic. ~~Based on this analysis, the proposed project would not create any significant impacts to the study area roadway segments because the roadway segments are forecast to operate at LOS C or better with project-added traffic.~~

Table 5.11-8
Existing plus Project with Baseball Field Intersection Level of Service Summary

Intersection	Existing Baseline						Existing plus Project						V/C Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	Midday
Proposed Project -- Single-Family Detached Homes															
1. Malibu C~~an~~yo~~n~~n Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.~~747~~739	C	0.~~8368~~ 25	D	+0.001	+0.~~0090~~ 01	+0.~~012~~001
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.~~731~~729	C	0.~~4844~~ 81	A	0.000	~~+~~0.00~~02~~	~~+~~0.00~~03~~
Proposed Project with Lot 7 Use – Single-Family Detached Homes and a Baseball Field															
1. Malibu Cyn Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.747	C	0.836	D	+0.001	+0.009	+0.012
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.731	C	0.484	A	0.000	+0.002	+0.003
Proposed Project with Lot 7 Use -- Single-Family Detached Homes and a Skate Park															
1. Malibu Cyn Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.740	C	0.827	D	+0.001	+0.002	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.483	A	0.000	0.000	+0.002

Table 5.11.9
Existing plus Project with Baseball Field Roadway Segment Level of Service Summary

Intersection	Existing Baseline						Existing plus Project						Density Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	AM	PM	Midday
Proposed Project – Single-Family Detached Homes															
1. PCH, John Tyler Dr to Malibu Cyn Rd															
- eastbound	9.6	A	13.7	B	13.9	B	9.6	A	13.~~8~~7	B	~~14.1~~13.9	B	0.0	~~+~~0.~~1~~0	~~+0.2~~0.0
- westbound	8.1	A	13.2	B	16.6	B	8.1	A	13.~~4~~2	B	16.~~9~~6	B	0.0	~~+~~0.~~2~~0	~~+~~0.~~3~~0
2. PCH, Malibu Cyn Rd to Webb Way															
- eastbound	17.3	B	13.7	B	14.9	B	17.3	B	13.8	B	15.1	B	0.0	+0.1	+0.2
- westbound	7.5	A	14.5	B	14.4	B	7.5	A	14.7	B	14.6	B	0.0	+0.2	+0.2

3. Malibu Cyn Rd, PCH to Civic Center															
- northbound	3.1	A	6.7	A	4.0	A	3.1	A	6.8	A	4.1	A	0.0	+0.1	+0.1
- southbound	13.7	B	6.0	A	8.7	A	13.7	B	6.0	A	8.8	A	0.0	0.0	+0.1
Proposed Project ~~and~~ with ~~Use of~~ Lot 7 Use – Single-Family Detached Homes and a Baseball Field															
1. PCH, John Tyler Dr to Malibu Cyn Rd															
- eastbound	9.6	A	13.7	B	13.9	B	9.6	A	13.8	B	14.1	B	0.0	+0.1	+0.2
- westbound	8.1	A	13.2	B	16.6	B	8.1	A	13.4	B	16.9	B	0.0	+0.2	+0.3
2. PCH, Malibu Cyn Rd to Webb Way															
- eastbound	17.3	B	13.7	B	14.9	B	17.3	B	13.8	B	15.1	B	0.0	+0.1	+0.2
- westbound	7.5	A	14.5	B	14.4	B	7.5	A	14.7	B	14.6	B	0.0	+0.2	+0.2
3. Malibu Cyn Rd, PCH to Civic Center															
- northbound	3.1	A	6.7	A	4.0	A	3.1	A	6.8	A	4.1	A	0.0	+0.1	+0.1
- southbound	13.7	B	6.0	A	8.7	A	13.7	B	6.0	A	8.8	A	0.0	0.0	+0.1
Proposed Project with Lot 7 Use – Single-Family Detached Homes and a Skate Park															
1. PCH, John Tyler Dr to Malibu Cyn Rd															
- eastbound	9.6	A	13.7	B	13.9	B	9.6	A	13.7	B	13.9	B	0.0	0.0	0.0
- westbound	8.1	A	13.2	B	16.6	B	8.1	A	13.3	B	16.7	B	0.0	+0.1	+0.1
2. PCH, Malibu Cyn Rd to Webb Way															
- eastbound	17.3	B	13.7	B	14.9	B	17.3	B	13.7	B	14.9	B	0.0	0.0	0.0
- westbound	7.5	A	14.5	B	14.4	B	7.5	A	14.6	B	14.5	B	0.0	+0.1	+0.1
3. Malibu Cyn Rd, PCH to Civic Center															
- northbound	3.1	A	6.7	A	4.0	A	3.1	A	6.7	A	4.1	A	0.0	0.0	+0.1
- southbound	13.7	B	6.0	A	8.7	A	13.7	B	6.0	A	8.8	A	0.0	0.0	+0.1

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Figure 5.11-4 Project Weekday Peak Hour Trips

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Figure 5.11-5 Project Saturday Peak Hour Trips

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Figure 5.11-6 Project with Lot 7 Use—Baseball Field, Weekday Peak Hour Traffic

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Figure 5.11-7 Project with Lot 7 Use—Baseball Field, Saturday Peak Hour Traffic

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Figure 5.11-8 Project with Lot 7 Use—Skate Park, Weekday Peak Hour Traffic

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Figure 5.11-9 Project with Lot 7 Use—Skate Park Saturday, Peak Hour Traffic

OPENING YEAR 2017

This section describes the future traffic conditions related to the following traffic scenarios:

- Opening Year 2017 Baseline
- Opening Year 2017 plus Project

Opening Year 2017 Baseline Condition

This scenario comprises existing traffic conditions, plus ambient traffic growth (2012 to 2017), plus traffic from cumulative (approved and/or pending) developments in the study area. These cumulative projects are located in the project study area and have not yet been constructed, but have been approved or are pending approval through a discretionary action or building permit issuance.

Traffic Controls and Intersection Geometrics

Per the City, no improvements are planned for the study area roadways and intersections in their current Capital Improvement Program. Therefore, the existing intersection traffic controls and geometrics were assumed for those intersections in the 2017 level of service analysis.

Traffic Volumes

The Opening Year 2017 baseline traffic in this scenario was forecast by applying an ambient growth rate of 1.5 percent per year over five years to the existing traffic volumes at both study area intersections. This growth rate was provided by City staff.

In addition, traffic from cumulative (approved and/or pending) developments in the study area was added to this scenario. These cumulative projects have not yet been constructed, but have been approved or are pending approval through a discretionary action or building permit issuance. Tables 5.11-10 and 5.11-11 present the list of cumulative projects in the study area, as well as their estimated trip generation for the weekday and Saturday peak hours, respectively. Both tables show trip generation estimates for the Opening Year 2017 and Future Year 2030 (buildout) conditions, as some of the projects may not be active by 2017 (construction or fully operational), or may just be under construction in 2017. The Future Year 2030 trip generation estimates assume that all projects would be constructed and in operation.

According to the tables, the cumulative projects would have a total weekday trip generation of ~~12,517~~13,148 daily trips, ~~536~~ 617 a.m. peak hour trips (~~355~~ 407 inbound and ~~181~~ 210 outbound), and 1,~~100~~ 133 p.m. peak hour trips (~~535~~ 570 inbound and ~~566~~ 563 outbound). The total Saturday trip generation for the cumulative projects is 14,~~945~~ 172 daily trips and 1,~~428~~ 386 midday peak hour trips (~~756~~ 739 inbound and ~~672~~ 648 outbound). Figure 5.11-~~6~~10, Map of Cumulative Projects shows the locations of the cumulative projects. Figures 5.11-~~7~~ 11 and 5.11-~~8~~ 12 illustrate the cumulative projects' total trip assignment at the study area intersections for the weekday and Saturday peak hours, respectively. The list of cumulative projects currently being processed in the City and their trip assignments are in Traffic Study Appendix D.

The ambient growth rate and trips from cumulative projects were applied to the existing traffic volumes to derive the Opening Year 2017 Baseline traffic volumes. Figures 5.11-~~9~~ 13 and Figures 5.11-~~10~~ 14 illustrate the resulting Opening Year 2017 Baseline weekday a.m. and p.m. peak hour, and Saturday midday peak hour traffic volumes, respectively.

Table 5-11-10 Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 AM Peak Hour In	Opening Year 2017 AM Peak Hour Out	Opening Year 2017 AM Peak Hour Total	Opening Year 2017 PM Peak Hour In	Opening Year 2017 PM Peak Hour Out	Opening Year 2017 PM Peak Hour Total	Future Year 2030 Daily	Future Year 2030 AM Peak Hour In	Future Year 2030 AM Peak Hour Out	Future Year 2030 AM Peak Hour Total	Future Year 2030 PM Peak Hour In	Future Year 2030 PM Peak Hour Out	Future Year 2030 PM Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]																
- Single-Family Detached Housing (210)	per DU	9.52	0.19u	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per TSF	*ITE*	*ITE equation*			*ITE equation*			*ITE*	*ITE equation*			*ITE equation*			
- General Office Buildling (710)	per TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																
1. 5905 and 5909 Latigo Canyon Road																
Single-Family Detached Housing	2 Dus	10	0	0	0	0	0	0	19	0	1	2	1	1	2	Under construction in 2017; construction traffic would occur before both peak hours.
Total		**10**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**1**	**2**	**1**	**1**	**2**	
2. 27535 PCH																
Single-Family Detached Housing	1 DU	10	0	1	1	1	0	1	10	0	1	1	1	0	1	Asssumed to be built-out by 2017.
Total		**10**	**0**	**1**	**1**	**1**	**0**	**1**	**10**	**0**	**1**	**1**	**1**	**0**	**1**	
3. Hajian Office																
General Office	9.685 TSF	107	13	2	15	2	12	14	107	13	2	15	2	12	14	Asssumed to be built-out by 2017.
Total		**107**	**13**	**2**	**15**	**2**	**12**	**14**	**107**	**13**	**2**	**15**	**2**	**12**	**14**	
4. Towing Subdivision																
Single-Family Detached Housing	4 DUs	38	1	2	3	3	1	4	38	1	2	3	3	1	4	Asssumed to be built-out by 2017.
Total		**38**	**1**	**2**	**3**	**3**	**1**	**4**	**38**	**1**	**2**	**3**	**3**	**1**	**4**	
5. Rancho Malibu Hotel																
trip generation per April 2012 TIA prepared by Overland Consultants		2,182	63	44	107	101	84	185	2,182	63	44	107	101	84	185	Per TIA, project asssumed to be built-out by 2016.
Total		**2,182**	**63**	**44**	**107**	**101**	**84**	**185**	**2,182**	**63**	**44**	**107**	**101**	**84**	**185**	

Table 5-11-10 Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]		Opening Year 2017 Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Future Year 2030 Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]																	
- Single-Family Detached Housing (210)	per	DU	9.52	0.19u	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per	DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per	DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per	TSF	*ITE*	*ITE equation*			*ITE equation*			*ITE*	*ITE equation*			*ITE equation*			
- General Office Buildling (710)	per	TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per	TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per	student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per	TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per	TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																	
6. La Paz Shopping Center																	
Shopping Center	77.110	TSF	5,735	81	52	133	247	257	503	5,735	81	52	133	247	257	503	Asssumed to be built-out by 2017.
General Office	34.948	TSF	385	48	7	55	9	43	52	385	48	7	55	9	43	52	
Junior/Community College	20.000	TSF	550	44	16	60	29	21	51	550	44	16	60	29	21	51	
pass-by for Shopping Center (42%)[2]			*-2,414*	*-34*	*-22*	*-56*	*-104*	*-108*	*-212*	*-2,414*	*-34*	*-22*	*-56*	*-104*	*-108*	*-212*	
Total			**4,256**	**139**	**52**	**191**	**181**	**213**	**394**	**4,256**	**139**	**52**	**191**	**181**	**213**	**394**	
7. Whole Foods Shopping Center																	
trip generation per May 2011 TIA prepared by Overland Consultants			2,296	61	42	103	79	77	156	2,296	61	42	103	79	77	156	Per TIA, project asssumed to be built-out by 2015.
Total			**2,296**	**61**	**42**	**103**	**79**	**77**	**156**	**2,296**	**61**	**42**	**103**	**79**	**77**	**156**	
8. City of Malibu Civic Center Wastewater Treatment Facility																	
Wastewater Treatment Facility			20	0	0	0	0	0	0	2	0	0	0	0	0	0	Asssumed to be under construction in 2017 with 1 truck and 9 workers per day with cons- truction traffic occurring before both peak hours; at build-out, only 1 truck per day.
Total			**20**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	
			-	-		-				-	-		-				
			-	-		-				-	-		-				
9. Santa Monica College																	
Junior/Community College	200	students	246	20	4	24	15	9	24	246	20	4	24	15	9	24	Project under construction; asssumed to be built-out by 2017.
Total			**246**	**20**	**4**	**24**	**15**	**9**	**24**	**246**	**20**	**4**	**24**	**15**	**9**	**24**	

Table 5-11-10 Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]		Opening Year 2017 Daily	Opening Year 2017 AM Peak Hour In	Opening Year 2017 AM Peak Hour Out	Opening Year 2017 AM Peak Hour Total	Opening Year 2017 PM Peak Hour In	Opening Year 2017 PM Peak Hour Out	Opening Year 2017 PM Peak Hour Total	Future Year 2030 Daily	Future Year 2030 AM Peak Hour In	Future Year 2030 AM Peak Hour Out	Future Year 2030 AM Peak Hour Total	Future Year 2030 PM Peak Hour In	Future Year 2030 PM Peak Hour Out	Future Year 2030 PM Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]																	
- Single-Family Detached Housing (210)	per	DU	9.52	0.19u	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per	DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per	DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per	TSF	*ITE*	*ITE equation*			*ITE equation*			*ITE*	*ITE equation*			*ITE equation*			
- General Office Buildling (710)	per	TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per	TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per	student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per	TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per	TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																	
10. Housing Element Update																	
28455 PCH (apartments @ 20 DUs/acre)	102	DUs	0	0	0	0	0	0	0	681	10	42	52	41	22	63	Project under Planning review and no action
28401 PCH (apartments @ 20 DUs/acre)	65	DUs	0	0	0	0	0	0	0	432	7	27	33	26	14	40	is anticipated to occur by 2017.
3700 La Paz Lane (apartments @ 20 DUs/acre)	46	DUs	0	0	0	0	0	0	0	306	5	19	23	19	10	29	
			0	**0**	**0**	**0**	**0**	**0**	**0**	**1,419**	**22**	**87**	**109**	**86**	**46**	**132**	
11. Malibu Sycamore Village																	
trip generation per August 2013 TIA prepared by Overland Consultants			3,083	120	70	190	128	141	269	3,083	120	70	190	128	141	269	Per TIA, project asssumed to be built-out by
Total			**3,083**	**120**	**70**	**190**	**128**	**141**	**269**	**3,083**	**120**	**70**	**190**	**128**	**141**	**269**	2015; assumed 0.20 FAR project.
12. Pepperdine Campus Life Project																	
trip generation per September 3, 2010 TIA prepared by ATE			-	-		-				-	-		-				Phase I built-out by 2017; Phase II
Phase I			-477	-22	-22	-44	-16	-16	-32	-	-	-	-	-	-	-	built-out by 2030.
Phases I & II			-	-	-	-	-	-	-	-744	-34	-33	-67	-26	-26	-52	
Total			**-477**	**-22**	**-22**	**-44**	**-16**	**-16**	**-32**	**-744**	**-34**	**-33**	**-67**	**-26**	**-26**	**-52**	
13. Pierview Restaurant																	
Quality Restaurant	7.100	TSF	639	3	3	6	36	18	53	639	3	3	6	36	18	53	Asssumed to be built-out by 2017.
Total			**639**	**3**	**3**	**6**	**36**	**18**	**53**	**639**	**3**	**3**	**6**	**36**	**18**	**53**	
14. Windsail Restaurant																	
Quality Restaurant	5.904	TSF	531	2	2	5	30	15	44	531	2	2	5	30	15	44	Asssumed to be built-out by 2017.
Total			**531**	**2**	**2**	**5**	**30**	**15**	**44**	**531**	**2**	**2**	**5**	**30**	**15**	**44**	

Table 5-11-10 Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]		Opening Year 2017 Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Future Year 2030 Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]																	
- Single-Family Detached Housing (210)	per	DU	9.52	0.19u	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per	DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per	DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per	TSF	*ITE*	*ITE equation*			*ITE equation*			*ITE*	*ITE equation*			*ITE equation*			
- General Office Buildling (710)	per	TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per	TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per	student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per	TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per	TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																	
15. 22959 PCH Office																	
Shopping Center	4.517	TSF	0	0	0	0	0	0	0	907	14	9	24	37	38	75	Project under Planning review and no action
General Office	2.630	TSF	0	0	0	0	0	0	0	29	4	0	4	1	3	4	is anticipated to occur by 2017.
- pass-by for Shopping Center (55%)[3]			*0*	*0*	*0*	*0*	*0*	*0*	*0*	*-499*	*-8*	*-5*	*-13*	*-20*	*-21*	*-41*	
Total			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**437**	**10**	**5**	**15**	**17**	**21**	**38**	
16. 22729 PCH Office																	
General Office	2.499	TSF	28	3	0	4	1	3	4	28	3	0	4	1	3	4	Asssumed to be built-out by 2017.
Total			**28**	**3**	**0**	**4**	**1**	**3**	**4**	**28**	**3**	**0**	**4**	**1**	**3**	**4**	
17. Carbon Condominiums																	
Residential Condominium/Townhouse	8	DUs	46	1	3	4	3	1	4	46	1	3	4	3	1	4	Asssumed to be built-out by 2017.
Total			**46**	**1**	**3**	**4**	**3**	**1**	**4**	**46**	**1**	**3**	**4**	**3**	**1**	**4**	
18. 18805, 18807 and 18809 PCH																	
Single-Family Detached Housing	3	DUs	29	1	2	2	2	1	3	29	1	2	2	2	1	3	Asssumed to be built-out by 2017.
Total			**29**	**1**	**2**	**2**	**2**	**1**	**3**	**29**	**1**	**2**	**2**	**2**	**1**	**3**	
19. 22301, 22303, 22305 and 22309 PCH																	
Single-Family Detached Housing	4	DUs	38	1	2	3	3	1	4	38	1	2	3	3	1	4	Asssumed to be built-out by 2017.
Total			**38**	**1**	**2**	**3**	**3**	**1**	**4**	**38**	**1**	**2**	**3**	**3**	**1**	**4**	
20. 21997 and 22003 PCH																	
Single-Family Detached Housing	2	DUs	19	0	1	2	1	1	2	19	0	1	2	1	1	2	Asssumed to be built-out by 2017.
Total			**19**	**0**	**1**	**2**	**1**	**1**	**2**	**19**	**0**	**1**	**2**	**1**	**1**	**2**	

Table 5-11-10 Crummer Site Cumulative Projects Weekday AM and PM Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 AM Peak Hour In	Opening Year 2017 AM Peak Hour Out	Opening Year 2017 AM Peak Hour Total	Opening Year 2017 PM Peak Hour In	Opening Year 2017 PM Peak Hour Out	Opening Year 2017 PM Peak Hour Total	Future Year 2030 Daily	Future Year 2030 AM Peak Hour In	Future Year 2030 AM Peak Hour Out	Future Year 2030 AM Peak Hour Total	Future Year 2030 PM Peak Hour In	Future Year 2030 PM Peak Hour Out	Future Year 2030 PM Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]																
- Single-Family Detached Housing (210)	per DU	9.52	0.19u	0.56	0.75	0.63	0.37	1.00	9.52	0.19	0.56	0.75	0.63	0.37	1.00	
- Residential Condominium/Townhouse (230)	per DU	5.81	0.07	0.37	0.44	0.35	0.17	0.52	5.81	0.07	0.37	0.44	0.35	0.17	0.52	
- Apartment (220)	per DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62	6.65	0.10	0.41	0.51	0.40	0.22	0.62	
- Shopping Center (820)	per TSF	*ITE*	*ITE equation*			*ITE equation*			*ITE*	*ITE equation*			*ITE equation*			
- General Office Buildling (710)	per TSF	11.01	1.37	0.19	1.56	0.25	1.24	1.49	11.01	1.37	0.19	1.56	0.25	1.24	1.49	
- Junior/Community College (540)	per TSF	27.49	2.21	0.78	2.99	1.47	1.07	2.54	27.49	2.21	0.78	2.99	1.47	1.07	2.54	
- Junior/Community College (540)	per student	1.23	0.10	0.02	0.12	0.08	0.04	0.12	1.23	0.10	0.02	0.12	0.08	0.04	0.12	
- Recrecational Community Center (495)	per TSF	33.82	1.35	0.70	2.05	1.34	1.40	2.74	33.82	1.35	0.70	2.05	1.34	1.40	2.74	
- Quality Restaurant (931)	per TSF	89.95	0.41	0.41	0.81	5.02	2.47	7.49	89.95	0.41	0.41	0.81	5.02	2.47	7.49	
TRIP GENERATION																
21. 3314 Serra Road Subdivision																
Single-Family Detached Housing	3 DUs	29	1	2	2	2	1	3	29	1	2	2	2	1	3	Asssumed to be built-out by 2017.
Total		**29**	**1**	**2**	**2**	**2**	**1**	**3**	**29**	**1**	**2**	**2**	**2**	**1**	**3**	
22. 20624 and 20630 PCH																
Single-Family Detached Housing	2 DUs	10	0	0	0	0	0	0	19	0	1	2	1	1	2	Under construction in 2017; construction traffic would occur before both peak hours.
Total		**10**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**1**	**2**	**1**	**1**	**2**	
23. Seaboard																
Single-Family Detached Housing	1 DU	10	0	0	0	0	0	0	10	0	1	1	1	0	1	Under construction in 2017; construction traffic would occur before both peak hours.
Total		**10**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**1**	**1**	**1**	**0**	**1**	
TOTAL CUMULATIVE PROJECTS TRIP GENERATION		**13,148**	**407**	**210**	**617**	**570**	**563**	**1,133**	**14,737**	**428**	**294**	**721**	**667**	**622**	**1,288**	

Notes: Trip rates based on Institute of Transportation Engineers (ITE) *Trip Generation, 9th Edition*, 2012 and *Trip Generation Handbook*, 2004.
[1] TSF = Thousand Square Feet
[2] Pass By Trip Reduction percentage based logrithmic equation for Shopping Center land use in ITE *Trip Generation Handbook*, 2004.

Table 5.11-11 Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]		Opening Year 2017 Daily	Opening Year 2017 Midday Peak Hour In	Opening Year 2017 Midday Peak Hour Out	Opening Year 2017 Midday Peak Hour Total	Future Year 2030 Daily	Future Year 2030 Midday Peak Hour In	Future Year 2030 Midday Peak Hour Out	Future Year 2030 Midday Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]											
- Single-Family Detached Housing (210)	per	DU	9.91	0.50	0.43	0.93	9.91	0.50	0.43	0.93	
- Residential Condominium/Townhouse (230)	per	DU	5.67	0.25	0.22	0.47	5.67	0.25	0.22	0.47	
- Apartment (220)	per	DU	6.39	0.26	0.26	0.52	6.39	0.26	0.26	0.52	
- Shopping Center (820)	per	TSF	*ITE*		*ITE equation*		*ITE*		*ITE equation*		
- General Office Buildling (710)	per	TSF	2.46	0.23	0.20	0.43	2.46	0.23	0.20	0.43	
- Junior/Community College (540)	per	TSF	11.23	0.81	0.61	1.42	11.23	0.81	0.61	1.42	
- Junior/Community College (540)	per	student	0.42	0.03	0.02	0.05	0.42	0.03	0.02	0.05	
- Recrecational Community Center (495)	per	TSF	9.10	0.58	0.49	1.07	9.10	0.58	0.49	1.07	
- Quality Restaurant (931)	per	TSF	94.36	6.38	4.44	10.82	94.36	6.38	4.44	10.82	
TRIP GENERATION											
1. 5905 and 5909 Latigo Canyon Road											
Single-Family Detached Housing	2	Dus	10	0	0	0	20	1	1	2	Under construction in 2017; construction traffic would occur before midday peak hour.
Total			**10**	**0**	**0**	**0**	**20**	**1**	**1**	**2**	
2. 27535 PCH											
Single-Family Detached Housing	1	DU	10	1	0	1	10	1	0	1	Assumed to be built-out by 2017.
Total			**10**	**1**	**0**	**1**	**10**	**1**	**0**	**1**	
3. Hajian Office											
General Office	9.685	TSF	24	2	2	4	24	2	2	4	Assumed to be built-out by 2017.
Total			**24**	**2**	**2**	**4**	**24**	**2**	**2**	**4**	
4. Towing Subdivision											
Single-Family Detached Housing	4	DUs	40	2	2	4	40	2	2	4	Assumed to be built-out by 2017.
Total			**40**	**2**	**2**	**4**	**40**	**2**	**2**	**4**	
5. Rancho Malibu Hotel											
trip generation per April 2012 TIA prepared by Overland Consultants			2,120	112	97	209	2,120	112	97	209	Per TIA, project assumed to be built-out by 2016.
Total			**2,120**	**112**	**97**	**209**	**2,120**	**112**	**97**	**209**	
6. La Paz Shopping Center											
Shopping Center	77.110	TSF	7,844	384	354	738	7,844	384	354	738	Assumed to be built-out by 2017.
General Office	34.948	TSF	86	8	7	15	86	8	7	15	
Junior/Community College	20.000	TSF	225	16	12	28	225	16	12	28	
pass-by for Shopping Center (42%)[2]			*-3,302*	*-162*	*-149*	*-311*	*-3,302*	*-162*	*-149*	*-311*	
Total			**4,853**	**247**	**224**	**471**	**4,853**	**247**	**224**	**471**	
7. Whole Foods Shopping Center											
trip generation per May 2011 TIA prepared by Overland Consultants			2,528	117	111	228	2,528	117	111	228	Per TIA, project assumed to be built-out by 2015.
Total			**2,528**	**117**	**111**	**228**	**2,528**	**117**	**111**	**228**	

Table 5.11-11 Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]		Opening Year 2017 Daily	Opening Year 2017 Midday Peak Hour In	Opening Year 2017 Midday Peak Hour Out	Opening Year 2017 Midday Peak Hour Total	Future Year 2030 Daily	Future Year 2030 Midday Peak Hour In	Future Year 2030 Midday Peak Hour Out	Future Year 2030 Midday Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]											
- Single-Family Detached Housing (210)	per	DU	9.91	0.50	0.43	0.93	9.91	0.50	0.43	0.93	
- Residential Condominium/Townhouse (230)	per	DU	5.67	0.25	0.22	0.47	5.67	0.25	0.22	0.47	
- Apartment (220)	per	DU	6.39	0.26	0.26	0.52	6.39	0.26	0.26	0.52	
- Shopping Center (820)	per	TSF	*ITE*		*ITE equation*		*ITE*		*ITE equation*		
- General Office Building (710)	per	TSF	2.46	0.23	0.20	0.43	2.46	0.23	0.20	0.43	
- Junior/Community College (540)	per	TSF	11.23	0.81	0.61	1.42	11.23	0.81	0.61	1.42	
- Junior/Community College (540)	per	student	0.42	0.03	0.02	0.05	0.42	0.03	0.02	0.05	
- Recrecational Community Center (495)	per	TSF	9.10	0.58	0.49	1.07	9.10	0.58	0.49	1.07	
- Quality Restaurant (931)	per	TSF	94.36	6.38	4.44	10.82	94.36	6.38	4.44	10.82	
TRIP GENERATION											
8. City of Malibu Civic Center Wastewater Treatment Facility											
Wastewater Treatment Facility			20	0	0	0	2	0	0	0	Assumed to be under construction in 2017 with 1 truck and 9 workers per day with construction traffic occurring before the midday peak hour; at build-out, only 1 truck per day.
Total			**20**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	
			-	-			-	-			
			-	-			-	-			
9. Santa Monica College											
Junior/Community College	200	students	84	6	4	10	84	6	4	10	Project under construction; assumed to be built-out by 2017.
Total			**84**	**6**	**4**	**10**	**84**	**6**	**4**	**10**	
10. Housing Element Update											
28455 PCH (apartments @ 20 DUs/acre)	102	DUs	0	0	0	0	654	27	27	53	Project under Planning review and no action is anticipated to occur by 2017.
28401 PCH (apartments @ 20 DUs/acre)	65	DUs	0	0	0	0	415	17	17	34	
3700 La Paz Lane (apartments @ 20 DUs/acre)	46	DUs	0	0	0	0	294	12	12	24	
			0	**0**	**0**	**0**	**1,364**	**55**	**55**	**111**	
11. Malibu Sycamore Village											
trip generation per August 2013 TIA prepared by Overland Consultants			3,305	172	153	325	3,305	172	153	325	Per TIA, project assumed to be built-out by 2015; assumed 0.20 FAR project.
Total			**3,305**	**172**	**153**	**325**	**3,305**	**172**	**153**	**325**	
12. Pepperdine Campus Life Project											
trip generation per September 3, 2010 TIA prepared by ATE [3]			-	-			-	-			Phase I built-out by 2017; Phase II built-out by 2030.
Phase I			-239	-11	-11	-22					
Phases I & II							-372	-17	-17	-34	
Total			**-239**	**-11**	**-11**	**-22**	**-372**	**-17**	**-17**	**-34**	
13. Pierview Restaurant											
Quality Restaurant	7.100	TSF	670	45	31	77	670	45	31	77	Assumed to be built-out by 2017.
Total			**670**	**45**	**31**	**77**	**670**	**45**	**31**	**77**	

Table 5.11-11 Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 Midday Peak Hour In	Out	Total	Future Year 2030 Daily	Future Year 2030 Midday Peak Hour In	Out	Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]										
- Single-Family Detached Housing (210)	per DU	9.91	0.50	0.43	0.93	9.91	0.50	0.43	0.93	
- Residential Condominium/Townhouse (230)	per DU	5.67	0.25	0.22	0.47	5.67	0.25	0.22	0.47	
- Apartment (220)	per DU	6.39	0.26	0.26	0.52	6.39	0.26	0.26	0.52	
- Shopping Center (820)	per TSF	*ITE*		*ITE equation*		*ITE*		*ITE equation*		
- General Office Building (710)	per TSF	2.46	0.23	0.20	0.43	2.46	0.23	0.20	0.43	
- Junior/Community College (540)	per TSF	11.23	0.81	0.61	1.42	11.23	0.81	0.61	1.42	
- Junior/Community College (540)	per student	0.42	0.03	0.02	0.05	0.42	0.03	0.02	0.05	
- Recrecational Community Center (495)	per TSF	9.10	0.58	0.49	1.07	9.10	0.58	0.49	1.07	
- Quality Restaurant (931)	per TSF	94.36	6.38	4.44	10.82	94.36	6.38	4.44	10.82	
TRIP GENERATION										
14. Windsail Restaurant										
Quality Restaurant	5.904 TSF	557	38	26	64	557	38	26	64	Assumed to be built-out by 2017.
Total		**557**	**38**	**26**	**64**	**557**	**38**	**26**	**64**	
15. 22959 PCH Office										
Shopping Center	4.517 TSF	0	0	0	0	1,313	61	56	117	Project under Planning review and no action
General Office	2.630 TSF	0	0	0	0	6	1	1	1	is anticipated to occur by 2017.
- pass-by for Shopping Center (55%)[3]		*0*	*0*	*0*	*0*	*-722*	*-33*	*-31*	*-64*	
Total		**0**	**0**	**0**	**0**	**597**	**28**	**26**	**54**	
16. 22729 PCH Office										
General Office	2.499 TSF	6	1	0	1	6	1	0	1	Assumed to be built-out by 2017.
Total		**6**	**1**	**0**	**1**	**6**	**1**	**0**	**1**	
17. Carbon Condominiums										
Residential Condominium/Townhouse	8 DUs	45	2	2	4	45	2	2	4	Assumed to be built-out by 2017.
Total		**45**	**2**	**2**	**4**	**45**	**2**	**2**	**4**	
18. 18805, 18807 and 18809 PCH										
Single-Family Detached Housing	3 DUs	30	2	1	3	30	2	1	3	Assumed to be built-out by 2017.
Total		**30**	**2**	**1**	**3**	**30**	**2**	**1**	**3**	
19. 22301, 22303, 22305 and 22309 PCH										
Single-Family Detached Housing	4 DUs	40	2	2	4	40	2	2	4	Assumed to be built-out by 2017.
Total		**40**	**2**	**2**	**4**	**40**	**2**	**2**	**4**	
20. 21997 and 22003 PCH										
Single-Family Detached Housing	2 DUs	20	1	1	2	20	1	1	2	Assumed to be built-out by 2017.
Total		**20**	**1**	**1**	**2**	**20**	**1**	**1**	**2**	
21. 3314 Serra Road Subdivision										
Single-Family Detached Housing	3 DUs	30	2	1	3	30	2	1	3	Assumed to be built-out by 2017.
Total		**30**	**2**	**1**	**3**	**30**	**2**	**1**	**3**	

Table 5.11-11 Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]	Opening Year 2017 Daily	Opening Year 2017 Midday Peak Hour In	Opening Year 2017 Midday Peak Hour Out	Opening Year 2017 Midday Peak Hour Total	Future Year 2030 Daily	Future Year 2030 Midday Peak Hour In	Future Year 2030 Midday Peak Hour Out	Future Year 2030 Midday Peak Hour Total	Notes Regarding Project Construction and Build-Out Timing, and Roadway Closures/Detours
TRIP RATES[2]										
- Single-Family Detached Housing (210)	per DU	9.91	0.50	0.43	0.93	9.91	0.50	0.43	0.93	
- Residential Condominium/Townhouse (230)	per DU	5.67	0.25	0.22	0.47	5.67	0.25	0.22	0.47	
- Apartment (220)	per DU	6.39	0.26	0.26	0.52	6.39	0.26	0.26	0.52	
- Shopping Center (820)	per TSF	*ITE*		*ITE equation*		*ITE*		*ITE equation*		
- General Office Building (710)	per TSF	2.46	0.23	0.20	0.43	2.46	0.23	0.20	0.43	
- Junior/Community College (540)	per TSF	11.23	0.81	0.61	1.42	11.23	0.81	0.61	1.42	
- Junior/Community College (540)	per student	0.42	0.03	0.02	0.05	0.42	0.03	0.02	0.05	
- Recrecational Community Center (495)	per TSF	9.10	0.58	0.49	1.07	9.10	0.58	0.49	1.07	
- Quality Restaurant (931)	per TSF	94.36	6.38	4.44	10.82	94.36	6.38	4.44	10.82	
TRIP GENERATION										
22. 20624 and 20630 PCH										
Single-Family Detached Housing	2 DUs	10	0	0	0	20	1	1	2	Under construction in 2017; construction traffic would occur before midday peak hour.
Total		**10**	**0**	**0**	**0**	**20**	**1**	**1**	**2**	
23. Seaboard										
Single-Family Detached Housing	1 DU	10	0	0	0	10	1	0	1	Under construction in 2017; construction traffic would occur before midday peak hour.
Total		**10**	**0**	**0**	**0**	**10**	**1**	**0**	**1**	
TOTAL CUMULATIVE PROJECTS TRIP GENERATION		**14,172**	**739**	**648**	**1,386**	**16,001**	**819**	**726**	**1,544**	

Notes: Trip rates based on Institute of Transportation Engineers (ITE) *Trip Generation, 9th Edition*, 2012 and *Trip Generation Handbook*, 2004.
[1] TSF = Thousand Square Feet
[2] Pass By Trip Reduction percentage based logrithmic equation for Shopping Center land use in ITE *Trip Generation Handbook*, 2004.
[3] No Saturday trip generation estimates were provided in the ATE traffic study, therefore generation was assumed to be half of the weekday trip generation as there is less student activity during the weekends.

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Table 5.11-11
Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]	Daily	Midday Peak Hour		
			In	Out	Total
Trip Rates[2]					
– Single-Family Detached Housing (210)	Per DU	10.08	0.49	0.44	0.93
– Residential Condominium/Townhouse (230)	Per DU	5.67	0.25	0.22	0.47
– Shopping Center (820)	Per TSF	*ITE*	*ITE equation*		
– General Office Building (710)	Per TSF	2.37	0.22	0.19	0.41
– Junior/Community College (540)	Per student	0.42	0.03	0.02	0.05
– Recreational Community Center (495)	Per TSF	9.10	0.58	0.49	1.07
– Quality Restaurant (931)	Per TSF	94.36	6.38	4.44	10.82
Trip Generation					
1. 5905 and 5909 Latigo Canyon Road					
Single-Family Detached Housing	2 Dus	20	1	1	2
Total		20	1	1	2
2. Towing Subdivision					
Single-Family Detached Housing	4 DUs	40	2	2	4
Total		40	2	2	4
3. Rancho Malibu Hotel					
trip generation per April 2012 TIA prepared by Overland Consultants		2,120	112	97	209
Total		2,120	112	97	209
4. La Paz Shopping Center					
Shopping Center	77.110 TSF	7,844	376	347	724
General Office	34.948 TSF	83	8	7	14
Municipal Use	20.000 TSF	182	12	10	21
– pass by for Shopping Center (37%)[2]		*-2,906*	*-139*	*-129*	*-268*
Total		5,203	256	235	491
5. Whole Foods Shopping Center					
trip generation per May 2011 TIA prepared by Overland Consultants		2,528	117	111	228
Total		2,528	117	111	228
6. Santa Monica College					
Junior/Community College	200 students	84	6	4	10
Total		84	6	4	10
7. Malibu Sycamore Village					
Shopping Center	30.000 TSF	4,328	204	188	392
General Office	30.000 TSF	71	7	6	12
– pass by for Shopping Center (38%)[2]		*-1,644*	*-77*	*-71*	*-149*
Total		2,755	133	122	255
8. Pierview Restaurant					
Quality Restaurant	7.100 TSF	670	45	31	77

Table 5.11-11
Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]	Daily	Midday Peak Hour		
			In	Out	Total
Total		670	45	31	77
9. Windsail Restaurant					
Quality Restaurant	5.904 TSF	557	38	26	64
Total		557	38	26	64
10. Hajian Office					
General Office	9.685 TSF	23	2	2	4
Total		23	2	2	4
11. 22959 PCH Office					
Shopping Center	4.517 TSF	1,313	60	55	114
General Office	2.630 TSF	6	1	0	1
pass-by for Shopping Center (38%)[2]		-505	-23	-21	-44
Total		814	37	34	71
12. 22729 PCH Office					
General Office	2.499 TSF	6	1	0	1
Total		6	1	0	1
13. Carbon Condominiums					
Residential Condominium/Townhouse	8 DUs	45	2	2	4
Total		45	2	2	4
14. 22301, 22303, 22305 and 22309 PCH					
Single-Family Detached Housing	4 DUs	40	2	2	4
Total		40	2	2	4
15. 21997 and 22003 PCH					
Single-Family Detached Housing	2 DUs	20	1	1	2
Total		20	1	1	2
16. 20624 and 20630 PCH					
Single-Family Detached Housing	2 DUs	20	1	1	2

Table 5.11-11
Crummer Site Cumulative Projects Saturday Midday Peak Hour Trip Generation Estimates

Land Use	Size[1]	Daily	Midday Peak Hour		
			In	Out	Total
	Total	20	1	1	2
17. Seaboard					
Single-Family Detached Housing					

Levels of Service

Intersections

Table 5.11-12 presents the results of the Opening Year 2017 Baseline intersection LOS analysis.

Table 5.11-12
Opening Year 2017 Baseline Intersection Level of Service

Intersection	Control	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		V/C	LOS	V/C	LOS	V/C	LOS
1. Malibu Canyon Road/PCH	signal	0.~~868~~879	D	0.~~879~~880	D	0.~~953~~956	E
2. Malibu Canyon Rd/Civic Center Way	signal	0.~~625~~638	B	0.~~926~~954	E	0.~~694~~722	~~B~~C

Note: LOS determined using ICU method.

Based on the Opening Year 2017 Baseline LOS analysis, Malibu Canyon Road/PCH is forecast to operate at LOS E during the Saturday midday peak hour. Malibu Canyon Road/Civic Center Way is forecast to operate at LOS E during the weekday p.m. peak hour.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-13 presents the results of the Opening Year 2017 Baseline roadway segment LOS analysis. Based on the existing LOS analysis, all three study area roadway segments are forecast to operate with satisfactory LOS at LOS C or better during the weekday and Saturday peak hours.

Table 5.11-13
Opening Year 2017 Baseline Roadway Segment Level of Service Summary

Intersection	# Lanes and Median	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS
1. PCH, John Tyler Dr to Malibu Cyn Rd							
- eastbound	2D	11.2	B	16.0	B	16.8	B
- westbound	2D	9.1	A	15.6	B	19.5	C
2. PCH, Malibu Cyn Rd to Webb Way							
- eastbound	2D	19.4	C	16.9	B	18.7	C
- westbound	2D	9.2	A	17.7	B	18.1	C
3. Malibu Cyn Rd, PCH to Civic Center							
- northbound	2U	5.0	A	9.3	A	7.1	A
- southbound	2U	15.5	B	8.8	A	12.1	B

Note: LOS determined using HCM Multilane Highways Operations method.
# lanes and median: 2D = two lanes divided with median; and, 2U = two lanes undivided
pcplpm = Roadway segment density expressed in passenger cars per lane per mile.

OPENING YEAR 2017 PLUS PROJECT

Traffic generated by the proposed project was added to the Opening Year 2017 Baseline scenario, and the project impacts on the circulation system were analyzed. This scenario would determine project-specific impacts and mitigation measures (if required).

Traffic Volumes

The proposed project, proposed project and baseball field, and proposed project and skate park trip assignments for ~~the~~ weekday and Saturday peak hours were added to the Opening Year 2017 Baseline weekday and Saturday peak hour traffic volumes, which resulted in the Opening Year 2017 plus Project traffic volumes. Figures 5.11-~~11~~ 15and 5.11-~~12~~ 16 illustrate the Opening Year 2017 plus Project weekday and Saturday peak hour traffic volumes, respectively. Figures 5.11-17 and 5.11-18 illustrate the Opening Year 2017 plus Project and baseball field weekday and Saturday peak hour traffic volumes, respectively. Figures 5.11-19 and 5.11-20 illustrate the Opening Year 2017 plus Project and skate park weekday and Saturday peak hour traffic volumes, respectively.

Levels of Service

Intersections

Table 5.11-14 presents the results of the Opening Year 2017 plus Project intersection LOS analysis.

Proposed Project – Single-Family Detached Homes

Based on the Opening Year 2017 plus Project LOS analysis and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds. ~~at Malibu Canyon Road/PCH because this intersection is forecast to continue to operate at LOS E (0.965 V/C), and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).~~

Proposed Project with Lot 7 Use –Baseball Field

Based on the Opening Year 2017 plus Project with use of Lot 7 (Baseball Field) LOS analysis, and the significance criteria of the City, the proposed Project would create a significant impact at Malibu Canyon Road/PCH during the Saturday midday peak hour as this intersection is forecast to continue to operate at LOS E (0.968 V/C) and the proposed Project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).

The proposed project with Lot 7 Use (Baseball Field) would not create any significant impacts to the other study area intersections since the project-added V/C increases are less than the City's thresholds.

Proposed Project with Lot 7 Use –Skate Park

Based on the Opening Year 2017 plus Project with Lot 7 Use (Skate Park) LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-15 presents the results of the Opening Year 2017 plus Project roadway segment LOS analysis.

Proposed Project – Single-Family Detached Homes

Based on the Opening Year 2017 plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments because the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use –Baseball Field

Based on the Opening Year 2017 plus Project with Use of Lot 7 (Baseball Field) LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use –Skate Park

Based on the Opening Year 2017 plus Project with Use of Lot 7 (Skate Park) LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments because the roadway segments are forecast to operate at LOS C or better with project-added traffic.

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Table 5.11-14 Opening Year 2017 plus Project Intersection Level of Service Summary

Intersection	Existing Baseline						Existing plus Project						V/C Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	Midda
PROPOSED PROJECT – Single-Family Detached Homes															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.739	C	0.825	D	+0.001	+0.001	+0.00
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.481	A	0.000	0.000	0.000
PROPOSED PROJECT WITH LOT 7 USE (BASEBALL FIELD) – Single-Family Detached Homes and a Baseball Field															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.747	C	0.836	D	+0.001	+0.009	+0.012
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.731	C	0.484	A	0.000	+0.002	+0.003
PROPOSED PROJECT WITH LOT 7 USE (SKATE PARK) – Single-Family Detached Homes and a Skate Park															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.740	C	0.827	D	+0.001	+0.002	+0.003
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.483	A	0.000	0.000	+0.002
OPOSED PROJECT – Single-Family Detached Homes															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.739	C	0.825	D	+0.001	+0.001	+0.00
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.481	A	0.000	0.000	0.000
PROPOSED PROJECT WITH LOT 7 USE (BASEBALL FIELD) – Single-Family Detached Homes and a Baseball Field															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.747	C	0.836	D	+0.001	+0.009	+0.01
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.731	C	0.484	A	0.000	+0.002	+0.00
PROPOSED PROJECT WITH LOT 7 USE (SKATE PARK) – Single-Family Detached Homes and a Skate Park															
Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.740	C	0.827	D	+0.001	+0.002	+0.00
Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.483	A	0.000	0.000	+0.00
PROPOSED PROJECT – Single-Family Detached Homes															
1. Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.739	C	0.825	D	+0.001	+0.001	+0.001
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.481	A	0.000	0.000	0.000
PROPOSED PROJECT WITH LOT 7 USE (BASEBALL FIELD) – Single-Family Detached Homes and a Baseball Field															
1. Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.747	C	0.836	D	+0.001	+0.009	+0.012

2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.731	C	0.484	A	0.000	+0.002	+0.003
PROPOSED PROJECT WITH LOT 7 USE (SKATE PARK) – Single-Family Detached Homes and a Skate Park															
1. Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.740	C	0.827	D	+0.001	+0.002	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.483	A	0.000	0.000	+0.002

Table 5.11-15 Opening Year 2017 plus Project Roadway Segment Level of Service Summary

	Opening Year 2017 Baseline						Opening Year 2017 plus Project						Density Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
Intersection	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	AM	PM	Midday
PROPOSED PROJECT – Single-Family Detached Homes															
1. PCH, John Tyler to Malibu Cnyn Eastbound	11.2	B	16.0	B	16.8	B	11.2	B	16.0	B	16.8	B	0.0	0.0	0.0
~~WB~~Westbound	9.1	A	15.6	B	19.5	C	9.1	A	15.6	B	19.5	B	0.0	0.0	0.0
2. PCH, Malibu Cnyn to Webb Wy															
~~2. PCH, Malibu Cnyn to Webb Wy~~															
~~EB~~Eastbound	19.4	C	16.9	B	18.7	C	19.4	C	16.9	B	18.7	B	0.0	0.0	0.0
~~WB~~Westbound	9.2	A	17.7	B	18.1	C	9.2	A	17.7	B	18.1	B	0.0	0.0	0.0
W3. Malibu Cnyn, PCH to Civic Cntr															
~~3. Malibu Cnyn, PCH to Civic Cntr~~															
~~NB~~Northbound	5.0	A	9.3	A	7.1	A	5.0	A	9.3	A	7.1	A	0.0	0.0	0.0
Soutbound~~SB~~	15.5	B	8.8	A	12.1	B	15.5	B	8.8	A	12.1	A	0.0	0.0	0.0
PROPOSED PROJECT WITH LOT 7 USE – Single-Family Detached Homes and a Baseball Field~~BASEBALL FIELD~~															

1. PCH, John Tyler to Malibu Cnyn														
~~1. PCH, John Tyler to Malibu Cnyn EB~~Eastbound	11.2	B	16.0	B	16.8	B	11.2	B	16.2	B	17.0	B	0.0	+0.2	+0.2
Westbound~~WB~~	9.1	A	15.6	B	19.5	C	9.1	A	15.8	B	19.7	C	0.0	+0.2	+0.2
2. PCH, Malibu Cnyn to Webb Wy														
~~2. PCH, Malibu Cnyn to Webb Wy EB~~Eastbound	19.4	C	16.9	B	18.7	C	19.4	C	17.0	B	18.8	C	0.0	+0.1	+0.1
Westbound~~WB~~	9.2	A	17.7	B	18.1	C	9.2	A	17.8	B	18.3	C	0.0	+0.1	+0.2
3. Malibu Cnyn, PCH to Civic Cntr														
~~3. Malibu Cnyn, PCH to Civic Cntr NB~~Northbound	5.0	A	9.3	A	7.1	A	5.0	A	9.4	A	7.1	A	0.0	+0.1	0.0
Southbound~~SB~~	15.5	B	8.8	A	12.1	B	15.5	B	8.8	A	12.1	B	0.0	0.0	0.0
PROPOSED PROJECT WITH LOT 7 USE – ~~SKATE PARK~~Single-Family Detached Homes and a Skate Park														
1. PCH, John Tyler to Malibu Cnyn														
~~1. PCH, John Tyler to Malibu Cnyn EB~~Eastbound	11.2	B	16.0	B	16.8	B	11.2	B	16.1	B	16.8	B	0.0	+0.1	0.0
Westbound~~WB~~	9.1	A	15.6	B	19.5	C	9.1	A	15.7	B	19.5	C	0.0	+0.1	0.0
2. PCH, Malibu Cnyn to Webb Wy														
~~2. PCH, Malibu Cnyn to Webb Wy EB~~Eastbound	19.4	C	16.9	B	18.7	C	19.4	C	16.9	B	18.7	C	0.0	0.0	0.0
Wesbound~~WB~~	9.2	A	17.7	B	18.1	C	9.2	A	17.7	B	18.1	C	0.0	0.0	0.0
3. Malibu Cnyn, PCH to Civic Cntr														
Northbound	5.0	A	9.3	A	7.1	A	5.0	A	9.3	A	7.1	A	0.0	0.0	0.0
~~SB~~Southbound	15.5	B	8.8	A	12.1	B	15.5	B	8.8	A	12.1	B	0.0	0.0	0.0

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Figure 5.11-~~6~~10 Map of Cumulative Projects

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Figure 5.11-~~7~~ 11 Cumulative Projects, Weekday Peak Hour Trips

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Figure 5.11-~~8~~ 12 Cumulative Projects, Saturday Peak Hour Trips

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Figure 5.11-~~9~~ 13 Opening Year 2017 Baseline, Weekday Peak Hour Traffic

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Figure 5.11-~~10~~ 14 Opening Year 2017 Baseline, Saturday Peak Hour Traffic

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Figure 5.11-~~11~~ 15 Opening Year 2017 plus Project, Weekday Peak Hour Traffic

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Figure 5.11-~~12~~ 16 Opening Year 2017 plus Project, Saturday Peak Hour Traffic

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FUTURE YEAR 2030 GENERAL PLAN BUILDOUT

This section describes the future traffic conditions related to the following traffic scenarios:

- Future Year 2030 Baseline
- Future Year 2030 plus Project

Future Year 2030 Baseline Condition

This General Plan buildout scenario comprises existing traffic conditions, plus ambient traffic growth (2012 to 2030), plus traffic from cumulative (approved and/or pending) developments in the study area. These cumulative projects have not yet been constructed, but have been approved or are pending approval through a discretionary action or building permit issuance.

Traffic Controls and Intersection Geometrics

Per the City, there are no improvements planned for the study area roadways and intersections in their current Capital Improvement Program. Therefore, the existing intersection traffic controls and geometrics were assumed for those intersections in the 2030 level of service analysis.

Traffic Volumes

The Future Year 2030 baseline traffic in this scenario was forecast by applying an ambient growth rate of 0.48 percent per year over 18 years (2012–2030) to the existing traffic volumes at both study area intersections. This growth rate was provided by City staff. In addition, traffic from cumulative (approved and/or pending) developments in the study area was added to this scenario. These cumulative projects are listed in Table 5.11-10, and Figure 5.11-~~8~~12 (above) shows the locations of the cumulative projects. The ambient growth rate and trips from cumulative projects were applied to the existing traffic volumes to derive the Future Year 2030 Baseline traffic volumes. Figures 5.11-~~13~~17 and 5.11-~~14~~18 illustrate the resulting Future Year 2030 Baseline weekday a.m. and p.m. peak hour, and Saturday midday peak hour traffic volumes, respectively.

Levels of Service

Intersections

Table 5.11-16 presents the results of the Future Year 2030 Baseline intersection LOS analysis.

Table 5.11-16
Future Year 2030 Baseline Intersection Level of Service Summary

Intersection	Control	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		V/C	LOS	V/C	LOS	V/C	LOS
1. Malibu Canyon Road/PCH	signal	0.~~876~~897	D	0.~~886~~899	D	0.~~961~~976	E
2. Malibu Canyon Rd/Civic Center Way	signal	0.~~631~~645	B	0.~~933~~964	E	0.~~699~~731	~~B~~C

Note: LOS determined using ICU method.

Based on the Future Year 2030 Baseline LOS analysis, Malibu Canyon Road/PCH is forecast to continue to operate at LOS E during the Saturday midday peak hour. Malibu Canyon Road/Civic Center Way is forecast to continue to operate at LOS E during the weekday p.m. peak hour.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-17 presents the results of the Future Year 2030 Baseline roadway segment LOS analysis. Based on the existing LOS analysis, all three study area roadway segments are forecast to operate with satisfactory LOS at LOS C or better during the weekday and Saturday peak hours.

Table 5.11-17
Future Year 2030 Baseline Roadway Segment Level of Service Summary

Intersection	# lanes and median	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		pcplpm	LOS	pcplpm	LOS	pcplpm	LOS
1. PCH, John Tyler Dr to Malibu Cyn Rd							
- eastbound	2D	11.2	B	16.0	B	16.8	B
- westbound	2D	9.1	A	15.6	B	19.5	C
2. PCH, Malibu Cyn Rd to Webb Way							
- eastbound	2D	19.4	C	16.9	B	18.7	C
- westbound	2D	9.2	A	17.7	B	18.1	C
3. Malibu Cyn Rd, PCH to Civic Center							
- northbound	2U	5.0	A	9.3	A	7.1	A
- southbound	2U	15.5	B	8.8	A	12.1	B

Note: LOS determined using HCM Multilane Highways Operations method.
# lanes and median: 2D = two lanes divided with median; and, 2U = two lanes undivided
pcplpm = Roadway segment density expressed in passenger cars per lane per mile.

Future Year 2030 plus Project

Traffic generated by the proposed project was added to the Future Year 2030 Baseline scenario and the project impacts on the circulation system were analyzed. This scenario would determine project-specific impacts and mitigation measures (if required).

Traffic Volumes

The proposed project trip assignments for the weekday and Saturday peak hours, noted in Figures 5.11-4, 5.11-5, 5.11-6, 5.11-7, 5.11-8, and 5.11-9, were added to the Future Year 2030 Baseline weekday and Saturday peak hour traffic volumes, which resulted in the Future ~~Opening~~ Year 2030~~17~~ plus Project traffic volumes. Figures 5.11-~~15~~ 19 and 5.11-~~16~~ 20 illustrate the Future Year 2030 plus Project weekday and Saturday peak hour traffic volumes, respectively.

Figures 5.11-25 and 5.11-26 illustrate the Future Year 2030 plus Project with Lot 7 Use (Baseball Field) weekday and Saturday peak hour traffic volumes, respectively.

Figures 5.11-27 and 5.11-28 illustrate the Future Year 2030 plus Project with Lot 7 Use (Skate Park) weekday and Saturday peak hour traffic volumes, respectively.

Figure 5.11-~~13~~17 Opening Year 2017 plus Project with Lot 7 Use – Baseball Field, Weekday Peak Hour Traffic

~~**Year 2030 Baseline, Weekday Peak Hour Traffic**~~

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Figure 5.11-~~14~~18 Opening Year 2017 plus Project with Lot 7 Use – Baseball Field, Saturday Peak Hour Traffic

~~**Year 2030 Baseline, Saturday Peak Hour Traffic**~~

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Figure 5.11-~~15~~19 Opening Year 2017 plus Project with Lot 7 Use – Skate Park, Weekday Peak Hour Traffic

~~**Year 2030 plus Project, Weekday Peak Hour Traffic**~~

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Figure 5.11-~~16~~20 Opening Year 2017 plus Project with Lot 7 Use – Skate Park, Saturday Peak Hour Traffic

~~**Year 2030 plus Project, Saturday Peak Hour Traffic**~~

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Levels of Service

Intersections

Table 5.11-18 presents the results of the Future Year 2030 plus Project intersection LOS analysis.

Proposed Project – Single-Family Detached Homes

Based on the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections because the project-added V/C increases are less than the City's and CMP's thresholds. ~~at Malibu Canyon Road/PCH because this intersection is forecast to continue to operate at LOS E (0.973 V/C), and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).~~

Proposed Project with Lot 7 Use –Baseball Field

Based on the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City, the proposed project would create a significant impact at Malibu Canyon Road/PCH as this intersection is forecast to continue to operate at LOS E (0.988 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).

If a baseball field is developed on Lot 7 in the future, with mitigation, impacts would be less than significant.

The proposed project and dedicated Lot 7 developed as a baseball field would not create any significant impacts to the other study area intersections as the project-added V/C increases are less than the City's thresholds.

Proposed Project with Lot 7 Use –Skate Park

Based on the Future Year 2030 plus Project with Lot 7 Use (Skate Park) LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections because the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-19 presents the results of the Future Year 2030 plus Project roadway segment LOS analysis. Based on this analysis, the proposed project would not create any significant impacts to the study area roadway segments because the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project – Single-Family Detached Homes

Based on the Future Year 2030 plus Project LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments because the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use –Baseball Field

Based on the Future Year 2030 plus Project with Lot 7 Use (Baseball Field) LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

Proposed Project with Lot 7 Use –Skate Park

Based on the Future Year 2030 plus Project with Lot 7 Use (Skate Park) LOS analysis, the proposed project would not create any significant impacts to the study area roadway segments as the roadway segments are forecast to operate at LOS C or better with project-added traffic.

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Table 5.11-18 Future Year 2030 plus Project Intersection Level of Service Summary

Intersection	Opening Year 2017 Baseline AM Peak Hour V/C	LOS	PM Peak Hour V/C	LOS	Saturday Midday Pk Hr V/C	LOS	Opening Year 2017 plus Project AM Peak Hour V/C	LOS	PM Peak Hour V/C	LOS	Saturday Midday Pk Hr V/C	LOS	V/C Increase AM	PM	Midday
PROPOSED PROJECT (five single family homes)															
1. Malibu Canyon Rd/PCH	0.879	D	0.880	D	0.956	E	0.880	D	0.880	D	0.957	E	+0.001	0.000	+0.001
2. Malibu Cyn Rd/Civic Cntr Way	0.638	B	0.954	E	0.722	C	0.638	B	0.954	E	0.723	C	0.000	0.000	+0.001
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD															
1. Malibu Canyon Rd/PCH	0.879	D	0.880	D	0.956	E	0.880	D	0.888	D	0.968	E	+0.001	+0.008	+0.012
2. Malibu Cyn Rd/Civic Cntr Way	0.638	B	0.954	E	0.722	C	0.638	B	0.956	E	0.725	C	0.000	+0.002	+0.003
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK															
1. Malibu Canyon Rd/PCH	0.879	D	0.880	D	0.956	E	0.880	D	0.881	D	0.959	E	+0.001	+0.001	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.638	B	0.954	E	0.722	C	0.638	B	0.955	E	0.723	C	0.000	+0.001	+0.001

Intersection	Future Year 2030 Baseline AM Peak Hour V/C	LOS	PM Peak Hour V/C	LOS	Saturday Midday Pk Hr V/C	LOS	Future Year 2030 plus Project AM Peak Hour V/C	LOS	PM Peak Hour V/C	LOS	Saturday Midday Pk Hr V/C	LOS	V/C Increase AM	**PM**	**Midday**
PROPOSED PROJECT (five single family homes)															
1. Malibu Canyon Rd/PCH	0.897	D	0.899	D	0.976	E	0.898	D	0.900	D	0.977	E	+0.001	+0.001	+0.001
2. Malibu Cyn Rd/Civic Cntr Way	0.645	B	0.964	E	0.731	C	0.645	B	0.965	E	0.731	C	0.000	+0.001	+0.001
PROPOSED PROJECT WITH LOT 7 USE – BASEBALL FIELD															
1. Malibu Canyon Rd/PCH	0.897	D	0.899	D	0.976	E	0.898	D	0.908	E	0.988	E	+0.001	+0.008	**+0.012**
2. Malibu Cyn Rd/Civic Cntr Way	0.645	B	0.964	E	0.731	C	0.645	B	0.967	E	0.734	C	0.000	+0.003	+0.003
PROPOSED PROJECT WITH LOT 7 USE – SKATE PARK															
1. Malibu Canyon Rd/PCH	0.897	D	0.899	D	0.976	E	0.898	D	0.901	D	0.979	E	+0.001	+0.002	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.645	B	0.964	E	0.731	C	0.645	B	0.966	E	0.732	C	0.000	+0.002	+0.001

Table 5.11-19 Future Year 2030 plus Project Roadway Segment Level of Service Summary

Intersection	Future Year 2030 Baseline AM Peak Hour pcplpm	LOS	Future Year 2030 Baseline PM Peak Hour pcplpm	LOS	Future Year 2030 Baseline Saturday Midday Pk Hr pcplpm	LOS	Future Year 2030 plus Project AM Peak Hour pcplpm	LOS	Future Year 2030 plus Project PM Peak Hour pcplpm	LOS	Future Year 2030 plus Project Saturday Midday Pk Hr pcplpm	LOS	Density Increase AM	PM	Midday
PROPOSED PROJECT – Single-Family Detached Homes															
1. PCH, John Tyler to Malibu Cnyn EB	11.3	B	16.2	B	16.9	B	11.3	B	16.2	B	16.9	B	0.0	0.0	0.0
WB	9.1	A	15.8	B	19.6	C	9.1	A	15.8	B	19.6	C	0.0	0.0	0.0
2. PCH, Malibu Cnyn to Webb Wy EB	19.6	C	17.0	B	18.8	C	19.6	C	17.0	B	18.8	C	0.0	0.0	0.0
WB	9.2	A	17.8	B	18.2	C	9.2	A	17.8	B	18.2	C	0.0	0.0	0.0
3. Malibu Cnyn, PCH to Civic Cntr NB	5.1	A	9.4	A	7.1	A	5.1	A	9.4	A	7.1	A	0.0	0.0	0.0
SB	15.7	B	8.8	A	12.1	B	15.7	B	8.8	A	12.1	B	0.0	0.0	0.0
PROPOSED PROJECT WITH LOT 7 USE – Single-Family Detached Homes and a Baseball Field															
1. PCH, John Tyler to Malibu Cnyn EB	11.3	B	16.2	B	16.9	B	11.3	B	16.3	B	17.2	B	0.0	+0.1	+0.3
WB	9.1	A	15.8	B	19.6	C	9.2	A	15.9	B	19.9	C	+0.1	+0.1	+0.3
2. PCH, Malibu Cnyn to Webb Wy EB	19.6	C	17.0	B	18.8	C	19.6	C	17.1	B	19.0	C	0.0	+0.1	+0.2
WB	9.2	A	17.8	B	18.2	C	9.2	A	18.0	B	18.4	C	0.0	+0.2	+0.2
3. Malibu Cnyn, PCH to Civic Cntr NB	5.1	A	9.4	A	7.1	A	5.1	A	9.4	A	7.2	A	0.0	0.0	+0.1
SB	15.7	B	8.8	A	12.1	B	15.7	B	8.9	A	12.1	B	0.0	+0.1	0.0
PROPOSED PROJECT WITH LOT 7 USE – Single-Family Detached Homes and a Skate Park															
1. PCH, John Tyler to Malibu Cnyn EB	11.3	B	16.2	B	16.9	B	11.3	B	16.3	B	17.2	B	0.0	+0.1	+0.3
WB	9.1	A	15.8	B	19.6	C	9.2	A	15.9	B	19.9	C	+0.1	+0.1	+0.3
2. PCH, Malibu Cnyn to Webb Wy EB	19.6	C	17.0	B	18.8	C	19.6	C	17.0	B	18.9	C	0.0	0.0	+0.1
WB	9.2	A	17.8	B	18.2	C	9.2	A	17.9	B	18.3	C	0.0	+0.1	+0.1
3. Malibu Cnyn, PCH to Civic Cntr NB	5.1	A	9.4	A	7.1	A	5.1	A	9.4	A	7.1	A	0.0	0.0	0.0
SB	15.7	B	8.8	A	12.1	B	15.7	B	8.8	A	12.2	B	0.0	0.0	+0.1

~~Table 5.11-20~~
~~Weekday Project with Skate Park Option Trip Generation Estimates~~

~~Land Use~~	~~Size/Units~~	~~Daily~~	~~AM Peak Hour In~~	~~Out~~	~~Total~~	~~PM Peak Hour In~~	~~Out~~	~~Total~~
~~Trip Rates~~								
~~Single-Family Detached (ITE 210)[1]~~	~~per DU~~	~~9.57~~	~~0.19~~	~~0.56~~	~~0.75~~	~~0.64~~	~~0.37~~	~~1.01~~
~~Skate Park[2]~~	~~per park~~	~~30~~	~~0~~	~~0~~	~~0~~	~~5~~	~~5~~	~~10~~
~~Trip Generation~~								
~~Single-Family Detached~~	~~5 DUs~~	~~48~~	~~1~~	~~3~~	~~4~~	~~3~~	~~2~~	~~5~~
~~Skate Park~~	~~1 park~~	~~30~~	~~0~~	~~0~~	~~0~~	~~5~~	~~5~~	~~10~~
~~Total Trip Generation~~		~~78~~	~~1~~	~~3~~	~~4~~	~~8~~	~~7~~	~~15~~

~~Note: DU = dwelling unit~~
~~[1] Trip rates for single-family detached homes are from *Trip Generation* (8th ed.), Institute of Transportation Engineers, 2008.~~
~~[2] Trip generation for baseball field based on operational data provided by City of Malibu staff.~~

Table 5.11-21
Saturday Project with Skate Park Option Trip Generation Estimates

Land Use	Size/Units	Daily	Midday Peak Hour		
			In	Out	Total
Trip Rates					
Single-Family Detached (ITE 210) [1]	per DU	10.08	0.49	0.44	0.93
Skate Park [2]	per park	60	10	10	20
Trip Generation					
Single-Family Detached	5 DUs	50	3	2	5
Skate Park	per park	60	10	10	20
Total Trip Generation		110	13	12	25

Note: DU = dwelling unit
[1] Trip rates for single-family detached homes are from *Trip Generation* (8th ed.), Institute of Transportation Engineers, 2008.
[2] Trip generation for baseball field based on operational data provided by City of Malibu staff.

According to Table 5.11-21, during Saturdays the project alternative would generate approximately 110 daily trips and 25 midday peak hour trips (13 inbound and 12 outbound).

Trip Distribution and Assignment

Figures 5.11-17 and 5.11-18 illustrate the weekday and Saturday, respectively, trip distribution and assignment for the skate park project option.

EXISTING PLUS PROJECT WITH SKATE PARK OPTION

Traffic generated by the project with skate park option was added to the Existing Baseline scenario, and the project with skate park option impacts on the circulation system were analyzed. This scenario would determine project (with skate park) specific impacts and mitigation measures (if required).

Traffic Volumes

The project alternative trip assignments for the weekday and Saturday peak hours were added to the Existing Baseline weekday and Saturday peak hour traffic volumes, which resulted in the Existing plus Project with Skate Park Option traffic volumes.

Levels of Service

Intersections

Table 5.11-22 presents the results of the Existing plus Project Alternative intersection LOS analysis. Based on the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections because the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-23 presents the results of the Existing plus Skate Park Option roadway segment LOS analysis. Based on this analysis, the proposed project would not create any significant impacts to the study area roadway segments because the roadway segments are forecast to operate at LOS C or better with project (skate park alternative)-added traffic.

Table 5.11-22
Existing plus Skate Park Option Intersection Level of Service Summary

Intersection	Existing Baseline						Existing plus Alternative						V/C Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	Midday
1. Malibu Canyon Rd/PCH	0.785	C	0.738	C	0.824	D	0.786	C	0.740	C	0.827	D	+0.001	+0.002	+0.003
2. Malibu Cyn Rd/Civic Cntr Way	0.563	A	0.729	C	0.481	A	0.563	A	0.729	C	0.483	A	0.000	0.000	+0.002

Table 5.11-23
Existing plus Skate Park Option Roadway Segment Level of Service Summary

Intersection	Existing Baseline						Existing plus Alternative						Density Increase		
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr				
	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	AM	PM	Midday
1. PCH, John Tyler Dr to Malibu Cyn Rd															
- eastbound	9.6	A	13.7	B	13.9	B	9.6	A	13.7	B	13.9	B	0.0	0.0	0.0
- westbound	8.1	A	13.2	B	16.6	B	8.1	A	13.3	B	16.7	B	0.0	+0.1	+0.1
2. PCH, Malibu Cyn Rd to Webb Way															
- eastbound	17.3	B	13.7	B	14.9	B	17.3	B	13.7	B	14.9	B	0.0	0.0	0.0
- westbound	7.5	A	14.5	B	14.4	B	7.5	A	14.6	B	14.5	B	0.0	+0.1	+0.1
3. Malibu Cyn Rd, PCH to Civic Center															
- northbound	3.1	A	6.7	A	4.0	A	3.1	A	6.7	A	4.1	A	0.0	0.0	+0.1
- southbound	13.7	B	6.0	A	8.7	A	13.7	B	6.0	A	8.8	A	0.0	0.0	+0.1

Figure 5.11-21 Year 2030 Baseline, Weekday Peak Hour Traffic

~~**Figure 5.11-17 Skate Park Option, Weekday Peak Hour Trips**~~

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Figure 5.11-22 Year 2030 Baseline, Saturday Peak Hour Traffic

~~**Figure 5.11-18 Skate Park Option, Saturday Peak Hour Trips**~~

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Figure 5.11-23 Year 2030 plus Project, Weekday Peak Hour Traffic

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Figure 5.11-24 Year 2030 plus Project, Saturday Peak Hour Traffic

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Figure 5.11-25 Year 2030 plus Project with Lot 7 Use—Baseball Field, Weekday Peak Hour Traffic

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Figure 5.11-26 Year 2030 plus Project with Lot 7 Use—Baseball Field, Saturday Peak Hour Traffic

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Figure 5.11-27 Year 2030 plus Project with Lot 7 Use—Skate Park, Weekday Peak Hour Traffic

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Figure 5.11-28 Year 2030 plus Project with Lot 7 Use—Skate Park, Saturday Peak Hour Traffic

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5.11-24

ng Year 2017 plus Project with Skate Park Option Intersection Level of Service Summary

	Opening Year 2017 Baseline						Opening Year 2017 plus Project							
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		V/C Increase	
Intersection	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM
Canyon Rd/PCH	0.868	D	0.879	D	0.953	E	0.869	D	0.881	D	0.956	E	+0.001	+0.002
Cyn Rd/Civic Cntr Way	0.625	B	0.926	E	0.694	B	0.625	B	0.926	E	0.695	B	0.000	0.000

5.11-25

ng Year 2017 plus Project with Skate Park Option Roadway Segment Level of Service Summary

	Opening Year 2017 Baseline						Opening Year 2017 plus Alternative							
	AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		AM Peak Hour		PM Peak Hour		Saturday Midday Pk Hr		Density Increas	
Intersection	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	pcplpm	LOS	AM	PM
John Tyler Dr to Malibu Cyn Rd														
- eastbound	11.2	B	16.0	B	16.8	B	11.2	B	16.1	B	16.8	B	0.0	+0.1
- westbound	9.1	A	15.6	B	19.5	C	9.1	A	15.7	B	19.5	C	0.0	+0.1
Malibu Cyn Rd to Webb Way														
- eastbound	19.4	C	16.9	B	18.7	C	19.4	C	16.9	B	18.7	C	0.0	0.0
- westbound	9.2	A	17.7	B	18.1	C	9.2	A	17.7	B	18.1	C	0.0	0.0
Cyn Rd, PCH to Civic Center														
- northbound	5.0	A	9.3	A	7.1	A	5.0	A	9.3	A	7.1	A	0.0	0.0
- southbound	15.5	B	8.8	A	12.1	B	15.5	B	8.8	A	12.1	B	0.0	0.0

YEAR 2030 PLUS PROJECT WITH SKATE PARK OPTION

Traffic Volumes

The project with skate park option trip assignments for the weekday and Saturday peak hours were added to the Future Year 2030 Baseline weekday and Saturday peak hour traffic volumes, which resulted in the Future Year 2030 plus project with skate park traffic volumes. Figures 5.11-2 and 5.11-22 illustrate the Opening Year 2017 plus project with skate park weekday and Saturday peak hour traffic volumes, respectively.

Levels of Service

Intersections

Table 5.11-26 presents the results of the Future Year 2030 plus project with skate park intersection LOS analysis. Based on the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections because the project-added V/C increases are less than the City's and CMP's thresholds.

Roadway Segments

The peak hour roadway segment volumes were analyzed using the HCM Multilane Highway Operations method per City guidelines. Table 5.11-27 presents the results of the Future Year 2030 plus project with skate park roadway segment LOS analysis. Based on this analysis, the proposed project would not create

~~***any significant impacts to the study area roadway segments because the roadway segments are forecast to operate at LOS C or better with project with skate park traffic.***~~

IMPACT 5-11-2:	Project-related trip generation in combination with existing and proposed cumulative development would not result in designated road and/or highways exceeding county congestion management agency service standards. [Threshold T-2]

Impact Analysis: Based on the City's TIA Guidelines, the traffic analysis must study all CMP facilities that may be substantially affected by the project in a manner consistent with current CMP guidelines. According to the Guidelines for CMP Transportation Impact Analysis, a traffic analysis shall address all CMP arterial monitoring intersections where the proposed project would add 50 or more trips during the weekday peak hour and any mainline freeway monitoring locations where the project would add 150 or more trips in either direction during the peak hour. The only CMP arterial roadway in the vicinity of the project site is PCH (SR 1), which runs along the north edge of the project site. Because the intersection of Malibu Canyon Road/PCH is a CMP arterial monitoring location, this intersection was evaluated in the traffic impact analysis. According to the CMP criteria for determining a significant impact, a CMP intersection would be significantly impacted if the project would result in an increase in the V/C ratio of 0.02 or greater at an intersection that is projected to operate at LOS F. Other CMP intersections in the project vicinity are PCH at Decker Canyon Road, Kanan Dune Road, and Las Flores Canyon Road.

Based on the assumed distribution of project-generated traffic, a maximum of 50 percent of the project traffic would travel through any of these intersections, which equates to less than 50 trips during the peak hours. Because the resulting project trip assignment would be below the CMP threshold of 50 peak hour trips, a CMP traffic analysis was not required for these other arterial monitoring intersections. With regard to freeways, there are no freeways in the project area. The project would not, therefore, add 150 or more trips to a freeway, and a CMP freeway analysis would not be required.

The project's impacts are well below the CMP thresholds cited above, and the project would not exceed a level of service standard established by the county congestion management agency. No impacts would occur.

IMPACT 5.11-3:	Project circulation improvements have been designed to adequately address potentially hazardous conditions (sharp curves, etc.), potential conflicting uses, and emergency access. [Threshold T-4]

Impact Analysis: The proposed project would use the same access and circulation features that are already in place at the project site, which were designed in conformance with the City of Malibu, Los Angeles County, and Caltrans standards. The project would require a new intersection on Winter Mesa Road south of Pacific Coast Highway; this would be designed in conformance with the City of Malibu's standards. The project would not result in any sharp curves or dangerous intersections. The proposed residential units and recreation facilities are essentially an expansion or intensification of existing uses in the site vicinity, so the proposed uses would be compatible. The proposed project would not, therefore, substantially increase hazards due to a design feature or incompatible uses, and no impacts would occur as a result of the project.

IMPACT 5.11-4:	Adequate parking would be provided for the proposed project ~~with skate park or baseball field option~~. [Threshold T-6]

Impact Analysis:

Project with Baseball Field Alternative

Parking for the proposed residential units would be provided in the driveways and garages and along the private access road that serves the five residential units. Parking for the baseball field ~~(or for the skate park alternative)~~ would be provided in a new parking lot that is proposed to be constructed between the new baseball field and Winter Mesa Drive.

As currently envisioned, a future new parking lot on dedicated Lot 7 would have 94 parking stalls (90 standard stalls and 4 handicapped spaces). In conjunction with the development of the project, the existing east–west segment of Winter Mesa Drive and the north–south segment of Winter Mesa Drive that ends in a cul-de-sac would be eliminated. Parallel parking is currently accommodated along both sides of Winter Mesa Drive, and an estimated 40 cars can be parked at this location. With 94 parking spaces provided in the proposed parking lot and 40 existing parallel spaces eliminated, the net increase in the overall number of parking spaces would be 54. The estimate of 40 existing parallel parking spaces was calculated by dividing the length of the available parking area (875 linear feet) by an average length of 22 feet per parking space (875 ÷ 22 = 40 vehicles).

The existing parking lot at Malibu Bluffs Park contains 81 spaces, with an additional 40 vehicles that can be parallel parked along both sides of Winter Mesa Drive. As shown in Table 5.11-28, the total number of parking spaces to serve the existing Malibu Bluffs Park and any future recreational uses would be 175 spaces (81 existing spaces plus 94 proposed spaces).

Table 5.11-28
Public Parking Space Summary

Type	Existing	Proposed	New Grand Total
Standard	77	90	167
Handicapped	4	4	8
Parallel	40	0	0
Total	121	94	175

Weekday Peak Parking Demand

The projected weekday peak parking demand for a future new baseball field on dedicated Lot 7 would be 30 vehicles per game, which is based on the assumptions outlined previously in Impact 5.11-1. If the scheduling of the games is closely spaced, the parking demand could be as high as 60 vehicles during the interval when the participants of a game arrive at the site while the participants of a preceding game have not yet departed. The peak weekday parking demand for the baseball field (assuming 60 vehicles) would not be totally accommodated by the proposed 54 (net) additional parking stalls; however, the deficiency of six spaces would not constitute a significant parking impact because the demand of 60 vehicles represents a worst-case scenario where all 30 vehicles associated with a completed game would overlap with all 30 vehicles associated with the next game. The six vehicles would likely be waiting in the drive aisles of the parking lot for spaces to become available as people from the previous games leave the baseball field, or would park along Malibu Canyon Road and walk to the baseball field. The analysis does not take into account the 81 existing parking spaces that will remain in place. Since this worst-case scenario would occur infrequently and would have a short duration (10 to 15 minutes), the deficiency of six spaces would not constitute a significant parking impact.

Saturday Peak Parking Demand

The projected Saturday peak parking demand for a future new baseball field on dedicated Lot 7 would be 46 vehicles per game, which is based on the assumptions outlined previously in Impact 5.11-1. If the scheduling of the games is closely spaced, the parking demand could be as high as 92 vehicles during the interval when the participants of a game arrive at the site while the participants of a preceding game have not yet departed. The peak Saturday parking demand for the baseball field (assuming 92 vehicles) would also not be accommodated by the proposed 54 additional parking stalls. This deficiency of 38 spaces may constitute a significant parking impact, however, it assumes a worst-case scenario where all 46 vehicles associated with a completed game would overlap with all 46 vehicles associated with the next game. The 38 vehicles would likely be waiting in the drive aisles of the parking lot for spaces to become available as people from the previous games leave the baseball field, or would park along Malibu Canyon Road and walk to the baseball field. This worst-case scenario would occur infrequently and would have a short duration (10 to 15 minutes).

The conclusion of the parking analysis is that the proposed project (5 single-family homes) would have no impacts. The proposed project with the future baseball field on dedicated Lot 7 would not result in a significant impact during typical weekday operations because the proposed increase in the number of parking spaces (54 spaces) would accommodate the anticipated parking demand of 30 vehicles during a baseball game and would only be six spaces deficient of accommodating the worst-case parking demand of 60 vehicles (when all of the vehicles from two consecutive games were to be on site at the same time). During typical Saturday operations, the proposed project would not result in a significant impact because the proposed increase in the number of parking spaces (54 spaces) would accommodate the anticipated parking demand of 46 vehicles during a baseball game. However, assuming worst-case conditions, when all of the vehicles from two consecutive games were to be on site at the same time (92 vehicles), there would be a deficiency of 38 spaces onsite.

Malibu Bluffs Park Parking Demand

According to staff at the City of Malibu, up to 250 people use the existing Malibu Bluffs Park at any given time, which results in a parking demand of 125 vehicles. This parking demand can be accommodated by the 125 existing parking spaces at the park. However, during special events or during times when the patronage at the park is particularly heavy, the parking demands cannot be accommodated onsite.

The impacts would not be particularly problematic on days when Malibu Bluffs Park operates at typical conditions because the deficiency of six parking spaces would have a short duration and could be accommodated at other locations within the park. The increase in parking demand associated with the baseball field would, however, aggravate a situation that is already impacted during special events at the park and during times of peak park utilization.

Project with Skate Park Alternative

Parking for the proposed residential units would be provided in the driveways and garages and along the private access road that serves the five residential units. Parking for a future skate park on dedicated Lot 7 would be provided in a new parking lot that would be constructed between the new skate park and Winter Mesa Drive.

As described above, 94 parking spaces (90 standard stalls and four handicapped spaces) would be provided and 40 existing parallel spaces would be eliminated, for a net increase of 54 parking spaces. In conjunction with this possible development , the existing east-west segment of Winter Mesa Drive and the north-south segment of Winter Mesa Drive that ends in a cul-de-sac would be eliminated. Parallel parking is currently accommodated for along both sides of Winter Mesa Drive and an estimated 40 cars can be parked at this location. As 94 parking spaces would be provided in the proposed parking lot and as 40 existing parallel spaces would be eliminated, the net increase in the overall number of parking spaces would be 54 spaces. The estimate of 40 existing parallel parking spaces was calculated by dividing the

length of the available parking area (875 linear feet) by an average length of 22 feet per parking space (875 ÷ 22 = 40 vehicles).

The projected parking demand for a future skate park on dedicated lot 7 would be 10 vehicles, which is based on the assumption that up to 20 people would be using the skate park at any given time and that the average vehicle occupancy would be two persons per vehicle. The parking demand for a future skate park alternative (10 vehicles) would be accommodated by 54 additional parking stalls, and parking impacts would be less than significant.

The parking impacts of a future skate park alternative for dedicated Lot 7 would be less than significant because the proposed increase in the number of parking spaces (54 spaces) would accommodate the anticipated parking demand of the skate park (10 vehicles).

5.11.4 Cumulative Impacts

As discussed in Impact 5.11-1, the traffic analysis that was conducted for the proposed project included a cumulative analysis of the impacts of other proposed development projects. The future baseline traffic conditions without the project for the target year of completion (2017) as well and General Plan Buildout (2030) were estimated by considering the effects of general ambient regional growth as well as the cumulative increase in traffic volumes that would be generated by other development projects proposed in the area. The future baseline traffic volume projections included the increased levels of traffic that would occur at the study area roadways and intersections as a result of the cumulative traffic that would be generated by other proposed development projects, which were provided by staff at the City of Malibu.

Proposed Project (five single family homes)

Based on the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Proposed Project with Lot 7 Use – Baseball Field

Based on the Opening Year 2017 plus Project and the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City, the proposed project with the future development of dedicated Lot 7 as a baseball field would create a significant impact at Malibu Canyon Road/PCH as this intersection is forecast to continue to operate at LOS E (0.988 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).

~~Based on the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City, the proposed project with baseball field option would create a significant impact at Malibu Canyon Road/PCH as this intersection is forecast to continue to operate at LOS E (0.973 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).~~

Proposed Project with Lot 7 Use – Skate Park

Based on the Future Year 2030 plus Project with Lot 7 Use – Skate Park LOS analysis, and the significance criteria of the City and Los Angeles County CMP (for Malibu Canyon Road/PCH), the proposed project with future development of Lot 7 would not create any significant impacts to the study area intersections as the project-added V/C increases are less than the City's and CMP's thresholds.

Up to 250 people use the existing Malibu Bluffs Park at any given time, which results in a parking demand of 125 vehicles. With future development of dedicated Lot 7 as baseball field, a peak demand of 217 spaces could occur under maximum usage of the Malibu Bluffs Park and the new (third) baseball field (125 existing demand plus 92 new demand during overlapping games on Saturday). This would result in an overall park parking shortfall of 42 spaces (217 spaces minus 175 spaces).

The impacts would not be particularly problematic on weekdays days when Malibu Bluffs Park operates at typical conditions because the deficiency of six parking spaces would have a short duration and could be accommodated at other locations within the park. The increase in parking demand associated with the baseball field would, however, aggravate a situation that is already impacted during special events at the park and during times of peak park utilization.

Without mitigation, the cumulative impacts would be significant.

5.11.5 Existing Regulations and Standard Conditions

- Los Angeles County CMP
- City of Malibu General Plan
- City TIA Guidelines

5.11.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant:

- Impact 5.11-2 The proposed project would not exceed a level of service standard established by the county congestion management agency.
- Impact 5.11-3 The proposed project would not result in any traffic hazards.

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.11-1 The proposed project with development of dedicated Lot 7 as a baseball field option would result in a substantial increase in traffic in Opening Year 2017 and Future Year 2030.
- Impact 5.11-4 Development of dedicated Lot 7 with recreational uses would increase the need for parking, which, in combination with special events at Malibu Bluffs Park, or times of peak park use, could result in inadequate parking at the site.
- Cumulative Impacts The proposed project and future development of dedicated Lot 7 with active recreational uses would contribute to a cumulatively significant parking demand impact and to a cumulatively considerable impact to the level of service of the intersection of PCH and Malibu Canyon Road.

5.11.7 Mitigation Measures

Impact 5.11-1

11-1 Prior to recordation of the final map, the Project Applicant(s) shall construct the following improvements at the intersection of Malibu Canyon Road/PCH (See Draft EIR Figure 5.11-29, *Depiction of Mitigation Measure 11-1*):

- Re-stripe the existing southbound through plus left-turn lane on Malibu Canyon Road (at its intersection with Pacific Coast Highway) to a through plus left- and right-turn lane.
- Either modify the existing traffic signal to remove the right-turn overlap phase to a standard right-turn-on-red (RTOR) permissive phase resulting in LOS E at 0.~~928~~ 930 V/C OR;
- Keep right turn overlap phase for existing #2 (outside) dedicated right-turn lane on Malibu Canyon Road (at its intersection with Pacific Coast Highway) resulting in LOS E at 0.~~902~~ 901 V/C.

Impact 5.11-4

11-2 Prior to obtaining the last Building Permit for the recreational facilities, the City Parks and Recreation Department shall prepare and implement a Parking Management Plan that demonstrates that adequate onsite and/or offsite parking shall be provided during special events and/or other times when it is anticipated that Malibu Bluffs Park would operate at over-capacity conditions relative to parking demand. The Parking Management Plan shall preclude the use of the proposed baseball field when Malibu Bluffs Park would operate at over-capacity conditions relative to parking demand. In addition, the Parking Management Plan will require the City Parks and Recreation Department to schedule baseball games with at least a half-hour to 45 minute interval between games so that the parking demand of two consecutive games would not overlap. To accommodate this longer interval between games, less than 10 games per day would be permitted.

5.11.8 Level of Significance After Mitigation

Proposed Project with Lot 7 Use – Baseball Field

Based on the Opening Year 2017 and the Future Year 2030 plus Project LOS analysis, and the significance criteria of the City, the proposed project with the future development of dedicated Lot 7 as a baseball field would create a significant impact at Malibu Canyon Road/PCH as this intersection is forecast to continue to operate at LOS E (0.988 V/C) and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).~~Based on the Opening Year 2017 plus Project and Future year 2030 LOS analyses and the City's significance criteria the proposed project would create a significant impact at Malibu Canyon Road/PCH because this intersection is forecast to continue to operate at LOS E (0.965 V/C), and the proposed project would increase the intersection's V/C by 0.012 V/C (i.e., ≥ 0.010 V/C threshold at LOS E or F).~~ However, the impact is less than significant based on the County of Los Angeles CMP criteria. The proposed project with future development of Lot 7 would not create any significant impacts to the other study area intersections as the project-added V/C increases are less than the City's thresholds.

Future development of the site with the proposed project (5 single-family homes) and Lot 7 with a baseball field would result in a substantial increase in traffic in Opening Year 2017 and Future Year 2030 if the intersection of PCH and Malibu Canyon Road/Winter Mesa Road, which is operated and maintained by Caltrans, is not improved. However, re-striping the existing southbound through plus left-turn lane on PCH to a through plus left- and right-turn lane does not require Caltrans approval because the restriping would occur on Malibu Canyon Road, and is within the City's public right-of-way. Furthermore, the City Public Works Department has determined that the preference is to keep the right turn overlap phase for the existing No. 2 Lane dedicated right-turn lane on PCH (status quo) because it will result in a higher level of service than modifying the existing traffic signal to remove the right turn overlap phase to a standard right-turn-on-red permissive phase. Therefore, the mitigation measures do not require approval from Caltrans. Implementation of ~~transportation improvements to Caltrans facilities such as the intersection of Malibu Canyon Road/PCH, is the primary responsibility of Caltrans. Any modifications to the operation of a roadway by the project applicant and/or a contractor would require the issuance of an encroachment permit by Caltrans, the responsible agency for the intersection of Malibu Canyon Road/PCH. While Caltrans has recognized that private development has a role to play in funding fair share improvements to impacts on Caltrans facilities, Caltrans has not adopted a program that can ensure that locally contributed impact fees will be tied to improvements. Only Caltrans has jurisdiction over improvements to Caltrans facilities. Because Caltrans has exclusive control improvements to the intersection of Malibu Canyon Road/PCH, ensuring that developer fair share contributions to improving this intersection is actually part of a program tied to implementation of mitigation is within the jurisdiction of Caltrans. However, a number of funding programs are in place in Los Angeles to assist in improving and upgrading the regional transportation system. If~~ mitigation measure 11-1 ~~and these programs are not implemented by the agencies with the responsibility to do so, the project's impacts to the intersection of Malibu Canyon Road/PCH, would remain significant and unmitigated for Impact 5.11-1~~would reduce impacts to a less than significant level.

Parking Demand

Development of the proposed project (5 single-family homes) would not result is cumulative parking impacts. Development of the proposed project (5 single-family homes) and future development of dedicated Lot 7 as a skate park also would not result is cumulative parking impacts. With future development of dedicated Lot 7 as baseball field, a peak demand of 217 spaces could occur under maximum usage of the Malibu Bluffs Park and the new (third) baseball field (125 existing demand plus 92 new demand during overlapping games on Saturday). This would result in an overall park parking shortfall of 42 spaces (217 spaces minus 175 spaces). The impacts would not be particularly problematic on weekdays days when Malibu Bluffs Park operates at typical conditions because the deficiency of six parking spaces would have a short duration and could be accommodated at other locations within the park. The increase in parking demand associated with the baseball field would, however, aggravate a situation that is already impacted during special events at the park and during times of peak park utilization. With mitigation measure 11-2, the cumulative impacts related to parking would be less than significant.

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Figure ~~5.11-23~~5.11-29 Depiction of Mitigation Measure 11-1

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1. *Executive Summary*

1.1 INTRODUCTION

This Draft Environmental Impact Report (EIR) addresses the environmental effects associated with the implementation of the proposed Crummer Site Subdivision project (proposed project). The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An EIR is a public document designed to provide the public, local, and state governmental agency decision-makers with an analysis of potential environmental consequences to support informed decision-making.

This EIR has been prepared pursuant to the requirements of CEQA (California Public Resources Code, Division 13, Section 21000, et seq.) and the CEQA Guidelines (Title 14 of the California Code of Regulations, Division 6, Chapter 3, Section 15000, et seq.) to determine if approval of the discretionary actions requested could have a significant impact on the environment. The purpose of this EIR is to identify and disclose significant environmental impacts that will or could potentially occur as a result of project approval and implementation. It is intended to inform agencies with discretionary permitting authority over the project and project area, property owners and tenants, and the general public of such impacts and to fulfill the CEQA environmental clearance requirements for the project and all other aspects of project entitlement. The actions and approvals anticipated for this project are listed in Section 3.0, *Project Description*. The purpose of this EIR is also to identify ways to avoid or mitigate the project's significant impacts on the environment and to indicate alternatives to the project.

In accordance with Section 15367 of the CEQA Guidelines, the City of Malibu is the lead agency for the proposed project, since it will serve as "the public agency which has the principal responsibility for carrying out or approving the project." The City of Malibu determined that an EIR was required for the project based on its review of the proposed project application and its consideration of the potential environmental effects of the project identified in the initial study. The City of Malibu has reviewed all submitted drafts, technical studies, and reports. Information for this EIR was obtained from onsite field observations, discussions with affected agencies, analysis of adopted plans and policies, review of available studies, reports, data and similar literature in the public domain, and specialized environmental assessments (e.g., aesthetics, air quality, biological resources, geology, hazards, hydrology and water quality, noise, traffic, and greenhouse gases). Environmental studies conducted specifically for the proposed project are available at the City for review and are included as appendices to this EIR.

1.2 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared pursuant to CEQA to assess the environmental effects associated with implementation of the proposed project, as well as anticipated future discretionary actions and approvals. The six main objectives of this document as established by CEQA are listed below:

1) To disclose to decision makers and the public the significant environmental effects of proposed activities.
2) To identify ways to avoid or reduce environmental damage.
3) To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.

4) To disclose to the public reasons for agency approval of projects with significant environmental effects.
5) To foster interagency coordination in the review of projects.
6) To enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation identified in CEQA and the CEQA Guidelines and provides the information needed to assess the environmental consequences of a proposed project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed project that has the potential to result in significant, adverse environmental impacts.

An EIR is also one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Prior to approving a proposed project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings concerning the project's significant environmental impacts and alternatives, and adopt a Statement of Overriding Considerations if the proposed project results in significant impacts that cannot be avoided.

1.2.1 EIR Format

This Draft EIR has been formatted as described below.

Section 1. Executive Summary: Summarizes the background and description of the proposed project, the format of this EIR, project alternatives, any critical issues remaining to be resolved, and the potential environmental impacts and mitigation measures identified for the project.

Section 2. Introduction: Describes the purpose of this EIR, background on the project, the Notice of Preparation, the use of incorporation by reference, and Final EIR certification.

Section 3. Project Description: A detailed description of the project, the objectives of the proposed project, the project area and location, approvals anticipated to be included as part of the project, the necessary environmental clearances for the project, and the intended uses of this EIR.

Section 4. Environmental Setting: A description of the physical environmental conditions in the vicinity of the project as they existed at the time the Notice of Preparation was published, from both a local and regional perspective. The environmental setting provides baseline physical conditions from which the lead agency determines the significance of environmental impacts resulting from the proposed project.

Section 5. Environmental Analysis: Provides, for each environmental parameter analyzed, a description of the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the project; the existing environmental setting; the potential adverse and beneficial effects of the project; the level of impact significance before mitigation; the mitigation measures for the proposed project; the level of significance of the adverse impacts of the project after mitigation is incorporated; and the potential cumulative impacts associated with the proposed project and other existing, approved, and proposed development in the area.

Section 6. Significant Unavoidable Adverse Impacts: Describes the significant unavoidable adverse impacts of the proposed project.

Section 7. Alternatives to the Proposed Project: Describes the impacts of the alternatives to the proposed project, including the No Project Alternative.

Section 8. Impacts Found Not to Be Significant: Briefly describes the potential impacts of the project that were determined not to be significant by the Initial Study and were therefore not discussed in detail in this EIR.

Section 9. Significant Irreversible Changes Due to the Proposed Project: Describes the significant irreversible environmental changes associated with the project.

Section 10. Growth-Inducing Impacts of the Project: Describes the ways in which the proposed project would cause increases in employment or population that could result in new physical or environmental impacts.

Section 11. Organizations and Persons Consulted: Lists the people and organizations that were contacted during the preparation of this EIR for the proposed project.

Section 12. Qualifications of Persons Preparing EIR: Lists the people who prepared this EIR for the proposed project.

Section 13. Bibliography: A bibliography of the technical reports and other documentation used in the preparation of this EIR for the proposed project.

Appendices. The appendices for this document contain the following supporting documents:

- Appendix A: 2008 Initial Study and Notice of Preparation
- Appendix B: 2008 Comments Received (Initial Study and Notice of Preparation)
- Appendix C: 2012 Initial Study and Notice of Preparation
- Appendix D: 2012 Comments Received (Initial Study, Notice of Preparation and Scoping)
- Appendix E: View Simulations Report
- Appendix F: Landscape Plans
- Appendix G: Air Quality Modeling Sheets
- Appendix H: Biological Studies
- Appendix I: Cultural Study
- Appendix J: Geotechnical Study
- Appendix K: Greenhouse Gas Modeling Sheets
- Appendix L: Fire Safety Plan and Fuel Modification Plan
- Appendix M: Fire Safety Review Letters, March 2012
- Appendix N: Hydrology Studies
- Appendix O: Residential Conditions of Approval, Local Coastal Program and Zoning Text Amendments
- Appendix P: Noise Modeling Sheets
- Appendix Q: Traffic Study

1.2.2 Type and Purpose of This Draft EIR

This Draft EIR has been prepared as a "Project EIR" as defined by State CEQA Guidelines (Section 15161, California Code of Regulations, Title 14, Division 6, Chapter 3). This type of EIR examines the environmental impacts of a

specific development project and should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project, including planning, construction, and operation.

1.3 PROJECT LOCATION

The project site is a 24-acre parcel at 24120 Pacific Coast Highway (PCH), in the City of Malibu, County of Los Angeles. The Assessor's Parcel Numbers (APN) for the site are 4458-018-019, -018, and -002. The site is atop a bluff, and steep slopes descend to the south and east. Malibu Bluffs Park borders the project site to the west, PCH borders the site to the north, and a privately owned parcel borders the site to the east. Winter Mesa Drive, a small road connecting PCH to Malibu Bluffs Park, provides access to the project site.

1.4 PROJECT SUMMARY

The proposed project entails the subdivision of the project site into seven individual lots. Lots 1 through 5 would be developed with single-family residences and various accessory structures. Lot 6 would be developed with a private gated street, a gatehouse, an onsite wastewater treatment system (OWTS) Package Plant, landscaping, and open space to be owned and maintained by the homeowners association (HOA). Lot 7 would be dedicated to the City of Malibu for active and passive recreational use. The recreational area has yet to be designed and would not be developed as part of this project. Although no recreational improvements would be permitted as part of the applicant's current proposal, the land dedication is intended to expand Bluffs Park. Therefore, active recreation areas, passive recreation areas, and an expanded parking lot are all foreseeable future uses. At this time the City believes that the recreational area may be used as a baseball field or a skate park. Therefore, these uses are evaluated in this Draft EIR.

1.5 SUMMARY OF PROJECT ALTERNATIVES

CEQA states that an EIR must address "a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives" (14 Cal. Code of Reg. 15126.6(a)). As noted in Section 8.0, a number of impacts relating to agricultural resources, hazards and hazardous materials, mineral resources, population and housing, public services, and utilities and services systems were determined to have no impact or a less than significant impact without mitigation. All other potentially significant impacts of the project can be mitigated to a less than significant level. ~~with the exception of the significant unavoidable impacts described in Section 6.0. The significant unavoidable adverse impact of the project is the following:~~

~~The proposed project with baseball field option would result in a substantial increase in traffic in Opening Year 2017 and Future Year 2030 if the intersection of PCH and Malibu Canyon Road/Winter Mesa Road, which is operated and maintained by Caltrans, is not improved.~~

As described in Section 7 of this Draft EIR, two alternatives were considered but rejected during the project scoping/planning process:

- Other Development Areas Alternative
- No Project, No Development Alternative

In addition, ~~three~~ four project alternatives were identified and analyzed in detail for relative impacts to the proposed project:

- Two-Story Homes with Skate Park Only Alternative
- One-Story Homes with Skate Park or Baseball Field Alternative
- No Project, Foreseeable Development Alternative
- Reduced Project Alternative

The following presents a summary of each of the alternatives analyzed in the Draft EIR. Please refer to Section 7 of this Draft EIR for a complete discussion of how the alternatives were selected and the relative impacts associated with each alternative.

1.5.1 Other Development Areas Alternative

The project applicant owns the AZ Winter Mesa Towing Site immediately east of the project site. An EIR for the subdivision of this site and the construction of four homes on this site has been approved. The adjacent parcel is therefore not available as a development area for the Crummer Site Subdivision project. The project applicant does not own any other sites within the jurisdiction of the City of Malibu that are considered feasible alternatives to the proposed project. Since the project applicant cannot reasonably acquire, control, or otherwise access any other sites, and since the analysis of other sites would be speculative without site-specific data, no other sites were further considered.

1.5.2 No Project, No Development Alternative

This alternative assumes that the existing 24-acre site would remain unchanged. The project site would not be subdivided, no new housing or recreational facilities would be constructed, and no improvements would be made. The site would remain vacant, in its current form and would not be developed for other uses, including the proposed project. The No Project, No Development Alternative would avoid or reduce impacts associated with air quality, biological resources, cultural resources, geology and soils, fire hazards, hydrology and water quality, and traffic and transportation. However, this alternative has been rejected because it would not attain any of the primary objectives of the proposed project. While it would preserve the rural character of site and bluewater views, it is not reasonable to assume that project applicant would never develop this site, a valuable economic resource, and that it would remain in its current physical condition. Consequently, the No Project, No Development Alternative was rejected from further analysis.

1.5.3 Two-Story Homes with Skate Park Only Alternative

This alternative is designed to eliminate the project's only significant and unavoidable impact. The Two-Story Homes with Skate Park Only Alternative assumes that the project would be developed with 5 two-story homes and that Lot 7 would be improved with a skate park and new 94-stall parking lot. Lot 7 would not be developed with a baseball field. As discussed in Section 5.11, *Transportation and Traffic*, the proposed project with baseball field development option would result in a substantial increase in traffic in Opening Year 2017 and Future Year 2030 if the intersection of PCH and Malibu Canyon Road/Winter Mesa Road, which is operated and maintained by Caltrans, is not improved. Any modifications to the operation of a roadway by the project applicant and/or a contractor would require the issuance of an encroachment permit by Caltrans, the responsible agency for the intersection of Malibu Canyon Road/PCH. There is the potential that significant impacts may not be fully mitigated if such improvements are not completed for reasons beyond the City's control (i.e., the City cannot undertake or require improvements within the control of Caltrans).

This alternative would generate 78 Average Daily Trip (ADT), 4 AM and 15 PM weekday peak hour trips and 110 ADT and 25 Saturday peak hour. Weekday and Saturday ADT would be reduced by 54 percent and 89 percent, respectively. Weekday PM peak hour trips would be reduced by 77 percent. Saturday midday peak hour trips would be reduced by 74 percent. The skate park would generate a parking demand of 10 vehicles, which is based on an assumption that up to 20 people would be using the skate park at any given time and that the average vehicle occupancy would be two-person per car.

The Two-Story Homes with Skate Park Only Alternative assumes that the construction schedule, grading volumes, and development footprints are the same as the proposed project. This alternative would eliminate the significant and unavoidable traffic impact. It would also reduce parking demand impacts and operational noise impacts. This alternative would be environmentally similar to the proposed project in the area of operational air quality, greenhouse gas emissions, fire hazards, hydrology and water quality, land use, construction noise, and recreation.

1.5.4 One-Story Homes with Skate Park or Baseball Field Alternative

This alternative was requested at the public scoping meeting for the project held on June 7, 2012. Although impacts to Aesthetics were found to be less than significant without mitigation, the proposed two-story residential buildings would appear very prominent when viewed from the low-lying portions of the City to the east and when viewed from higher elevation residential areas of Malibu Country Estates to north of the site. As requested by the public, the One-Story Homes Alternative analyzes the impact of developing all one-story homes instead of all two-story homes.

The One-Story Homes Alternative assumes that the project site is developed with five single-family, single-story homes and a skate park or baseball field. This alternative would reduce the maximum building height of the residential structures from 28 feet to 18 feet. The building square footages would remain the approximately the same for each unit, as would the lot sizes. The two-story structures represent a more compact building zone, which would result in less building mass and allow for more open area on each of the five lots. As a result, there would be a reduction of space between the homes when compared to the proposed project. The single-story alternative would almost double the building footprints, as well as the amount of grading and export, for each of the five homes. The length of construction activities would be approximately 39 months, slightly longer than the 38-month estimate for the proposed project. In addition, construction phasing and duration is only an estimate and could exceed the 39-month assumption given current market conditions.

Although not significant, this alternative would reduce aesthetic impacts. It would increase impacts in a variety of environmental categories, including construction air quality, biological impacts, cultural geotechnical, and construction noise. The increased fuel modification zones have the potential to cause a new significant impact. This alternative would be environmentally similar to the proposed project in the area of operational air quality, greenhouse gas emissions, fire hazards, hydrology and water quality, land use, operational noise, recreation, and traffic. While the alternative would meet many of the project objectives, it would not meet the objective of maximizing separation of building areas from significant environmental resources.

1.5.5 No Project, Foreseeable Development Alternative

This alternative is required by CEQA. Pursuant to CEQA Guidelines section 15126.6(e)(2), this alternative describes what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. This alternative assumes the project site will be developed pursuant to the Malibu General Plan, which designates the project site Planned Development (PD) and the City of Malibu Local Coastal Program (LCP). The Malibu Municipal Code Zoning Map and the LCP

Land Use Zoning Map designate the project site as PD. The project site is the only property designated PD in the Malibu General Pan and the Malibu LCP. The LCP PD zoning designation "is intended to provide for a mix of residential and recreational development of the Crummer Trust property [proposed project site] located east of Malibu Bluffs State Park and south of Pacific Coast Highway…. Any planned development in such commercial areas would require an amendment to the Malibu LCP in order to specify the permitted type, density, and intensity of development."

This alternative assumes that the project site would be fully developed based on a site plan previously considered under a development agreement by the City and by the California Coastal Commission at the time of the Malibu LCP was being developed. Therefore, it is a reasonable foreseeable alternative that a subsequent developer may apply for similar development which includes eight homes and recreational facilities. This alternative would consist of eight single-family homes, each on a minimum two-acre lot. The western portion of the project site would be developed with a basketball court, a baseball field, and a 100-space parking lot for the recreational facilities. The length of construction activities would be approximately 44 months, longer than the 38-month estimate for the proposed project. In addition, construction phasing and duration is only an estimate and could exceed the 44-month assumption given current market conditions,

This alternative would not lessen any of the environmental effects of the proposed project. This alternative would increase all impacts compared to the proposed project, with the exception of land use and recreational impacts, which remain equal. This alternative would not lessen any of the environmental effects of the proposed project, and it could potentially lead to new significant traffic impact. During the operational phase, this alternative is forecast to generate 89 more daily trips compared to the proposed project on a weekday and 151 daily trips on a weekend. As a result, air pollutant emissions (criteria and GHG emissions) and traffic generated by this alternative would be greater compared to the proposed project. It would not reduce impacts to noise and would in fact increase operational noise impacts associated with peak weekend noise levels. This alternative would be less compatible with the surrounding neighborhood. This alternative would achieve some of the objectives established for the project, but not to the same extent as the proposed project.

1.5.6 Reduced Project Alternative

This alternative was requested during the public review period for the Draft EIR. As discussed in Chapter 5.1, *Aesthetics*, the proposed project would not obstruct existing public scenic views or otherwise substantially impact scenic views or resources. Impacts would be less than significant without mitigation. However, the proposed residential buildings would appear very prominent when viewed from the low-lying portions of the City to the east. In addition, when viewed from higher-elevation residential areas of Malibu Country Estates to the north of the site, the proposed project would alter the horizon of the bluff, and would create buildings visible from these vantage points where no buildings currently exist. As requested by the public, the Reduced Project Alternative analyzes the impact of the proposed project when targeted reductions in height, massing, and visual bulk are applied to the five proposed homes.

The Reduced Project Alternative assumes that the project site is developed with five single-family homes and dedicated Lot 7 is developed with a skate park or baseball field. This alternative would reduce overall floor area of the proposed homes by approximately 11 percent. This reduction would be accomplished by the following modifications to homes on Lots 1–5:

- Lot 1: Reduction of the square footage on the second floor from 3,344 square feet to 1,619 square feet and the total square footage of the residence from 11,081 square feet to 10,052 square feet

- Lot 2: Reduction of the height of the entire residence not to exceed 18 feet and the square footage of the home from 11,068 square feet to 9,642 square feet
- Lot 3: Reduction of the square footage of the residence from 11,009 square feet to 8,999 square feet
- Lot 4: Reduction of the square footage on the second floor from 3,409 square feet to 3,152 square feet and the total square footage of the residence from 11,157 square feet to 9,536 square feet
- Lot 5: Relocation of the pool cabana from the western side of the pool to the eastern side; relocation of the residence further north and approximately 6 ½ feet to the east; and a 4 feet, 4 inch reduction of the height of approximately 26 linear feet of roof on the southwestern portion of the house by changing the roof from flat to pitched

This alternative also involves modifications to the proposed landscape plan, as follows:

Common Area:

- Seven (7) Heteromeles arbutifolia trees were removed from both the north and south sides of the street between the gatehouse and the driveway of Lot 5 to create view corridors from Rancho Malibu.
- Three (3) trees were removed from both the north and south sides of the street to the west of the driveways to Lots 1 and 4 to open a larger view corridor from Rancho Malibu.

Lot 1:

- Replaced four (4) Sambucus Mexicana with 5 Arbutus marinas on the north side of driveway.
- Added seven (7) Arbutus marinas along the northern property line to be consistent with the change in location of the house and new footprint.
- Relocated three (3) Chitalpa tashkentensis to the west of the house to be consistent with the change in location of the house and new footprint.
- Removed palms in front of the house.
- Removed two (2) Brahea armata Palms, one (1) Arbutus unedo, and two (2) Chamerops humilis Palms in the rear yard and along south side of the house to coordinate with changes in the location of the house and new footprint.

Lot 2:

- Four (4) Cupressus macrocarpa on east side of house were replaced with Quercus agrifolia, and locations adjusted. One (1) Quercus agrifolia removed from the north side of the house and replaced with two (2) Cupressus macrocarpa.
- Removed eight (8) Cycas revoluta and adjusted locations of six (6) Arbutus unedo trees to coordinate with changes in the location of the house and new footprint.

Lot 3:

- Adjusted trees around updated entry water feature in site plan as a result of removal of the guest house.

Lot 4:

- Removed five (5) Olea europa trees along entry drive to widen the view corridor from Rancho Malibu property.
- Removed two (2) Taxodium mucronatum and adjusted the location of a third on the east side of the house. This adjustment aligns with the removed street trees and Olea eurpoa to create a continuous view corridor down the draw to the ocean.

- Adjusted the location of the remaining Olea europas along the driveway to better screen the house.
- Added two (2) Arbutus marina in front of the house to be consistent with the change in location of the house and new footprint of the house and new footprint.
- Adjusted location of various trees on the east side of the house to coordinate with the revised architecture.

Lot 5:

- Added one (1) Erythrina caffra and adjusted the location of another on the west side of the house to be consistent with the change in location of the house and new footprint.
- Relocated Stenocarpus sinuatus trees on west side of the house to coordinate with changes in the location of the house and revised architecture.
- Adjusted location of Quercus agrifolia to west of the house in area between Bluffs Park ball field and driveway to coordinate with changes in the location of the house and revised architecture.
- Removed four (4) Heteromeles arbutifolia along the south side of the driveway to open views to the ocean.

These modifications were designed with the intention of reducing impacts of the proposed project on visual resources.

This alternative would require slightly less, but generally a similar amount of, soil export and import. As discussed in Draft EIR Section 3.3.4, *Proposed Land Uses*, the proposed project entails two-story homes on Lots 1 through 5. As discussed, air quality, noise, and construction traffic impacts for the proposed project are less than significant. These impacts would remain less than significant under the Reduced Project Alternative. The length of construction activities would be similar to that under the proposed project. However, construction phasing and duration is only an estimate and could exceed the 39-month assumption given current market conditions.

This alternative would slightly reduce impacts in a variety of environmental categories, including visual resources, construction air quality, biological resources, cultural resources, geotechnical, and construction noise. However, these impacts would be substantially similar, or slightly less than, than those under the proposed project and they would remain less than significant. This alternative would also be environmentally similar to the proposed project in the area of operational air quality, cultural resources, greenhouse gas emissions, fire hazards, hydrology and water quality, land use, operational noise, recreation, and traffic.

1.6 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the lead agency as to the following:

1. Whether this DEIR adequately describes the environmental impacts of the project.

2. Whether the benefits of the project override those environmental impacts which cannot be feasibly avoided or mitigated to a level of insignificance.

3. Whether the proposed land use changes are compatible with the character of the existing area.

4. Whether the identified goals, policies, or mitigation measures should be adopted or modified.

5. Whether there are other mitigation measures that should be applied to the project besides the Mitigation Measures identified in the Draft EIR.

6. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic project objectives.

1.7 AREAS OF CONTROVERSY

Adjacent residents are concerned over the potential of land use and aesthetic incompatibility of the two-story single family homes and recreational uses with the surrounding neighborhood. In particular, residents are concerned over the loss of scenic resources, ocean views, light and glare, landscaping, and building height and mass. Also of concern to the community are traffic, hydrology, water quality, land use compatibility, noise, biological resources, geology and soils, greenhouse gas emissions and air quality, cultural resources, recreation, public access, and duration of construction activities.

1.8 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table 1-1 summarizes the conclusions of the environmental analysis contained in this DEIR. Impacts are identified as significant or less than significant, and for all significant impacts mitigation measures are identified. The level of significance after imposition of the mitigation measures is also presented.

1.9 INCORPORATION BY REFERENCE

This document relies upon previously adopted regional and statewide plans and programs in its analysis. The following documents are incorporated by reference into this DEIR.

City of Malibu General Plan: The City of Malibu General Plan is a statement of the goals and programs of the City, and a comprehensive plan setting forth a consistent guide to future development in the City. All development plans, zoning and subdivision ordinances, coastal development permits, and conditional use permits of the City are required to be consistent with the General Plan. The proposed project must comply with the requirements contained in the General Plan.

City of Malibu Local Coastal Program: An LCP is "a local government's land use plans, zoning ordinances, zoning district maps, and, within sensitive coastal resources areas, other implementing actions, which, when taken together, meet the requirements of, and implement the provisions and policies of [the California Coastal Act of 1976] at the local level." The LCP has a Land Use Plan (LUP) and a Local Implementation Plan (LIP). The LUP includes goals, objectives, and policies intended to guide future development in the City of Malibu. The LIP contains specific regulations intended to carry out the policies of the LUP. The proposed project must comply with all goals, objectives, policies, and requirements contained in the LUP and the LIP. In cases where the LCP conflicts with the City General Plan or Municipal Code, the LCP takes precedence.

City of Malibu Municipal Code: The City of Malibu Municipal Code contains provisions and requirements that apply throughout the City. Included in the Municipal Code are provisions pertaining to buildings and construction, onsite wastewater treatment systems, subdivisions, public services, traffic, health, and safety, among others. The proposed project must comply with the requirements contained in the City of Malibu Municipal Code.



Table 1-1
Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 AESTHETICS			
Impact 5.1-1: The proposed project would alter scenic resources.	Less than significant	No mitigation measures are necessary.	Less than significant
Impact 5.1-2: The proposed project would alter the visual appearance of the site.	Less than significant	No mitigation measures are necessary.	Less than significant
Impact 5.1-3: The proposed project would not generate substantial light or glare.	Less than significant	No mitigation measures are necessary.	Less than significant
5.2 AIR QUALITY			
Impact 5.2-1: The proposed project is consistent with the applicable Air Quality Management Plan.	Less than significant	No mitigation measures are necessary.	Less than significant
Impact 5.2-2: Construction activities associated with the proposed project would generate short-term emissions in exceedance of SCAQMD's threshold criteria for NOx and would therefore contribute to the ozone (O_3) and particulate matter (PM_{10} and $PM_{2.5}$) nonattainment designations of the SoCAB.	Potentially significant	2-1 The construction contractor shall implement the following measures to reduce construction exhaust emissions during grading and construction activities: ▪ The construction contractor shall ensure that all construction equipment is properly serviced and maintained to the manufacturer's standards to reduce operational emissions. ▪ The construction contractor shall limit nonessential idling of construction equipment to no more than five consecutive minutes. ▪ Where feasible, use haul trucks with engines that are 2010 or newer for soil import and export activities. ▪ The construction contractor shall limit soil hauling activities associated with the site grading phase to a maximum of 38 trucks per day (76 one-way soil haul trips per day for haul trips). ▪ The construction contractor shall use USEPA-rated Tier 3 construction engines for equipment rated at 50 horsepower or greater for general site grading activities. Tier 3 engines between 90 and 750 horsepower are available for 2006 to 2008 model years. ▪ A list of construction equipment by type and model year shall be maintained by the construction contractor onsite.	Less than significant

Table 1-1
Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		These requirements shall be noted on all construction management plans and verified by the City of Malibu during site grading activities.	
Impact 5.2-3: Long-term operation of the project would not generate vehicle trips and associated emissions in exceedance of SCAQMD's regional threshold criteria.	Less than significant	No mitigation measures are necessary.	Less than significant
Impact 5.2-4: Construction of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.	Less than significant	No mitigation measures are necessary.	Less than significant
Impact 5.2-5: Operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.	Less than significant	No mitigation measures are necessary.	Less than significant
Impact 5.2-6: Proximity to the Pacific Coast Highway would not expose sensitive receptors to substantial pollutant concentrations.	Less than significant	No mitigation measures are necessary.	Less than significant
5.3 BIOLOGICAL RESOURCES			
Impact 5.3-1: Implementation of the proposed project would result in the loss of special status plant species and an increase in nonnative plants.	Potentially significant	3-1 (a) A focused survey for Braunton's milk-vetch shall occur prior to the issuance of a grading permit. The focused survey shall occur within on-site suitable habitat (i.e., mixed sage scrub and coastal sage chaparral scrub) that may be disturbed as a result of the proposed project implementation, during the typical blooming period (February through July). This survey shall be conducted in accordance with the methodologies used for performing focused plant surveys per the CDFG's 2000 *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities (Guidelines)*, and the CNPS's 2001 *Botanical Survey Guidelines of the California Native Plant Society*. In the event that Braunton's milkvetch are discovered during focused preconstruction surveys, a translocation plan shall be developed by a biologist familiar with the ecology of the species and the plan would be approved by the U.S. Fish and Wildlife Service prior to issuance of grading permit.	Less than significant

Table 1-1
Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		(b) Certain ornamental plants are known to escape from planted areas and invade into native plant communities. In order to protect established native plant communities located in the vicinity, the plants listed in Table 14 of the Biological Resource Study prepared by Impact Sciences, Inc., in 2008 for the proposed project shall not be planted within the project site. This list shall also be distributed to new homeowners and included within any covenants, conditions, and restrictions. The landscaping plans within common areas of the project shall be reviewed by a qualified botanist who shall recommend appropriate provisions to prevent other invasive plant species from colonizing remaining onsite or adjacent natural areas. These provisions may include the following: (a) review and screening of proposed plant palette and planting plans to identify and avoid the use of invasive species; (b) weed removal during the initial planting of landscaped areas; and (c) monitoring for and removal of weeds and other invasive plant species as part of ongoing landscape maintenance activities. The frequency and method of monitoring for invasive species shall be determined by a qualified botanist. In addition, the homeowner's association shall provide homeowners with the list entitled "City of Malibu Non-Native Invasive Plants Prohibited in Landscape Plans" which is maintained by the City of Malibu and can be found on the City's website. (c) Seeded areas shall be irrigated with temporary overhead irrigation until plants have established as determined by a qualified biologist.	
Impact 5.3-2: Development of the proposed project would not result in the loss of sensitive habitat.	Less than significant	No mitigation measures are necessary.	Less than significant
Impact 5.3-3: The proposed project would not impact jurisdictional waters.	Less than significant	No mitigation measures are necessary.	Less than significant
Impact 5.3-4: The proposed project would not affect wildlife movement.	Less than significant	No mitigation measures are necessary.	Less than significant
Impact 5.3-5: The proposed project would	Potentially significant	3-2 The City of Malibu Native Tree Protection Ordinance requires that mitigation and	Less than significant

Table 1-1
Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures		Level of Significance After Mitigation
require compliance with the City of Malibu Local Coastal Program and Native Tree Protection Ordinance.			maintenance measures be developed to preserve the six Southern California black walnut trees located on the project site. The Protected Tree Report released in June 2008 by Impact Sciences, Inc., includes suggested mitigation measures. The proposed project shall comply with all mitigation measures contained in the 2008 Protected Tree Report. These measures include the installation of protective fencing around the black walnut trees for the duration of construction and limits on grading activities which can be performed near the protected trees, among others. The mitigation measures included in the Protected Tree Report also require maintenance and monitoring of the trees. The report requires that many of the mitigation measures be approved by a City-approved arborist. After the completion of construction, a monitoring report would be required. Should the monitoring report determine that any protected trees were impacted, counter-measures, including the planting of replacement trees, would be required.	
Impact 5.3-6: The proposed project would not substantially reduce the habitat of a fish or wildlife species, threaten to eliminate a plant or animal community, or cause a fish or wildlife population to drop below self-sustaining levels.	Potentially significant	3-3	(a) To avoid impacts to native nesting birds, the applicant and/or its contractors shall retain a qualified biologist (with selection to be reviewed by the City) to conduct nest surveys in potential nesting habitat within the project site prior to construction or site preparation activities. Specifically, within 30 days of ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys to determine if active nests of bird species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Game Code are present in the construction zone or within a distance determined by CDFG or the City of Malibu biologist. Because many birds known to use the project area (including Anna's hummingbird, Cooper's hawk, and loggerhead shrike) nest during the late winter, breeding bird surveys shall be carried out both during the typical nesting/breeding season (mid-March through September) and in January and February. The surveys shall continue on a weekly basis, with the last survey being conducted no more than three days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, additional pre-construction surveys will be conducted such that no more than three days will have elapsed between the last survey and the commencement of ground disturbance activities. Surveys shall include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known	Less than significant

Table 1-1
Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		to occur in the area are shrub or ground nesters, including (but not limited to) California horned lark, kill deer, and mourning dove. (b) If active nests are found, clearing and construction activities within a buffer distance determined by CDFG or the City of Malibu biologist, shall be postponed or halted until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting during the same year. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Malibu within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.	

Table 1-1
Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures		Level of Significance After Mitigation
5.4 CULTURAL RESOURCES				
Impact 5.4-1: Construction activities could disturb previously unidentified archaeological resources.	Potentially significant	4-1	For adequate coverage and the protection of potentially significant buried resources, a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards (48 Federal Register 44738-39) shall be retained by the applicant to monitor all ground-disturbing activities, including but not limited to all grading, excavation, and site preparation. The project archaeologist shall have the authority to halt any activities adversely impacting potentially significant resources. Any significant archaeological resources found shall be preserved as determined necessary by the project archaeologist and offered to the South Central Coastal Information Center at California State University, Fullerton or repository willing to accept the resource. Any resulting reports shall also be forwarded to the South Central Coastal Information Center at California State University, Fullerton. Should paleontological soils be uncovered during grading, a paleontological monitor shall also be retained by the applicant, upon the archaeological monitor's request, to oversee ground-disturbing activities, including but not limited to all grading, excavation, and site preparation. The paleontological monitor shall have the authority to halt any activities adversely impacting potentially significant resources. Should fossil-bearing formations be uncovered, the monitor shall professionally collect any specimens without impeding development. Any paleontological artifacts recovered shall be preserved, as determined necessary by the project paleontologist, and offered to an accredited and permanent scientific institution for the benefit of current and future generations. This mitigation measure shall also apply to trenching for utilities, geological testing, and any other ground-disturbing activities associated with the proposed project.	Less Than Significant
		4-2	A Native American Monitor of Chumash descent shall be retained to monitor all ground-disturbing activities, including but not limited to all grading, excavation, and site preparation. Any artifacts recovered shall be curated at the South Central Coastal Information Center at California State University, Fullerton, the designated repository for Los Angeles, Ventura, and Orange	

Table 1-1
Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Counties. The extent and duration of the archaeological monitoring program shall be determined in accordance with the proposed grading or demolition plans. If human remains are uncovered, the Los Angeles Coroner, Native American Heritage Commission, local Native American representatives, and archaeological monitor shall determine the nature of further studies, as warranted and in accordance with Public Resources Code 5097.98 and the City's standard conditions of approval. This mitigation measure shall also apply to trenching for utilities, geological testing, and any other ground-disturbing activities associated with the proposed project.	
Impact 5.4-2: Project implementation could disturb previously unidentified fossils.	Potentially significant	Mitigation 4-1 and 4-2 applies.	Less Than Significant
5.5 GEOLOGY AND SOILS			
Impact 5.5-1: Slopes along the southern and eastern boundaries of the project site do not meet the City's requirement for the minimum factor of safety.	Potentially significant	5-1 The proposed project shall be constructed in accordance with the geotechnical engineering recommendations as presented in the Leighton and Associates, Inc., Feasibility-Level Grading Plan Review, Proposed Malibu Bluffs Development: 5-Lot Subdivision, "The Crummer Site", APN 4458-018-019, 24200 Pacific Coast Highway, City of Malibu, California, as well as any subsequent documents, including responses to City comments. These recommendations address site preparation, excavation, fill placement and compaction, foundation design, and site drainage, among other topics.	Less than significant

Table 1-1
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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		5-2 (a) The planned community's covenants, conditions, and restrictions (CC&Rs) shall include protocols for proper maintenance of the slopes and prompt restoration following heavy precipitation events and/or fires. (b) Excavating and cutting into the slopes or removal of slope failure debris by the tenants or one or more future property owners without prior approval from a geotechnical engineer shall be prohibited by the covenants, conditions and restrictions for the proposed development. This information shall also be recorded against the title of each residential property. The services of such a geotechnical engineer shall become necessary should a slope excavation be a desired, planned activity proposed by one or more property owners, or in response to unforeseen slope failure, such as sloughing in the aftermath of heavy rain.	
Impact 5.5-2: Project development could result in substantial soil erosion or the loss of topsoil.	Potentially significant	Mitigation Measures 5-1 and 5-2 apply.	Less than significant
Impact 5.5-3: The proposed project would place structures on potentially unstable soils.	Potentially significant	Mitigation Measures 5-1 and 5-2 apply.	Less than significant
Impact 5.5-4: Site conditions are inadequate to support the onsite wastewater treatment system.	Potentially significant	5-4 (a) The proposed onsite wastewater treatment system shall be installed in accordance with the geotechnical engineering recommendations as presented in the Geotechnical Evaluation of Proposed Onsite Wastewater Treatment System, Proposed Residential Development "Crummer Site", 24200 Pacific Coast Highway, APN 4458-018-019, City of Malibu, California, as well as any subsequent documents, including responses to City comments. These recommendations address site preparation, excavation, fill placement and compaction, foundation design, and site drainage, among other topics. (b) The Applicant shall obtain final construction plan approval for the proposed onsite wastewater treatment systems from the City Environmental Health Administrator. The final design must be engineered to meet the effluent limits specified in waste discharge requirements, and requirements of the Regional Water Quality Control Board and the United States Environmental Protection Agency.	Less than significant

Table 1-1
Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		(c) The proposed onsite wastewater treatment system shall not be installed within the structural setback zone as presented in the Leighton and Associates, Inc., Feasibility-Level Grading Plan Review, Proposed Malibu Bluffs Development: 5-Lot Subdivision, "The Crummer Site", APN 4458-018-019, 24200 Pacific Coast Highway, City of Malibu, California.	
5.6 GREENHOUSE GAS EMISSIONS			
Impact 5.6-1: The proposed project would result in a nominal increase in Greenhouse Gas emissions and would not exceed the proposed South Coast Air Quality Management District screening threshold.	Less than significant	No mitigation measures are necessary.	Less than significant.
Impact 5.6-2: The proposed project would not conflict with plans adopted for the purpose of reducing greenhouse gas emissions.	Less than significant	No mitigation measures are necessary.	Less than significant.
5.7 HAZARDS AND HAZARDOUS MATERIALS			
Impact 5.7-1: The project site is within a designated fire hazard zone (VHFHSZ) and could expose structures and/or residences to fire danger.	Potentially significant	7-1 In addition to compliance with existing requirements and standards of the Los Angeles County Fire Department (LACFD), the proposed project must comply with all requirements detailed in letters dated March 16, 2012, from the LACFD, included in Appendix L of the Draft EIR. Where the two letters differ, the more conservative approach shall be taken. The letters include the following requirements, among others: ▪ For Lot 1 and 5 the circular turnaround shall remain clear and unobstructed. No plantings, fountains, or other features shall be allowed; ▪ For Lot 2 the circular turnaround drive aisle shall be maintained at a minimum 20 feet in width with 32 feet on centerline turning radius. If landscaping or other features are to be located in the center, they must not encroach into the drive aisle. ▪ Provide evidence from a certified civil engineer that the "bridge" feature on Lot 5 shall support the minimum weight capacity of 75,000 pounds to accommodate fire apparatus. Once the "bridge" is installed, provide recertification prior to occupancy from a certified civil engineer that the	Less than significant.

Table 1-1
Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		"bridge" will support a minimum of 75,000 pounds. The width of 15 feet shall be maintained clear and unobstructed for the "bridge" portion of the fire department access. ▪ Emergency access for firefighter pedestrian use shall be extended to all exterior walls of all proposed structures within the subdivision. Additional walking access shall be reviewed and approved by Fire Prevention Engineering prior to building permit issuance. ▪ Department access shall be extended to within 150 feet distance of any exterior portion of all structures. ▪ Access shall comply with Section 503 of the Fire Code, which requires all-weather access. All-weather access may require paving. ▪ Where driveways extend farther than 150 feet and are of single-access design, turnarounds suitable for fire protection equipment use shall be provided and shown on the final map. Turnarounds shall be designed, constructed, and maintained to ensure their integrity for fire department use. Where topography dictates, turnarounds shall be provided for driveways that extend over 150 feet in length. ▪ Private driveways shall be indicated on the final map as "Private Driveway and Fire Lane," with the widths clearly depicted, and shall be maintained in accordance with the Fire Code. All required fire hydrants shall be installed, tested, and accepted prior to construction. ▪ Vehicular access must be provided and maintained serviceable throughout construction to all required fire hydrants. All required fire hydrants shall be installed, tested, and accepted prior to construction. ▪ Prior to occupancy, provide street signs and building access numbers as approved by the Fire Department or City. ▪ Provide water mains, fire hydrants, and fire flows as required by the County of Los Angeles Fire Department for all land shown on map which shall be recorded. ▪ The required fire flow for public fire hydrants at this location is 1,375 gallons per minute at 20 psi for a duration of 2 hours, over and above maximum daily domestic demand. Hydrant(s) flowing simultaneously may be used to achieve the required fire flow.	

Table 1-1
Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		▪ Three private fire hydrants shall be installed onsite. The required fire flow for private onsite hydrants is 1,375 gallons per minute at 20 psi. ▪ The required fire hydrants shall be installed, tested, and accepted or bonded for prior to Final Map approval. ▪ Vehicular access must be provided and maintained serviceable throughout construction; ▪ Additional water system requirements will be required when this land is further subdivided and/or during the building permit process. ▪ Per the County of Los Angeles Water Works 29, the Fire Flow Availability form dated March 30, 2012, indicates adequate flow from the existing public fire hydrant on Winter Mesa Drive. All required fire hydrants shall measure 6 inches x 4 inches x 2-1/2 inches, brass or bronze, conforming to current AWWA standard C503 or approved equal and meet the required fire flow requirements (1,375 gallons per minute at 20 psi). 7-2 The proposed project shall comply with all recommendations contained in the fire protection plan and in the fuel modification plan prepared for the proposed project. Compliance with the fire protection plan and fuel modification plan would reduce the vulnerability of the proposed structures and the project site to wildland fires. The recommendations would minimize the likelihood of ember (firebrand) penetration or direct flame impingement, ensure that fire sprinklers and fire alarms are installed in the proposed residences, that the infrastructure of the site and surrounding area allow emergency personnel and vehicles to access the proposed project, and that the project site is landscaped in such a way that the proposed residences are not immediately adjacent to significant amounts of vegetation that could fuel wildfires. 7-3 The covenants, conditions, and restrictions for the proposed residences shall require the regular maintenance of the vegetation on the project site to ensure compliance with the fuel modification plan. 7-4 The applicant shall participate in an appropriate financing mechanism, such as a developer fee or an in-kind consideration in lieu of developer fees, to provide funds for fire protection facilities that are required by residential development in an amount proportional to the demand created by this project. Currently, the developer fee is a set amount per square foot of building space, adjusted	

Table 1-1
Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		annually, and is due and payable at the time a building permit is issued. In the event that the developer fee is no longer in effect at the time of building permit issuance, alternative mitigation measures may be required.	
5.8 HYDROLOGY AND WATER QUALITY			
Impact 5.8-1: The proposed project would not violate any water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise degrade water quality.	Less than significant	No mitigation measures are necessary.	Less than significant.
Impact 5.8-2: Development of the proposed project would alter the existing drainage pattern of the site and result in erosion or siltation and flooding.	Potentially significant	8-1 The project shall include the construction and proper maintenance of onsite stormwater detention tanks underneath each residential lot and the private street to mitigate potential flooding and erosion impacts to downstream areas. The detention tanks shall be sized according to the City of Malibu's required detention volume for new residential development. In addition, the project shall comply with all site-design, source-control, and treatment-control best management practices outlined in the project's stormwater management plan, including design to reduce potential flooding and to reduce the potential for erosion and siltation.	Less than significant.
Impact 5.8-3: The site would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.	Less than significant	No mitigation measures are necessary.	Less than significant.
5.9 LAND USE AND PLANNING			
Impact 5.9-1: Project Implementation would not conflict with applicable plans adopted for the purpose of avoiding or mitigating an environmental effect.	Less than significant	No mitigation measures are necessary.	Less than significant.

Table 1-1
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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.10 NOISE			
Impact 5.10-1: The proposed project would not result in a substantial permanent increase to the ambient noise environment.	Less than significant	No mitigation measures are necessary.	Less than significant.
Impact 5.10-2: The proposed project would not result in significant exterior noise impacts that would exceed the land use compatibility criteria (for either exterior or interior noise).	Less than significant	No mitigation measures are necessary.	Less than significant.
Impact 5.10-3: Neither construction nor operation of the proposed project would result in significant vibration impacts.	Less than significant	No mitigation measures are necessary.	Less than significant.
Impact 5.10-4: Construction of the proposed project would not result in substantial short-term noise increases at noise-sensitive receptors.	Less than significant	No mitigation measures are necessary.	Less than significant.
Impact 5.10-5: The proposed project would not cause people residing or working in the area to be exposed to excessive noise levels from public airports or private airstrips	Less than significant	No mitigation measures are necessary.	Less than significant.

Table 1-1
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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.11 TRANSPORTATION/TRAFFIC			
Impact 5.11-1: The proposed project with baseball field option would result in a substantial, cumulatively considerable, increase in traffic in Opening Year 2017 and Future Year 2030.	Potentially significant	11-1 Prior to the recordation of the final map, the Project Applicant(s) shall construct the following improvements at the intersection of Malibu Canyon Road/PCH: ▪ Re-stripe the existing southbound through plus left-turn lane on Malibu Canyon Road (at its intersection with Pacific Coast Highway) to a through plus left- and right-turn lane. ▪ Either modify the existing traffic signal to remove the right-turn overlap phase to a standard right-turn-on-red (RTOR) permissive phase resulting in LOS E at 0.9302~~8~~ V/C OR; ▪ Keep right turn overlap phase for existing #2 (outside) dedicated right-turn lane on Malibu Canyon Road (at its intersection with Pacific Coast Highway) resulting in LOS E at 0.901~~2~~ V/C.	Less than significant. ~~However, since the intersection of PCH and Malibu Canyon Road/Winter Mesa Road is operated and maintained by Caltrans, if Mitigation Measure 11-1 is not implemented, the impact will remain Significant and Unavoidable~~.
Impact 5.11-3: The proposed project would not result in any traffic hazards.	Less than significant	No mitigation measures are necessary.	Less than significant.
Impact 5.11-2: The proposed project would not exceed a level of service standard established by the county congestion management agency.	Less than significant	No mitigation measures are necessary.	Less than significant.
Impact 5.11-4: The proposed recreational use would increase the need for parking, which, in combination with special events at Malibu Bluffs Park, or times of peak park use, could result in inadequate parking at the site.	Potentially significant	11-2 Prior to obtaining the last Building Permit for the recreational facilities, the City Parks and Recreation Department shall prepare and implement a Parking Management Plan that demonstrates that adequate onsite and/or offsite parking shall be provided during special events and/or other times when it is anticipated that Malibu Bluffs Park would operate at over-capacity conditions relative to parking demand. The Parking Management Plan shall preclude the use of the proposed baseball field when Malibu Bluffs Park would operate at over-capacity conditions relative to parking demand. In addition, the Parking Management Plan will require the City Parks and Recreation Department to schedule baseball games with at least a half-hour to 45 minute interval between games so that the parking demand of two consecutive games would not overlap. To accommodate this longer interval between games, less than	Less than significant.

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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		10 games per day would be permitted	
5.12 RECREATION			
Impact 5.12-1: The proposed project would generate 14 additional residents that would increase the use of existing park and recreational facilities.	Less than significant.	No mitigation measures are necessary.	Less than significant.
Impact 5.12-2: Project implementation would result in environmental impacts to provide new and/or expanded recreational facilities.	Less than significant.	No mitigation measures are necessary.	Less than significant.