APPENDIX A
NOTICE OF PREPARATION AND PUBLIC COMMENTS

ANTHONY LOMBARDO & ASSOCIATES
A PROFESSIONAL CORPORATION

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January 24, 2014

197.036

Mr. Mike Novo, Planning Director
Monterey County Planning Department
168 West Alisal, 2nd Floor
Salinas, CA 93901

RECEIVED
JAN 27 2014
MONTEREY COUNTY
PLANNING DEPARTMENT

RE: Carmel Canine Sport Center IS

Dear Mike:

We have completed our review of the Initial Study and Mitigated Negative Declaration (IS) prepared by the staff and found it to be deficient in a great many areas. It is inadequate to fully inform the public and decision makers about the true scope and impact of this project. The comments which follow will address in detail our concerns with the IS. All of the comments should be viewed in the context that it is our firm belief that the County has used an inappropriate and illegal "baseline" for the preparation of this document.

I wrote to you in November regarding my clients concerns about the use of an appropriate baseline for preparation of the County's IS. The correct baseline for the IS is the level of use on the property immediately prior to the initiation of the project improvements.

The IS (page 29) states "Because it is not uncommon to allow irrigated farmland to go fallow for a period of time, and due to the extended history of irrigated agriculture on the site, the determination of the baseline will not rest solely on the most recent years." This conclusion is incorrect as a matter of law. This is a project which requires a discretionary permit (use permit); it is not farming. There is no dispute that the baseline water use prior to initiation of the project is zero and has been zero since 2008. That "zero use" is the appropriate baseline to assess the impacts of this project's water use. Historic water use or what the water use could be in the future might be appropriate for comparison purposes or a discussion of alternatives in an environmental impact report. It is not though a baseline pursuant to the CEQA guidelines.

I also noted that other portions of the IS, such as traffic, does use a zero baseline and does not rely on the historic use from several years ago. The County is seemingly picking and choosing baselines to fit its needs rather than using the legally correct baseline required by CEQA.

SPECIFIC COMMENTS:

Page 1: The IS states that the General Plan designation is Residential-Low Density 5-1 acres per unit. The correct designation is Residential- Low Density 2.5 acres per unit as shown on the CVMP land use map.

Page 2-3. Description of use: The description of the use is incomplete:

Daily Training and Exercise

- The IS states that the CCSC's goal is 500 members. It is not clear if that is 500 individuals or 500 memberships. It is also not clear whether 500 memberships is a goal or a limit. The proposed use is supposedly similar to a club, such as a country club or YMCA, where a "membership" may include a family. The "membership" should be expressed in the terms of the maximum number of people, not memberships that would use the project.
- The IS states that the project proponents estimate an average use of 100 members per day. There is no evidence or comparative use analysis done that would demonstrate the 100 members per day (which may not be the same as 100 people) is other than the project proponents "best guess."
- The IS states that there will be classes and workshops for up to 10 participants scheduled throughout the day, including members and nonmembers. There is no indication as to how days per week there will be classes or how many classes per day will be held. Since classes are open to non-members and could be held hourly as many as 80-100 additional visitors could use the facility each day. There is nothing that indicates how the combined use, members and non-members, will be controlled on any given day and how that has been accounted for in the water, waste water or traffic analysis.
- No place in the IS does it estimate either a maximum or average number of dogs and other animals that would be on-site at any time.

Special Events:

The IS is devoid of any real detail on how the special events would operate. There is no operational plan in the in files or the IS. Without that plan it is impossible to assess the true impact of the special events. For example:

- The IS states there would be up to 24 of the days per year with a maximum of 250 people in attendance. There is no discussion as to what constitutes an "event day." It is not unusual in conducting large-scale events that there are 1-2 days, or more, required for set up and break down of the event facilities. It is not clear in the IS if those activities would be included in the 24 days or are in addition to the 24 days.
- The operating hours for special events are not discussed.

- There is no discussion or explanation as to how attendance would be monitored and controlled to assure that no more than 250 individuals were on-site at any time or how persons coming to an event would be handled once the 250 person limit were reached. How will traffic that would have to be turned away be handled?
- It is not clear if event days are limited to weekends.
- The IS states that there will be space for food and retail vendors during the special events. There is no indication as to how many vendors would be allowed, where they would be located on-site or how their activities would be monitored.

Again, without a clear understanding of how special events will operate and be monitored an accurate assessment of impacts cannot be made.

Site Improvements:

- The IS discusses the activities that occurred in early 2013 when the project proponents began site work for the installation of utilities, buildings, parking areas and a pond. Although the County's position is that the planting of the grass was an agricultural use it is clear that the only reason the grass was planted was to support the dog center. The pond that was excavated without benefit of a grading permit has supposedly been included in the IS but the IS does not disclose the overall grading volume of the pond. The pond is said to be 1.2 acres. At an average depth of 8 feet the excavation required for the pond was approximately 15,500 yd.^{3}. Project plans indicate that the excavated materials are to be spread across the project site. Therefore the total grading volume, cut and fill, is approximately 31,000 yd.^{3}. This number is not calculated, disclosed or discussed anywhere in IS.
- The pond was graded without benefit of a grading permit or use permit for development in the Carmel Valley floodplain. Under Section 21.84.130 the pond site, at a minimum, should have been restored to its previolation state prior to this application being deemed complete. The only exception to the restoration requirement would be if it were determined that the restoration would somehow be detrimental to the public health and safety or that restoration was not feasible. There is no evidence in the record to indicate that restoration was either detrimental or not feasible. Why restoration was not required should be explained.
- The site improvements do not describe the improvements that will be required for a 70 space RV park. The State Department of Housing and Community Development (HCD) and the Monterey County Regional Fire District (MCRFD) require substantial physical improvements for an RV park including access roads, parking areas, water storage for fire protection, fire hydrants and exterior lighting. The impact of the RV park on both the project site and the area must be described in substantial detail. To the best of my knowledge there has not been a plan submitted to the County that meets HCD and

MCRFD requirements. The work that would be required for this portion of the project must be described more fully including site plans and elevations so that the full impact of the RV park can be assessed.

Page 6-7. Surrounding Land Uses and Environmental Setting

- The IS incorrectly identifies Quail Lodge as "Quail Creek resort."
- This section only briefly describes surrounding land uses. It gives the zoning for the nearby golf course and Quail Lodge parcels. There is not a discussion of the other surrounding uses nor is there a discussion of the actual environmental setting. There is no discussion of existing traffic conditions, water use, riparian corridor or similar features. While these may be described later in the IS they should at least be identified in the environmental setting section so that the reader can have a full understanding of the area, its resources and its constraints.
- The environmental setting should also describe and quantify the impact of eight houses. The project site is comprised of eight separate lots of record, each of which is entitled to a single family dwelling and accessory uses. Since the IS bases much of its conclusions on zoning consistency on the assumption that the impacts of the proposed use are equivalent to the development that would otherwise be allowed, the impact of that allowed use (water use, traffic, septic etc.) should be identified for comparison to the proposed use.

Page 8. General Plan Consistency

The project site is designated as Low Density Residential by the 2010 General Plan and Carmel Valley Master Plan. The 2010 General Plan describes Low Density Residential areas as being appropriate for residential, recreational, public and quasi- public and limited agricultural activities that are incidental and subordinate to the residential use. (MCGP policy LU-2.34 (a)). This is reinforced by the LDR zoning district's purpose statement that "the purpose of this Chapter is to provide a district to accommodate *low density and intensity uses* in the rural and suburban areas of the County of Monterey and to ensure that allowable uses are *compatible* with the area. (Title 21 Section 21.14.040)."

The IS's discussion of general plan consistency is at best confusing. The IS states "The Zoning Ordinance implements the General Plan and allows uses of a similar nature to those uses allowed within the LDR Zoning District subject to the approval of the Use Permit. Upon a finding that the project is of a similar nature and is a conditionally permitted use a Use Permit can be approved by the Planning Commission. Subject to these factors the project is consistent with the General Plan." Is the conclusion of the IS that the project is or is not consistent with the General Plan? What amounts to essentially a "we don't know" statement is insufficient.

The IS should be clear in its opinion as to whether or not the proposed use is consistent with the 2010 General Plan and Carmel Valley Master Plan:

- If it is the staff's opinion that the project *as proposed* is not consistent with the General Plan then the IS should state that.
- If it is the staff's position that there are project changes that need to be made to bring the project into consistency with the 2010 General Plan and Carmel Valley Master Plan those changes should be detailed and be proposed as specific mitigations within the IS.
- If it is the staff's opinion that the use *as proposed* is consistent with the 2010 General Plan and Carmel Valley Master Plan then it should be explained in the IS how the nature and intensity of the proposed use is similar to other uses allowed in the LDR district and is in keeping with the overall direction of the General Plan and Zoning Ordinance that uses in LDR areas be compatible, low density and intensity uses.

Page 9-10. Cultural Resources

The IS indicates that the project site was previously disturbed due to the history of the agricultural use of the property. The IS goes on to state that the additional grading for the project will be "insignificant (approx. 100 cubic yards)." As discussed earlier there is a significant amount of grading involved with the construction of the pond. A 1.2 acre pond at an average depth of 8 feet would result in an excavation of about 15,500 yd.^{3}. The excavated materials are to be spread on project site. The total grading volume, cut and fill, is nearly 31,000 yd.^{3}. While the discrepancy may not be significant in relation to cultural resources it is a significant omission in the IS.

The value of the archaeological survey is highly questionable. The survey was done after the site grading was done. It is recognized that based on the history of agricultural use the site had been previously disturbed. But it was never disturbed to the extent of building a 1.2 acre pond. Any resources that might have been found in that pond area were destroyed with the illegal grading.

Page 14. Aesthetics

The project site is in an area designated as visually sensitive by the 2010 General Plan. The IS indicates that there is either no impact or a less than significant impact on the area's aesthetics. The IS cites policy OS-1.2 which states "development in designated visually sensitive areas shall be subordinate to the natural features of the area." The IS does not cite two significant CVMP policies:

> CV-1.1 All policies, ordinances, and decisions regarding Carmel Valley shall be consistent with the goal of preserving Carmel Valley's rural character. In order to preserve the rural character of Carmel Valley, *development shall follow a rural architectural theme* with design review.
>
> CV-1.18 Facilities classified as either Public/Quasi-Public or Special Use (such as schools, churches, hospitals, convalescent homes, rehabilitation centers, hospice

facilities, emergency facilities, and public facilities such as community halls) may be considered in any land use category provided that they meet the following criteria:

a. Low visibility

b. Safe and unobtrusive access away from pedestrian traffic areas.

c. Low noise impact on surrounding uses.

d. *Development should follow a rural architectural theme with design review.*

e. Conform to all other Plan requirements.

The IS states that the structures proposed to be placed on the site are an office trailer, restroom trailer, members' trailer and an electrical storage room. Based on the project plans the "trailers" are boxlike structures with little in the way of architectural style or features. Structures of this design do not have a rural architectural theme nor are they in keeping with the architecture of the general area. The designs are inconsistent with the CVMP. The IS should prescribe specific architectural standards (color, materials, style) as project mitigation to address this inconsistency.

This section also states that any exterior lighting would be required to be "...unobtrusive, down-lit and designed so as to illuminate the immediate area only." The IS does not however disclose how much exterior lighting is proposed for this project either as part of their regular operations, special events or use of the RV park. The IS should fully describe the exterior lighting that is proposed for the entire project and specify the standards that lighting (lumens, etc.) will be required to meet.

The IS does not include an analysis of the potential visual effect of a 70 space RV park. A plan which would meet HCD and MCRFD requirements for an RV park has not been submitted. Without such a plan there is no way to determine the size of the area that would be required to accommodate the RV park, the facilities that would need to be included or what the RV park might look like from off the property. Without drawings or photo simulations of an RV park that would meet HCD and MCRFD standards, the true effect on the area's aesthetics cannot be determined.

Page 19-20. Air Quality

The assessment of air quality impacts is wholly inadequate. The IS finds that there is less than a significant air quality impact because there is no increase in population, the grading activities will not exceed 2.2 acres of disturbance per day and that the construction of the trailers will not be individually or cumulatively significant. This analysis is inadequate because:

- While the project will not increase the "population" of the site there will be a substantial increase in the use of the site. The traffic consultants estimate that the typical daily operation of the project would result in 300 trips per day. That is the equivalent of 30-37 houses at 8-10 vehicle trips per day per house. During special events there would be 442 trips per day. That is the equivalent of 44 -55 houses. Nonetheless there is no discussion of the air quality impacts of those trips.
- The project also proposes a 70 space RV park. There is no discussion or assessment of the air quality impact on 70 RVs arriving and leaving the site, the operation of their generators or from their towed vehicles.
- There is no evidence to indicate that the air-quality guidelines of 2.2 acres of disturbance per day were not exceeded. Essentially the entire 40 acre site was regraded and a 1.2 acre pond was excavated. There is no information that indicates over what period of time that grading was done to show that not more than 2.2 acres per day were disturbed. Given that the grading is done, this may be a moot point but it should nonetheless be disclosed in the IS.

Page 20-23 Biological Resources

The biological resources analysis is completely inadequate:

- There was no expert, independent biological survey of the project site nor is there an explanation as to why a study was not required.
- The IS's conclusions are based on the assumption that because there was farming activity on the property that it was no longer potential habitat and that the proposed picnic area in the riparian habitat would not be allowed (it is unclear if the applicants have agreed to this mitigation) so there was no impact on the riparian corridor. There is no evidence to support those conclusions.
- The area along the Carmel River is well known to be habitat for the California Red Legged Frog (CRLF), California Tiger Salamander (CTS) and Western Turtles. Biological reports have been required for projects in Carmel Valley, and throughout the County, based on the mere possibility of a protected species being on or near the property. The County has routinely used early referral and consultation to the Department of Fish and Wildlife as part of its review process. There is no evidence in the IS that there was a report or consultation.
- The project site was not farmed for the last several years and would have been considered upland habitat. During that time it is possible, if not entirely likely, that protected species such as the CRLF or CTS migrated to the property and used features such as animal burrows as part of their habitat. Both CRLF and CTS are known to range a substantial distance from water bodies to establish their habitat area. But given there is no

independent expert biological analysis finding of less than a significant impact on the habitat cannot be supported.

Page 23. Cultural Resources

See previous comments.

Page 20-23 Greenhouse Gas Emissions

The IS concludes that there will be a less than significant impact on greenhouse gas (GHG) emissions. That conclusion is based on the assumption that the short-term, construction related impacts of the project are "expected" to be well under the MBUAPCD's AQMP threshold and that there will be no population growth. This is an inadequate analysis and an unsupportable conclusion:

- As discussed in the Air Quality section, the impact of the construction work, specifically grading for the fields and pond, have not been quantified or analyzed. Without that analysis a conclusion of less than a significant impact cannot be supported.
- The project will have a traffic impact equal to 30-55 homes. While the project may not have the full GHG impact of 55 homes there will be a proportional impact. That proportion should, in some rational manner, be quantified and the greenhouse gas emissions impact analyzed and if necessary mitigated. Without some analysis the conclusion of less than significant impact is not supported by evidence.
- There is no assessment of the impact of the use of generators in the RV park. It can be assumed that as many as 70 generators will be operating 12 hours a day 24 days a year. The impact of that on air-quality and GHG should be quantified and analyzed.

Page 32. Hydrology and Water Quality

The IS is inadequate for a number of reasons:

- This section of the IS does not discuss the method of sewage disposal for the property. The focus of the discussion relative to water quality is limited to animal waste. This portion of the IS does not disclose that the project site is within one of the constrained areas identified by the Montgomery study. There is no estimated sewage waste flow from members, staff, visitors, persons attending classes or special events. The EHB has set an upper limit for wastewater generation of 2,100 gallons per day. There is no discussion of that limit. There is no discussion about the septic system design and how it will meet that standard. There is no explanation as to how special events are factored into the 2,100 g/d. It should also be noted in the IS that per MCC Section 15.20.050, the use of portable toilets is limited to no more than 10 days per year not the 24 special event days requested.

- As previously discussed, the County has not used the correct baseline for the analysis of this project on water resources. The correct baseline is zero. That is the production of the wells on the property over the last several years and is the only supportable baseline as mandated by CEQA. This section should be completely rewritten to reflect the correct baseline and to assess the impact of the use of that water on a significantly over drafted aquifer.
- The discussion of water rights is misleading. The property does not have proven appropriative or riparian water rights. Water rights determinations for this property are in various stages of evaluation and consideration. The IS defers a water rights decision to the Monterey Peninsula Water Management District. However the District is not legally empowered to make that determination. A water rights determination can only be made by either the Superior Court or the State Water Resources Control Board. The District may offer an opinion of those rights. They cannot grant those rights. Until either the Superior Court confirms those rights (as has been required of other applicants) or an appropriative water right to allow this use is obtained from the SWRCB this project cannot proceed.[1]
- The IS indicates that the applicant provided the estimate of water use for the project. There is no independent assessment or determination that their estimates are accurate. Those estimates should be independently verified.
- The IS includes a mitigation that would limit the number of grazing animals to one for every 20,000 ft.^{2} of area "devoted to grazing." That would allow up to 93 grazing animals on the 43 acre project site. That is inconsistent with information provided elsewhere in the IS that indicates there would be no more than 50 grazing animals on-site. That inconsistency should be addressed and the IS should be corrected to clearly and consistently identify the number of animals that would be kept on the property and the area in which those animals can be kept should be clearly defined.
- The IS should include analysis of how waste from the grazing animals plus dogs is included and accounted for in the overall nitrate loading.
- The monitoring action for proposed mitigation measure 4 states the County will not issue permits until "these requirements" (e.g. the water rights issues) are satisfied. However the County has allowed the use of water commence without requiring proven water rights. In effect, this "mitigation" is already being violated.

Page 32-33. Land Use and Planning

The IS concludes that there is no significant impact relative to land-use and planning. However, as discussed earlier, the IS's "we don't know" conclusion regarding consistency is inadequate.

[1] The IS fails to disclose that the property owner did obtain an appropriative water right for this property that would not provide adequate water for the proposed use. Therefore the applicant must obtain an judicial determination of its rights or the project cannot proceed.

There is no question this project, as proposed, is inconsistent with the 2010 General Plan and CVMP. The specific issue has been examined in detail. Dale Ellis, the former County Zoning Administrator and Assistant Director of Planning and Building Inspection has prepared a detailed analysis of these issues which will be submitted separately.

Page 34-36. Noise

The noise analysis and its conclusions are inadequate:

- The sensitive receptors identified in the IS did not include the residences on the project site, homes along Prado del Sol that are approximately 1000 feet to the east and downwind of the project site or the commercial center at the corner of Valley Greens and Carmel Valley Road.
- The IS indicates that the noise from competitive events would be acceptable because they are brief. That seems highly inconsistent with activities which would run from early morning to late afternoon for three consecutive days. The IS seems to address barking of an individual dog not the cumulative effect of potentially hundreds of dogs on the site at one time.
- There is no discussion of the difference between quantitative noise measurement (dBA or CNL) versus qualitative noise. The IS describes the ambient noise levels including normal traffic, small aircraft and golf course maintenance activities. Over an extended period of time these noises have become part of the acceptable background and are not considered to be inappropriate or obtrusive. However the daily introduction of barking dogs and a massive influx of dogs during special events, while possibly not exceeding the quantitative standards, will substantially alter the background noise residents and visitors have grown to expect and will adversely effect them. The impact of this qualitative effect should be discussed.
- The IS indicates that RVs may have generators that produce noise levels of 45 to 55 DBA at 50 feet. There is no discussion of the potential impact of the cumulative effect of multiple generators operating at the same time. It should be readily anticipated that most of the persons using RVs will also use some form of generator. The potential impact of that cumulative effect should be analyzed.
- The noise analysis is internally inconsistent with other portions of the IS. The traffic estimates in the noise study are 10-12% less than the traffic estimated by the applicants own traffic consultant. There is no explanation or justification for using a lesser traffic estimate.

Page 39. Recreation

The IS asks if the project includes recreational facilities which might have an adverse physical effect on the environment. The study indicates that there is no impact. That finding is inconsistent with the balance of the IS.

This project is supposedly a recreational use similar to schools, parks, and playgrounds. Throughout the IS there are conclusions that there may be impacts, and as we have pointed out the effect of these impacts are underestimated, so how can this section which speaks directly to the use come to a conclusion that there is no impact?

Page 39-43. Traffic

The IS's traffic analysis is seriously flawed:

- The applicant's traffic study and its conclusions are all based on the applicant's estimate of membership, daily use and special event use. It does not appear that there was any independent data collected for similar types of activities and events. Without that independent data and equally independent analysis, any conclusions of the traffic study are at best questionable.
- Hatch Mott MacDonald (HMM) has reviewed the traffic reports and the conclusions of the IS. A copy of their review is attached. The HMM report refutes almost every conclusion contained in the applicant's traffic reports. After reviewing the HMM analysis it is evident that the applicant's traffic estimates, methodology, conclusions and mitigations are inadequate. Since HMM reached completely different conclusions regarding the magnitude of the traffic impacts of this project an EIR must be prepared by the County due to the disagreement among experts as to the magnitude of the environmental impacts.
- The driveway to Valley Greens is a limited use access for not more than four (4) residential lots. The IS does not disclose this or assess the impact of that limitation. A copy of Board of Supervisors Resolution 03-174 is attached. There was a 1 foot non-access strip along the eastern side of Valley Greens. As part of the lot line adjustment that established the current lot configuration the Board of Supervisors approved a 60 foot wide access easement on Valley Greens for four residential lots. Nowhere in the IS is the prohibition against more than four residences discussed. The ability to use this limited access driveway for the proposed use is not analyzed. There is no analysis of any alternative access to the project site. This issue needs to be fully addressed and analyzed.
- The applicant's traffic study and the IS both indicated that a percentage of the project's traffic would use Rancho San Carlos Road. Rancho San Carlos Road is a private road. There is no discussion of this fact in the IS. There is no evidence in the record to indicate that this project has rights to use Rancho San Carlos Road for their benefit.

Page 44. Utilities and Service Systems

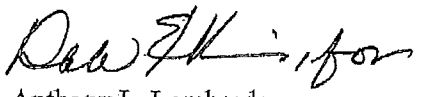
This section of the IS does discuss the on-site wastewater disposal constraints. The IS concludes that there is a less than significant impact because the total wastewater disposal will not exceed the 2100 gallons per day limit established by EHB. This analysis fails on three points:

- The estimated total "worst-case scenario" would result in a wastewater discharge of 2,096 gallons, four (4) gallons less than the maximum allowed. In other words, with three more flushes of the toilet the daily limit would be exceeded. The IS does not disclose how the 2,096 gallons of waste water was calculated. It does not discuss how the additional nitrate loading from the animals is factored into the 2096 g/d.
- The worst-case scenario used in the IS is based on events where there are "250 people on-site." It is not clear in the project description if the 250 people on-site for a special event intended to be the maximum allowed on site at one time or for an entire day. Assuming that like most special events people coming and going throughout the day it is highly likely that the number of people attending an event will be well in excess of 250 people per day. This needs to be clarified. If the use is limited to no more than 250 people on-site per day that limit should be specifically spelled out and included as project mitigations.
- There should also be an analysis of the daily loading of the system. The project applicants estimate that there will be 100 members per day using the project. As discussed earlier it is not clear if 100 members equals 100 people nor does it address the number of nonmembers who could use the site for classes. This level of use should be spelled out in much greater detail and analyzed accordingly.

Conclusion

The IS prepared by the County is inadequate on its face due to the use of a baseline that does not meet the legal requirements of CEQA. Significant pertinent facts and details of the application are omitted. Most of the conclusions in the IS are not supported by independent analysis or facts. This project cannot be approved using a Mitigated Negative Declaration. Based solely on water and traffic impacts a full EIR is required.

Sincerely,



Anthony L. Lombardo
ALL/gp

Attachments: Hatch Mott MacDonald letter
Board of Supervisors Resolution 03-174

Monterey County Resource Mgt. Agency
168 W Alisal Street 2nd floor
Salinas, CA, 93901

RECE
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MONTEREY COU
PLANNING DEPARTM

To: John Ford, RMA - Services Manager
David J.R. Mack, Associate Planner
Monterey County Resource Management Agency- Planning Department

From: Bruce Meyer, VP Quail Homeowners Association and Resident directly affected by the proposed CCSC Planning File Number PLN130352

Subj: Notice of Preparation (NOP) of the Draft Environmental Impact Report for Application Planning File Number PLN130352

To whom it may concern,

Representing myself and my neighbors within sight and sound of the proposed CCSC and the other 200+ Quail community homeowners negatively affected by this facility I here by express our dissatisfaction with the inadequate initial study. Our primary concern is the requested permit use of the facility for multiple events. The permit requests 24 event days and possible « special events ». The events require setting up large temporary RV Parks inside the CCSC facility adjacent to our quiet residential community for each of these 2-3 day events. These events are attended by dog owners (usually multiple dogs) who normally arrive in large RVs towing cars.

These dog owners are essentially paying customers of the CCSC which makes the CCSC a business, not an agricultural use. The CCSC facility area is zoned residential and the EIR should focus attention the County zoning issue. The proposed use is not permitted under the requested permit except for occasional « special » events. How can 24 « special events », event days be a County permitted occasional use?

The 24 event days would normally involve weekends during good weather months. Traffic and parking issues must be another major focus of your EIR. Traffic congestion caused by event participants, event officials, outside audience attendees and possible vendors must be addressed. Your department is, no doubt, aware that congestion on Highway 1 and Carmel Valley Road during these periods are already significant issues for our residents without additional traffic much less many large RVs and their attached cars used by the event participants for local trips during their few day stay at the CCSC facility.

The addition of up to 70 RVs towing cars on these approaches to our community during the peak hours of Friday afternoons (incoming) and Sunday afternoons (out going) for 8-10 weekends is a major concern for our residents. Most of this traffic would be expected to come from the north on highway 1, turn left on Carmel Valley Road and turn right on Valley Greens Drive passing the entrance to Quail Lodge. Those RVs and other attendees attempting to exit through this intersection that would normally turn left across the normal oncoming traffic and would find this to be a difficult task at any time. That intersection is already cited by the County as the second most dangerous intersection on Carmel Valley Road. An even worse, equally hazardous, scenario occurs if the RVs attempt to enter or exit on Valley Greens Drive from the Rancho San Carlos Road. This route would require use of a private road, crossing a narrow bridge (one lane for RVs) and traversing the entire Quail Community. This route also constitutes an unnecessary additional danger to cross traffic near the golf club crossing and parking areas.

My independent approximate measurements of RV parking and space requirements made at other related dog events indicates that 70 RVs will require much more space than the 2.2 acres allotted in the CCSC plan and the 200 car parking spaces proposed would also be insufficient for any large event.

Finally, the surrounding residents have major concerns about the noise from the dogs, their handlers and event officials amplified public address announcements during the events. They also object to the obtrusive night lighting which is required by law for the multiple temporary RV parks located on this site adjacent to our quiet residential neighborhood homes.

These areas of most concern to me and other Quail community residents must be seriously addressed in your Departments Environmental Impact Report.

Sincerely,

Bruce Meyer.
8079 Lake Place
Carmel, CA, 93923

Mack, David x5096

From: Ford, John H. x5158
Sent: Tuesday, January 06, 2015 8:28 AM
To: Mack, David x5096
Subject: FW: EIR - proposed Carmel Canine Sports Center

RECEIVED
JAN 06 2015
MONTEREY COUNTY
PLANNING DEPARTMENT

John Ford
RMA - Services Manager
Resource Management Agency -- Planning
(831) 755-5158

To view your project online via Accela Citizen Access, please use the following link:
https://aca.accela.com/monterey/Default.aspx

-----Original Message-----
From: Bob Byrne [mailto:bob8679@att.net]
Sent: Sunday, December 28, 2014 2:34 PM
To: Mason, Steve x5228; Ford, John H. x5158
Subject: EIR - proposed Carmel Canine Sports Center

Dear Mr. Mason & Mr. Ford,

Since my wife and I moved to Carmel Valley about 2 1/2 years ago, life in this area has gradually become more hectic - more traffic, more pollution, more congestion and more noise than ever expected. Carmel Valley Road is becoming a thoroughfare! It is dreadful!

This valley can sustain only so much. With the near-future renewal of the Carmel River, it will bring even more visitors to the valley for recreation and other events. More of everything!

We are proud owners of a champion dog. But, a canine center is not appropriate for this valley. The noise, animal odor, large & heavy vehicles, the traffic congestion and more pollution it will bring is contrary to what we need.

Please thoroughly consider the ill-effects the above will produce for Carmel Valley and the nearby communities. A canine center is more suitable for another location. It is not appropriate here.

Sincerely,

Bob Byrne
Carmel Valley
582-7316
bob8679@att.net

Carmel Valley Association

P.O. Box 157, Carmel Valley, California 93924

www.carmelvalleyassociation.org

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January 9, 2015

John Ford, Senior Planner
David Mack, Associate Planner
Monterey County Planning Department
168 West Alisal Street, 2nd. Floor
Salinas, CA 93901

Re: NOP of DEIR for the Application Planning File Number: PL130352 (aka Carmel Canine Sports Center)

Dear Mr. Ford and Mr. Mack:

The Carmel Valley Association (CVA) formally requests, with this letter, that the comments by CVA contained in our letter of January 24, 2014 (addressed to John Ford and Steve Mason), regarding the Negative Declaration for the Carmel Canine Sports Center, and the attachments to that letter, be considered as issues of our concern in response to the Notice of Preparation (NOP) of a DEIR for the same project (PLN130352).

That is, we wish the January 24, 2014 letter to be understood as our views "as to the scope and content of the environmental information which is germane" to our role as a community organization and part of the general public to whom, among others, the DEIR is to be addressed.

We expect the DEIR to be fully compliant with the California Environmental Quality Act (CEQA) and the Carmel Valley Master Plan (CVMP).

With respect to traffic impacts, we expect also that the DEIR will include full coverage of both daily expected traffic and special event traffic, including any contingent extensions of permissibility for special events (e.g., possible additions of extra events held on the property by groups other than the applicant, potential permits for extra events or extended events, events on days other than weekends, etc.). Both ADT and peak hour volume, and any other measures used to assess environmental impacts of traffic should be included in special event analyses.

Clear rationale should accompany the use of traffic measures other than ADT and peak hour volume, including full explanations and quantitative

descriptions of how traffic volumes generated by the project, background and cumulative conditions are converted into values expressed in terms of the other measures. (The Highway Capacity Manual, for example, is not an environmental analysis manual, and various of its measures are not suitable for or readily adapted to environmental traffic impact assessment.)

We note also that the initial study for the project contained traffic data that was not an accurate representation of contemporary measured conditions on the ground, but instead was manufactured from general County data. That kind of "analysis" is not acceptable in the DEIR or any other document released by the County under CEQA.

Thus we seek and expect a DEIR for the Carmel Canine Sports Center that is complete, accurate, adequate, and that fully discloses all relevant information concerning the project.

Sincerely,

Mibs McCarthy, President
Tim Sanders, CVA Traffic Committee Chair

Carmel Valley Association

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www.carmelvalleyassociation.org

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Strasser Kauffman

Cindy Walter

January 24, 2014

John Ford, Senior Planner
Steve Mason, Assistant Planner
Monterey County Planning Department
168 West Alisal Street, 2nd. Floor
Salinas, CA 93901

Dear Mr. Ford and Mr. Mason:

The Carmel Valley Association has reviewed the Mitigated Negative Declaration for the Carmel Canine Sports Center Project (PLN130352), and we are writing today to express that we support the recommendation of the Carmel Valley LUAC that this project be denied as presented.

We believe that approval of this Negative Declaration would be contrary to good planning for the following reasons:

The project continues to use inadequate evidence and data in the various areas of analysis. The data in the following areas are inadequate, missing or in clearly in error:

Analysis of the impact of the project in an area zoned for low density residential housing,

Traffic analysis based on faulty/or missing data and faulty analysis (see additional attached analysis by CVA Traffic Committee Chair Tim Sanders),

Lack of clear and accurate designation of the base line for water use, and

Lack of factual or comparable data supplied for analysis of the impact of noise.

We also wish to express our concern that grading has been done on the property without the appropriate permits which are required on any such project.

Finally, based upon our participation at the LUAC meetings relating to this project, our careful analysis of the IS/MND, and our own experiences of many

years in Carmel Valley, we have concluded that there are significant environmental impacts not adequately addressed or mitigated, including the ones stated above, and that the project is incompatible with the neighborhood, this area of Carmel Valley Road and the rural nature of Carmel Valley.

As such, we believe that the Planning Commission should deny the project as presented.

Sincerely,

Mibs McCarthy

Mibs McCarthy, President

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MONTEREY COUNTY
PLANNING DEPARTMENT

COUNTY OF MONTEREY
HEALTH DEPARTMENT

MEMORANDUM

ENVIRONMENTAL HEALTH BUREAU

JANUARY 8, 2015

To: **David Mack, Project Planner**

From: **Janna L Faulk**
Environmental Health Review

Subject: **Notice of Preparation for Wolter Properties LP (Carmel Canine Sports Center) project (PLN130352)**

Thank you for providing the Environmental Health Bureau (EHB) an opportunity to comment on the above referenced document.

EHB would requests that the following topics be addressed in detail:

Water Source, Capacity and Quality:

Below is EHB review comments on this project. The EIR should address this in detail.
There are two wells located on the property labeled as the small well (installed in 2001) and the large well (installed in 1992). Both wells were originally intended for irrigation use. The applicant has indicated that they will be using the small well for potable water and the large well for irrigation. A transient non-community small water system permit will be required to serve the project, utilizing the small well as the source (serves at least 25 individuals daily at least 60 days out of the year, but does not meet the requirements of a community or non-transient non-community water system). A condition has been added to obtain a water system permit and to submit engineered plans for water system improvements. A condition has been added to require that the small well be protected with fencing so that no potentially contaminating activities occur within the 50' well protection zone required for public water systems. Water quality analysis for the small well, collected 7/31/2013 and analyzed by MBAS, do include primary inorganic or secondary aesthetic MCL results that exceeded standards. These include: iron at 9,962 ug/L, Total Manganese at 1,477 ug/L, Specific Conductance at 1,647 umhos/cm, Sulfate at 594 mg/L, Total Dissolved Solids at 1,071 -1,314 mg/L, and Turbidity at 50 NTU. However, even though these results exceeded MCLs these constituents do not pose a health concern for a transient non-community water system. The sample for E.coli/coliform collected on 9/13/2013 and analyzed by MBAS, is absent/absent. Note, the analytical results for the large well are lacking any bacteria results and Arsenic was over regulated quantities. If the large well is proposed for potable water use in the future, additional action will be required to address Arsenic and potentially to address bacteria. Source capacity testing has not been required based on the well construction (irrigation well) and estimated well yields on the well completion reports.

Onsite Wastewater Treatment System:

The EIR should address the onsite soils, anticipated wastewater generation and the system design to accommodate the proposed use.

We look forward to reviewing the forthcoming Environmental Impact Report.

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January 8, 2015

197.036

Mr. Mike Novo, Planning Director
Monterey County Planning Department
168 West Alisal, 2nd Floor
Salinas, CA 93901

RE: Carmel Canine Sport Center EIR NOP

Dear Mike:

I am writing to express my client's concerns about the recently released NOP for the Carmel Canine Center EIR:

NOP Transmittal: The NOP is transmitted under the cover of a Notice of Completion form. CEQA Guidelines Section 15085 (a) states "As soon as the draft EIR is completed, a notice of completion must be filed with the Office of Planning and Research…" Use of the incorrect form could be misleading to the public or agencies reviewing the NOP.

The second page of the form identifies the agencies to which the County believes the NOP should be sent. Several agencies that we believe are essential to the review of this project are not included:

- California Highway Patrol. The CHP has primary responsibility for traffic safety and control of the two highways, 1 and 68, which serve the area. Both highways are known to operate at low LOS levels. The CHP also has secondary responsibility for Carmel Valley Road. The CHP should be consulted to identify the potential impacts and mitigations for the project traffic, particularly connected to special events and the influx of recreational vehicles.
- Native American Heritage Commission: Carmel Valley is in a highly sensitive area for archaeological resources. Human remains have been found in the area in recent years including one recent find at Carmel Valley Ranch in an area that was previously disturbed. The NAHC should be consulted, particularly in light of recent changes in state law, to assure their concerns are fully identified and addressed.
- SWRCB: Water Rights: As I have pointed out in previous correspondence there is a significant water rights issue with this project and brings into question if they have rights to use the water they propose to use. The SWRCB staff provided significant comments (attached) on the IS/MND. The SWRCB should be provided an opportunity to also participate in the NOP process.

Timeliness: The timing of the release of the NOP brings into question the entire EIR process for this project and if the pubic, responsible agencies and trustee agencies have been denied their

right to have timely input on the scope of work for the EIR. CEQA Guidelines Section 15082 9a) states " *Immediately after deciding* that an environmental impact report is required for a project, *the lead agency shall send* to the Office of Planning and Research and each responsible and trustee agency a notice of preparation stating that an environmental impact report will be prepared..." The purpose of broadly circulating the NOP is to assure as much as possible that the significant issues to be addressed in the EIR are identified early in the process and can be included in the EIR's scope of work. That did not happen.

It is not clear from the County's online records when the County made its decision that an EIR was needed. We do know the project proponents released a statement on February 28, 2014 that they were requesting the County prepare an EIR. Five months later, on July 29th, without benefit of an NOP or public scoping meeting, the County approved the PSA with AMEC to prepare the EIR. The NOP was released by the County four months later.

Project Description: The NOP uses a highly abbreviated project description that fails to adequately convey the scope of the project, the full range of intended uses or to fully disclose the significant unavoidable environmental impacts which were the basis for determining an EIR is required. The project description also fails to disclose the amount of grading required for the project or that part of the project includes construction of a pond requiring thousands of yards of grading.

Reliance on the 2013 IS/MND: The NOP includes a copy of the 2013 IS/MND and refers the reader to that document to identify its potential effects. My letter of January 24, 2014 (attached) identified critical factual errors and analytic deficiencies in the IS/MND. If that IS/MND is to be source of information then neither the public nor the responsible/trustee agencies can understand the full scope of the issues with this project.

No Scoping Meeting: The Herald reported that John Ford has said "...there are no plans to conduct a public scoping meeting for the draft EIR, arguing that there's been enough input through public comments on an earlier environmental report, land-use advisory committee meetings and general comment letters to inform the process..." While public scoping meetings are not mandatory they are a valuable resource for consultants, particularly those from out of the area, who may not have had the opportunity to hear the community's concerns first hand. Reviewing reports and correspondence is one way to gain information but it does not provide an opportunity for the consultants to ask follow-up questions or to clarify a person's comments.

Effect of the NOP: It is not clear that circulation of the NOP at this time does anything more than allow the County to say an NOP was circulated. It was reported in the Herald that John Ford also said the draft EIR is expected to be released "shortly after the first of the year." If that is accurate, given the NOP comment period ends January 9, 2015, the EIR must now be so far along in the process that the NOP will have little effect on the EIR process or quality.

It is unfortunate that the County and its consultant failed in their responsibility to prepare and circulate an adequate and timely NOP. That failure only heightened the concerns about this

project and the County's actions and process for this application. It would be appropriate for the County to recirculate the NOP in a proper format and to include the additional agencies that have been identified in that review, hold a public scoping meeting and then review the NOP comments before beginning to review the ADEIR.

Sincerely,

Anthony L. Lombardo
ALL/gp

Enclosures

cc: Client

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

JAN 29 2014

In Reply Refer to:
KDM:A030511

Mr. John Ford
Monterey County Planning & Building
Inspection Department
168 West Alisal, 2nd Floor
Salinas, CA 93901

Dear Mr. Ford:

MITIGATED NEGATIVE DECLARATION (MND) – CARMEL CANINE SPORTS CENTER PROJECT – RELATED TO APPLICATION 30511 OF WOLTER PROPERTIES LIMITED PARTNERSHIP, CARMEL RIVER SUBTERRANEAN STREAM IN MONTEREY COUNTY

Division of Water Rights (Division) staff has reviewed the MND prepared by Monterey County for the Carmel Canine Sports Center Project (Project). The MND refers to a reservoir on the property. However, no descriptive material was provided regarding the size or location of the reservoir. The MND states that a 1.2 acre pond will be excavated. This is not the same as stating the proposed size of the pond. Please clarify the size. The MND states that the Project may rely on riparian or appropriative rights. Seasonal water storage for irrigation purpose of use cannot be accomplished under riparian rights. An appropriative right is required.

The Project is being developed on the lands covered by water right Application 30511 of Wolter Properties. The application does not include a storage element. Application 30511 seeks a right to directly divert 0.42 cubic foot per second. There is no evaluation in the MND whether this would be adequate for the proposed Project. The environmental document should include an evaluation of the adequacy of the proposed flow rate.

On January 27, 2012, the Division informed Wolter Properties that it intended to condition any permit on Application 30511. The following information was provided to Wolter Properties:

> The State Water Resources Control Board (State Water Board) has an independent obligation to consider the effect of the proposed project on public trust resources and to protect those resources where feasible. (*National Audobon Society v. Superior Court* (1983) 33 Cal.3d 419 [Cal.Rptr. 346].) Division staff has been working with the National Marine Fisheries Service (NMFS) and the Monterey Peninsula Water Management District (District) to determine appropriate Carmel River diversion conditions to address public trust resource needs. The following condition is being utilized in current permits issued, and is based on the NMFS 2002 Carmel River fishery report. It appears that the condition resolves the remaining public trust protests and the project could be permitted with inclusion of the condition. If you are not amenable to the condition, you will need to document a valid methodology for protecting public trust resources.
> (Wat. Code § 1275(b).)

Permit Condition:

For the protection of fisheries, wildlife, and other instream uses in the Carmel River, diversions under this permit shall be subject to maintenance of minimum mean daily instream flows as specified in Table A, Minimum Mean Daily Instream Flow Requirements. No water shall be diverted under this permit if the instream flows would be reduced by such diversion below the minimum mean daily flows specified in Table A. To ensure compliance with these conditions, by September 30 of each year, Permittees shall file a report with the Deputy Director for Water Rights, Department of Fish and Wildlife and NMFS containing the following information:

a. Dates during the previous diversion season when water was diverted under this permit; and
b. Mean daily flows recorded at the monitoring location specified in this condition during the same period.

TABLE A		
MINIMUM MEAN DAILY INSTREAM FLOW REQUIREMENTS		
December 1-April 15	**April 16-May 31**	**June 1- November 30**
Prior to Carmel River lagoon opening to the ocean [1]: May divert with minimum bypass of **40 cfs** at the Carmel River at Highway 1 Bridge gage[2]. **Following Carmel River lagoon opening to the ocean:** May divert with minimum bypass of **120 cfs** at the Carmel River at Highway 1 Bridge gage.	May divert with minimum bypass of **80 cfs** at the Carmel River at Highway 1 Bridge gage	May divert with minimum bypass of **5 cfs** at the Carmel River at Highway 1 Bridge gage.

[1] On December 1, if water in the lagoon is flowing to the ocean, the lagoon shall be deemed to be open to the ocean. If on December 1 water in the lagoon is not flowing to the ocean, the lagoon shall be deemed to be open to the ocean when the lagoon level drops rapidly from a stable elevation to a lower elevation as evidenced by the water surface elevation gage located at the Carmel Area Wastewater District effluent pipeline across the south arm of the lagoon. This elevation gage is operated by the District.

[2] The District operates a stream gage at Highway 1 and reports flows at this location on its website. Reported flows are not provided on a real-time basis and reported flows are subject to revision due to frequent changes in the riverbed at this location. In addition, updates of flow information at this location are carried out when the District has sufficient staff and resources and it should be noted that the District is under no obligation to provide this information on its website.

Although the Project developer has long been aware of the bypass flow condition, the MND does not include a discussion of the flows needed to protect salmonids. The bypass flows listed above have been included in all Table 13 water right permits issued since NMFS developed the flow regime. Division staff requests that the environmental document include the mitigation listed above. This will provide consistency between the two permitting agencies.

Regarding the issue of whether the Division would issue a permit in the quantity of 96 af, the following information should be taken into consideration. In Decision 1632, the State Water Board provided a method for inbasin water users with existing projects to receive a permit with a modified water right priority. Such persons were listed in Table 13 of the decision. After modification, the Wolter Properties quantity was set at 96 af. The MND states that the Wolter Properties lands have been fallow since 2008. Division staff was unaware of the non-use issue until the MND was issued. Decision 1632 does not provide for protection in cases where there is no ongoing use of water. Based on the decision, persons listed in Table 13 may seek a year-round diversion season. However, all others are limited to a four month winter diversion period. In the opinion of Division staff, the Project will likely be limited to a reduced diversion season since there is no longer a basis for protecting ongoing water use. The MND should identify this problem and determine what source of water the Project would use, should the diversion season be limited to four months.

Thank you for the opportunity to comment on the MND. The Division intends to use the final environmental document for permit issuance purposes.

If you require further assistance, I can be contacted at (916) 341-5363. Written correspondence should be addressed to: State Water Resources Control Board, Division of Water Rights, Attn: Katherine Mrowka, P.O. Box 2000, Sacramento, CA 95812.

Sincerely,

Katherine Mrowka

Katherine Mrowka, Senior
Inland Streams Unit

cc: Monterey Peninsula Water
Management District
Mr. Larry Hampson
5 Harris Court, Building G
Monterey, CA 93940
Larry@mpwmd.net

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January 24, 2014

197.036

Mr. Mike Novo, Planning Director
Monterey County Planning Department
168 West Alisal, 2nd Floor
Salinas, CA 93901

RE: Carmel Canine Sport Center IS

Dear Mike:

We have completed our review of the Initial Study and Mitigated Negative Declaration (IS) prepared by the staff and found it to be deficient in a great many areas. It is inadequate to fully inform the public and decision makers about the true scope and impact of this project. The comments which follow will address in detail our concerns with the IS. All of the comments should be viewed in the context that it is our firm belief that the County has used an inappropriate and illegal "baseline" for the preparation of this document.

I wrote to you in November regarding my clients concerns about the use of an appropriate baseline for preparation of the County's IS. The correct baseline for the IS is the level of use on the property immediately prior to the initiation of the project improvements.

The IS (page 29) states "Because it is not uncommon to allow irrigated farmland to go fallow for a period of time, and due to the extended history of irrigated agriculture on the site, the determination of the baseline will not rest solely on the most recent years." This conclusion is incorrect as a matter of law. This is a project which requires a discretionary permit (use permit); it is not farming. There is no dispute that the baseline water use prior to initiation of the project is zero and has been zero since 2008. That "zero use" is the appropriate baseline to assess the impacts of this project's water use. Historic water use or what the water use could be in the future might be appropriate for comparison purposes or a discussion of alternatives in an environmental impact report. It is not though a baseline pursuant to the CEQA guidelines.

I also noted that other portions of the IS, such as traffic, does use a zero baseline and does not rely on the historic use from several years ago. The County is seemingly picking and choosing baselines to fit its needs rather than using the legally correct baseline required by CEQA.

SPECIFIC COMMENTS:

Page 1: The IS states that the General Plan designation is Residential-Low Density 5-1 acres per unit. The correct designation is Residential- Low Density 2.5 acres per unit as shown on the CVMP land use map.

Page 2-3. Description of use: The description of the use is incomplete:

Daily Training and Exercise

- The IS states that the CCSC's goal is 500 members. It is not clear if that is 500 individuals or 500 memberships. It is also not clear whether 500 memberships is a goal or a limit. The proposed use is supposedly similar to a club, such as a country club or YMCA, where a "membership" may include a family. The "membership" should be expressed in the terms of the maximum number of people, not memberships that would use the project.
- The IS states that the project proponents estimate an average use of 100 members per day. There is no evidence or comparative use analysis done that would demonstrate the 100 members per day (which may not be the same as 100 people) is other than the project proponents "best guess."
- The IS states that there will be classes and workshops for up to 10 participants scheduled throughout the day, including members and nonmembers. There is no indication as to how days per week there will be classes or how many classes per day will be held. Since classes are open to non-members and could be held hourly as many as 80-100 additional visitors could use the facility each day. There is nothing that indicates how the combined use, members and non-members, will be controlled on any given day and how that has been accounted for in the water, waste water or traffic analysis.
- No place in the IS does it estimate either a maximum or average number of dogs and other animals that would be on-site at any time.

Special Events:

The IS is devoid of any real detail on how the special events would operate. There is no operational plan in the in files or the IS. Without that plan it is impossible to assess the true impact of the special events. For example:

- The IS states there would be up to 24 of the days per year with a maximum of 250 people in attendance. There is no discussion as to what constitutes an "event day." It is not unusual in conducting large-scale events that there are 1-2 days, or more, required for set up and break down of the event facilities. It is not clear in the IS if those activities would be included in the 24 days or are in addition to the 24 days.
- The operating hours for special events are not discussed.

- There is no discussion or explanation as to how attendance would be monitored and controlled to assure that no more than 250 individuals were on-site at any time or how persons coming to an event would be handled once the 250 person limit were reached. How will traffic that would have to be turned away be handled?
- It is not clear if event days are limited to weekends.
- The IS states that there will be space for food and retail vendors during the special events. There is no indication as to how many vendors would be allowed, where they would be located on-site or how their activities would be monitored.

Again, without a clear understanding of how special events will operate and be monitored an accurate assessment of impacts cannot be made.

Site Improvements:

- The IS discusses the activities that occurred in early 2013 when the project proponents began site work for the installation of utilities, buildings, parking areas and a pond. Although the County's position is that the planting of the grass was an agricultural use it is clear that the only reason the grass was planted was to support the dog center. The pond that was excavated without benefit of a grading permit has supposedly been included in the IS but the IS does not disclose the overall grading volume of the pond. The pond is said to be 1.2 acres. At an average depth of 8 feet the excavation required for the pond was approximately 15,500 yd.^{3}. Project plans indicate that the excavated materials are to be spread across the project site. Therefore the total grading volume, cut and fill, is approximately 31,000 yd.^{3}. This number is not calculated, disclosed or discussed anywhere in IS.
- The pond was graded without benefit of a grading permit or use permit for development in the Carmel Valley floodplain. Under Section 21.84.130 the pond site, at a minimum, should have been restored to its previolation state prior to this application being deemed complete. The only exception to the restoration requirement would be if it were determined that the restoration would somehow be detrimental to the public health and safety or that restoration was not feasible. There is no evidence in the record to indicate that restoration was either detrimental or not feasible. Why restoration was not required should be explained.
- The site improvements do not describe the improvements that will be required for a 70 space RV park. The State Department of Housing and Community Development (HCD) and the Monterey County Regional Fire District (MCRFD) require substantial physical improvements for an RV park including access roads, parking areas, water storage for fire protection, fire hydrants and exterior lighting. The impact of the RV park on both the project site and the area must be described in substantial detail. To the best of my knowledge there has not been a plan submitted to the County that meets HCD and

MCRFD requirements. The work that would be required for this portion of the project must be described more fully including site plans and elevations so that the full impact of the RV park can be assessed.

Page 6-7. Surrounding Land Uses and Environmental Setting

- The IS incorrectly identifies Quail Lodge as "Quail Creek resort."
- This section only briefly describes surrounding land uses. It gives the zoning for the nearby golf course and Quail Lodge parcels. There is not a discussion of the other surrounding uses nor is there a discussion of the actual environmental setting. There is no discussion of existing traffic conditions, water use, riparian corridor or similar features. While these may be described later in the IS they should at least be identified in the environmental setting section so that the reader can have a full understanding of the area, its resources and its constraints.
- The environmental setting should also describe and quantify the impact of eight houses. The project site is comprised of eight separate lots of record, each of which is entitled to a single family dwelling and accessory uses. Since the IS bases much of its conclusions on zoning consistency on the assumption that the impacts of the proposed use are equivalent to the development that would otherwise be allowed, the impact of that allowed use (water use, traffic, septic etc.) should be identified for comparison to the proposed use.

Page 8. General Plan Consistency

The project site is designated as Low Density Residential by the 2010 General Plan and Carmel Valley Master Plan. The 2010 General Plan describes Low Density Residential areas as being appropriate for residential, recreational, public and quasi- public and limited agricultural activities that are incidental and subordinate to the residential use. (MCGP policy LU-2.34 (a)). This is reinforced by the LDR zoning district's purpose statement that "the purpose of this Chapter is to provide a district to accommodate *low density and intensity uses* in the rural and suburban areas of the County of Monterey and to ensure that allowable uses are *compatible* with the area. (Title 21 Section 21.14.040)."

The IS's discussion of general plan consistency is at best confusing. The IS states "The Zoning Ordinance implements the General Plan and allows uses of a similar nature to those uses allowed within the LDR Zoning District subject to the approval of the Use Permit. Upon a finding that the project is of a similar nature and is a conditionally permitted use a Use Permit can be approved by the Planning Commission. Subject to these factors the project is consistent with the General Plan." Is the conclusion of the IS that the project is or is not consistent with the General Plan? What amounts to essentially a "we don't know" statement is insufficient.

The IS should be clear in its opinion as to whether or not the proposed use is consistent with the 2010 General Plan and Carmel Valley Master Plan:

- If it is the staff's opinion that the project *as proposed* is not consistent with the General Plan then the IS should state that.
- If it is the staff's position that there are project changes that need to be made to bring the project into consistency with the 2010 General Plan and Carmel Valley Master Plan those changes should be detailed and be proposed as specific mitigations within the IS.
- If it is the staff's opinion that the use *as proposed* is consistent with the 2010 General Plan and Carmel Valley Master Plan then it should be explained in the IS how the nature and intensity of the proposed use is similar to other uses allowed in the LDR district and is in keeping with the overall direction of the General Plan and Zoning Ordinance that uses in LDR areas be compatible, low density and intensity uses.

Page 9-10. Cultural Resources

The IS indicates that the project site was previously disturbed due to the history of the agricultural use of the property. The IS goes on to state that the additional grading for the project will be "insignificant (approx. 100 cubic yards)." As discussed earlier there is a significant amount of grading involved with the construction of the pond. A 1.2 acre pond at an average depth of 8 feet would result in an excavation of about 15,500 yd.^{3}. The excavated materials are to be spread on project site. The total grading volume, cut and fill, is nearly 31,000 yd.^{3}. While the discrepancy may not be significant in relation to cultural resources it is a significant omission in the IS.

The value of the archaeological survey is highly questionable. The survey was done after the site grading was done. It is recognized that based on the history of agricultural use the site had been previously disturbed. But it was never disturbed to the extent of building a 1.2 acre pond. Any resources that might have been found in that pond area were destroyed with the illegal grading.

Page 14. Aesthetics

The project site is in an area designated as visually sensitive by the 2010 General Plan. The IS indicates that there is either no impact or a less than significant impact on the area's aesthetics. The IS cites policy OS-1.2 which states "development in designated visually sensitive areas shall be subordinate to the natural features of the area." The IS does not cite two significant CVMP policies:

> CV-1.1 All policies, ordinances, and decisions regarding Carmel Valley shall be consistent with the goal of preserving Carmel Valley's rural character. In order to preserve the rural character of Carmel Valley, *development shall follow a rural architectural theme* with design review.
>
> CV-1.18 Facilities classified as either Public/Quasi-Public or Special Use (such as schools, churches, hospitals, convalescent homes, rehabilitation centers, hospice

facilities, emergency facilities, and public facilities such as community halls) may be considered in any land use category provided that they meet the following criteria:

a. Low visibility

b. Safe and unobtrusive access away from pedestrian traffic areas.

c. Low noise impact on surrounding uses.

d. *Development should follow a rural architectural theme with design review.*

e. Conform to all other Plan requirements.

The IS states that the structures proposed to be placed on the site are an office trailer, restroom trailer, members' trailer and an electrical storage room. Based on the project plans the "trailers" are boxlike structures with little in the way of architectural style or features. Structures of this design do not have a rural architectural theme nor are they in keeping with the architecture of the general area. The designs are inconsistent with the CVMP. The IS should prescribe specific architectural standards (color, materials, style) as project mitigation to address this inconsistency.

This section also states that any exterior lighting would be required to be "...unobtrusive, down-lit and designed so as to illuminate the immediate area only." The IS does not however disclose how much exterior lighting is proposed for this project either as part of their regular operations, special events or use of the RV park. The IS should fully describe the exterior lighting that is proposed for the entire project and specify the standards that lighting (lumens, etc.) will be required to meet.

The IS does not include an analysis of the potential visual effect of a 70 space RV park. A plan which would meet HCD and MCRFD requirements for an RV park has not been submitted. Without such a plan there is no way to determine the size of the area that would be required to accommodate the RV park, the facilities that would need to be included or what the RV park might look like from off the property. Without drawings or photo simulations of an RV park that would meet HCD and MCRFD standards, the true effect on the area's aesthetics cannot be determined.

Page 19-20. Air Quality

The assessment of air quality impacts is wholly inadequate. The IS finds that there is less than a significant air quality impact because there is no increase in population, the grading activities will not exceed 2.2 acres of disturbance per day and that the construction of the trailers will not be individually or cumulatively significant. This analysis is inadequate because:

- While the project will not increase the "population" of the site there will be a substantial increase in the use of the site. The traffic consultants estimate that the typical daily operation of the project would result in 300 trips per day. That is the equivalent of 30-37 houses at 8-10 vehicle trips per day per house. During special events there would be 442 trips per day. That is the equivalent of 44 -55 houses. Nonetheless there is no discussion of the air quality impacts of those trips.
- The project also proposes a 70 space RV park. There is no discussion or assessment of the air quality impact on 70 RVs arriving and leaving the site, the operation of their generators or from their towed vehicles.
- There is no evidence to indicate that the air-quality guidelines of 2.2 acres of disturbance per day were not exceeded. Essentially the entire 40 acre site was regraded and a 1.2 acre pond was excavated. There is no information that indicates over what period of time that grading was done to show that not more than 2.2 acres per day were disturbed. Given that the grading is done, this may be a moot point but it should nonetheless be disclosed in the IS.

Page 20-23 Biological Resources

The biological resources analysis is completely inadequate:

- There was no expert, independent biological survey of the project site nor is there an explanation as to why a study was not required.
- The IS's conclusions are based on the assumption that because there was farming activity on the property that it was no longer potential habitat and that the proposed picnic area in the riparian habitat would not be allowed (it is unclear if the applicants have agreed to this mitigation) so there was no impact on the riparian corridor. There is no evidence to support those conclusions.
- The area along the Carmel River is well known to be habitat for the California Red Legged Frog (CRLF), California Tiger Salamander (CTS) and Western Turtles. Biological reports have been required for projects in Carmel Valley, and throughout the County, based on the mere possibility of a protected species being on or near the property. The County has routinely used early referral and consultation to the Department of Fish and Wildlife as part of its review process. There is no evidence in the IS that there was a report or consultation.
- The project site was not farmed for the last several years and would have been considered upland habitat. During that time it is possible, if not entirely likely, that protected species such as the CRLF or CTS migrated to the property and used features such as animal burrows as part of their habitat. Both CRLF and CTS are known to range a substantial distance from water bodies to establish their habitat area. But given there is no

independent expert biological analysis finding of less than a significant impact on the habitat cannot be supported.

Page 23. Cultural Resources

See previous comments.

Page 20-23 Greenhouse Gas Emissions

The IS concludes that there will be a less than significant impact on greenhouse gas (GHG) emissions. That conclusion is based on the assumption that the short-term, construction related impacts of the project are "expected" to be well under the MBUAPCD's AQMP threshold and that there will be no population growth. This is an inadequate analysis and an unsupportable conclusion:

- As discussed in the Air Quality section, the impact of the construction work, specifically grading for the fields and pond, have not been quantified or analyzed. Without that analysis a conclusion of less than a significant impact cannot be supported.
- The project will have a traffic impact equal to 30-55 homes. While the project may not have the full GHG impact of 55 homes there will be a proportional impact. That proportion should, in some rational manner, be quantified and the greenhouse gas emissions impact analyzed and if necessary mitigated. Without some analysis the conclusion of less than significant impact is not supported by evidence.
- There is no assessment of the impact of the use of generators in the RV park. It can be assumed that as many as 70 generators will be operating 12 hours a day 24 days a year. The impact of that on air-quality and GHG should be quantified and analyzed.

Page 32. Hydrology and Water Quality

The IS is inadequate for a number of reasons:

- This section of the IS does not discuss the method of sewage disposal for the property. The focus of the discussion relative to water quality is limited to animal waste. This portion of the IS does not disclose that the project site is within one of the constrained areas identified by the Montgomery study. There is no estimated sewage waste flow from members, staff, visitors, persons attending classes or special events. The EHB has set an upper limit for wastewater generation of 2,100 gallons per day. There is no discussion of that limit. There is no discussion about the septic system design and how it will meet that standard. There is no explanation as to how special events are factored into the 2,100 g/d. It should also be noted in the IS that per MCC Section 15.20.050, the use of portable toilets is limited to no more than 10 days per year not the 24 special event days requested.

- As previously discussed, the County has not used the correct baseline for the analysis of this project on water resources. The correct baseline is zero. That is the production of the wells on the property over the last several years and is the only supportable baseline as mandated by CEQA. This section should be completely rewritten to reflect the correct baseline and to assess the impact of the use of that water on a significantly over drafted aquifer.
- The discussion of water rights is misleading. The property does not have proven appropriative or riparian water rights. Water rights determinations for this property are in various stages of evaluation and consideration. The IS defers a water rights decision to the Monterey Peninsula Water Management District. However the District is not legally empowered to make that determination. A water rights determination can only be made by either the Superior Court or the State Water Resources Control Board. The District may offer an opinion of those rights. They cannot grant those rights. Until either the Superior Court confirms those rights (as has been required of other applicants) or an appropriative water right to allow this use is obtained from the SWRCB this project cannot proceed.[1]
- The IS indicates that the applicant provided the estimate of water use for the project. There is no independent assessment or determination that their estimates are accurate. Those estimates should be independently verified.
- The IS includes a mitigation that would limit the number of grazing animals to one for every 20,000 ft.^{2} of area "devoted to grazing." That would allow up to 93 grazing animals on the 43 acre project site. That is inconsistent with information provided elsewhere in the IS that indicates there would be no more than 50 grazing animals on-site. That inconsistency should be addressed and the IS should be corrected to clearly and consistently identify the number of animals that would be kept on the property and the area in which those animals can be kept should be clearly defined.
- The IS should include analysis of how waste from the grazing animals plus dogs is included and accounted for in the overall nitrate loading.
- The monitoring action for proposed mitigation measure 4 states the County will not issue permits until "these requirements" (e.g. the water rights issues) are satisfied. However the County has allowed the use of water commence without requiring proven water rights. In effect, this "mitigation" is already being violated.

Page 32-33, Land Use and Planning

The IS concludes that there is no significant impact relative to land-use and planning. However, as discussed earlier, the IS's "we don't know" conclusion regarding consistency is inadequate.

[1] The IS fails to disclose that the property owner did obtain an appropriative water right for this property that would not provide adequate water for the proposed use. Therefore the applicant must obtain an judicial determination of its rights or the project cannot proceed.

There is no question this project, as proposed, is inconsistent with the 2010 General Plan and CVMP. The specific issue has been examined in detail. Dale Ellis, the former County Zoning Administrator and Assistant Director of Planning and Building Inspection has prepared a detailed analysis of these issues which will be submitted separately.

Page 34-36. Noise

The noise analysis and its conclusions are inadequate:

- The sensitive receptors identified in the IS did not include the residences on the project site, homes along Prado del Sol that are approximately 1000 feet to the east and downwind of the project site or the commercial center at the corner of Valley Greens and Carmel Valley Road.
- The IS indicates that the noise from competitive events would be acceptable because they are brief. That seems highly inconsistent with activities which would run from early morning to late afternoon for three consecutive days. The IS seems to address barking of an individual dog not the cumulative effect of potentially hundreds of dogs on the site at one time.
- There is no discussion of the difference between quantitative noise measurement (dBA or CNL) versus qualitative noise. The IS describes the ambient noise levels including normal traffic, small aircraft and golf course maintenance activities. Over an extended period of time these noises have become part of the acceptable background and are not considered to be inappropriate or obtrusive. However the daily introduction of barking dogs and a massive influx of dogs during special events, while possibly not exceeding the quantitative standards, will substantially alter the background noise residents and visitors have grown to expect and will adversely effect them. The impact of this qualitative effect should be discussed.
- The IS indicates that RVs may have generators that produce noise levels of 45 to 55 DBA at 50 feet. There is no discussion of the potential impact of the cumulative effect of multiple generators operating at the same time. It should be readily anticipated that most of the persons using RVs will also use some form of generator. The potential impact of that cumulative effect should be analyzed.
- The noise analysis is internally inconsistent with other portions of the IS. The traffic estimates in the noise study are 10-12% less than the traffic estimated by the applicants own traffic consultant. There is no explanation or justification for using a lesser traffic estimate.

Page 39. Recreation

The IS asks if the project includes recreational facilities which might have an adverse physical effect on the environment. The study indicates that there is no impact. That finding is inconsistent with the balance of the IS.

This project is supposedly a recreational use similar to schools, parks, and playgrounds. Throughout the IS there are conclusions that there may be impacts, and as we have pointed out the effect of these impacts are underestimated, so how can this section which speaks directly to the use come to a conclusion that there is no impact?

Page 39-43. Traffic

The IS's traffic analysis is seriously flawed:

- The applicant's traffic study and its conclusions are all based on the applicant's estimate of membership, daily use and special event use. It does not appear that there was any independent data collected for similar types of activities and events. Without that independent data and equally independent analysis, any conclusions of the traffic study are at best questionable.
- Hatch Mott MacDonald (HMM) has reviewed the traffic reports and the conclusions of the IS. A copy of their review is attached. The HMM report refutes almost every conclusion contained in the applicant's traffic reports. After reviewing the HMM analysis it is evident that the applicant's traffic estimates, methodology, conclusions and mitigations are inadequate. Since HMM reached completely different conclusions regarding the magnitude of the traffic impacts of this project an EIR must be prepared by the County due to the disagreement among experts as to the magnitude of the environmental impacts.
- The driveway to Valley Greens is a limited use access for not more than four (4) residential lots. The IS does not disclose this or assess the impact of that limitation. A copy of Board of Supervisors Resolution 03-174 is attached. There was a 1 foot non-access strip along the eastern side of Valley Greens. As part of the lot line adjustment that established the current lot configuration the Board of Supervisors approved a 60 foot wide access easement on Valley Greens for four residential lots. Nowhere in the IS is the prohibition against more than four residences discussed. The ability to use this limited access driveway for the proposed use is not analyzed. There is no analysis of any alternative access to the project site. This issue needs to be fully addressed and analyzed.
- The applicant's traffic study and the IS both indicated that a percentage of the project's traffic would use Rancho San Carlos Road. Rancho San Carlos Road is a private road. There is no discussion of this fact in the IS. There is no evidence in the record to indicate that this project has rights to use Rancho San Carlos Road for their benefit.

Page 44. Utilities and Service Systems

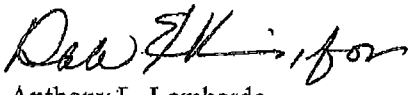
This section of the IS does discuss the on-site wastewater disposal constraints. The IS concludes that there is a less than significant impact because the total wastewater disposal will not exceed the 2100 gallons per day limit established by EHB. This analysis fails on three points:

- The estimated total "worst-case scenario" would result in a wastewater discharge of 2,096 gallons, four (4) gallons less than the maximum allowed. In other words, with three more flushes of the toilet the daily limit would be exceeded. The IS does not disclose how the 2,096 gallons of waste water was calculated. It does not discuss how the additional nitrate loading from the animals is factored into the 2096 g/d.
- The worst-case scenario used in the IS is based on events where there are "250 people on-site." It is not clear in the project description if the 250 people on-site for a special event intended to be the maximum allowed on site at one time or for an entire day. Assuming that like most special events people coming and going throughout the day it is highly likely that the number of people attending an event will be well in excess of 250 people per day. This needs to be clarified. If the use is limited to no more than 250 people on-site per day that limit should be specifically spelled out and included as project mitigations.
- There should also be an analysis of the daily loading of the system. The project applicants estimate that there will be 100 members per day using the project. As discussed earlier it is not clear if 100 members equals 100 people nor does it address the number of nonmembers who could use the site for classes. This level of use should be spelled out in much greater detail and analyzed accordingly.

Conclusion

The IS prepared by the County is inadequate on its face due to the use of a baseline that does not meet the legal requirements of CEQA. Significant pertinent facts and details of the application are omitted. Most of the conclusions in the IS are not supported by independent analysis or facts. This project cannot be approved using a Mitigated Negative Declaration. Based solely on water and traffic impacts a full EIR is required.

Sincerely,



Anthony L. Lombardo
ALL/gp

Attachments: Hatch Mott MacDonald letter
Board of Supervisors Resolution 03-174

Hatch Mott MacDonald

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Gilroy, CA 95020
T 408-848-3122 www.hatchmott.com

January 23, 2014

Dale Ellis
Anthony Lombardo & Associates, Inc.
450 Lincoln Avenue, Suite 101
Salinas, CA 93901

RE: Carmel Canine Sports Center, Monterey County, California

Dear Mr. Ellis:

At your request, I have reviewed the traffic study and initial study for the Carmel Canine Sports Center and this letter provides observations and recommendations concerning the traffic study technical procedures, findings and conclusions. The following documents pertaining to the traffic analysis have been reviewed:

1. Carmel Canine Sports Center Mitigated Negative Declaration (MND), County of Monterey, December 23, 2013.
2. Carmel Canine Sports Center Traffic Analysis, Hexagon Transportation Consultants, August 19, 2013.
3. Carmel Canine Sports Center Traffic Analysis Amendment, Hexagon Transportation Consultants, December 6, 2013.
4. Carmel Canine Sports Center Project Description, Paul Davis Group, August 7, 2013 (rev.).

Overall, the traffic analysis for the Carmel Canine Sports Center (CCSC) project does not adequately evaluate traffic impacts associated with the project. The CCSC traffic analysis includes technical procedures and assumptions that require additional explanation and justification. It appears that some technical procedures utilized in the study do not conform to professional standards and County of Monterey procedures bringing into question the validity of the analysis results and conclusions. In addition, the significance of impacts to regional facilities are not analyzed in the traffic study, but it is likely given the characteristics of the project that the project will significantly impact elements of the regional road network that have no improvements programmed for implementation. These impacts would require findings of overriding consideration, which would probably necessitate the preparation of an Environmental Impact Report.

Based on the applicant's trip generation assumptions, the traffic generated by the Carmel Canine Sports Center on a daily basis during normal operations will be equivalent to the trips generated by a 30-unit subdivision. The traffic generated by the Carmel Canine Sports Center on a daily basis during a special event will be equivalent to the trips generated by a 44-unit subdivision, with about 20 percent of the trips on a Friday Special Event made by recreational vehicles.

Specific comments regarding the traffic analysis are provided below.

1. The trip distribution pattern utilized in the traffic analysis reflects the regional orientation of the project with 55 percent of the traffic generation originating outside of Carmel Valley. However, the traffic analysis only analyzes project impacts at the Carmel Valley

Road/Valley Greens Road and Carmel Valley Road/Rancho San Carlos Road intersections and Carmel Valley Road. Analysis of impacts to Highway 1, Laureles Grade, Highway 68 and potentially some intersections on these facilities is warranted given the impact of this project over a wide geographic area and because the project will add traffic, including recreational vehicles, to facilities that are indicated in recent environmental documents to currently operate at Level of Service (LOS) F. The scope of intersections and segments to be analyzed for the study should apply the scoping criteria documented in the "Guide for the Preparation of Traffic Impact Studies," County of Monterey, October 2003.

2. Cumulative traffic conditions are not analyzed in the traffic report or discussed in the MND. Justification for not including an analysis of Cumulative Conditions should be explained in the documents.

3. The analysis does not utilize existing Friday peak hour volumes to analyze impacts associated with conditions during the Friday special event peak hours. Volumes collected on Thursday, June 6, 2013 are used to evaluate Existing Plus Project conditions for both normal activities and Friday Operations with a Special Event at the Valley Greens Road intersection. Volumes collected on Tuesday, February 26, 2013 are used to evaluate Existing Plus Project conditions for Friday Operations with a Special Event at the Rancho San Carlos Road intersection. Use of existing Tuesday/Thursday peak hour data as a basis for evaluating Existing Plus Project conditions for a Friday condition is not discussed or justified in the traffic study. The analysis of special event traffic conditions on a Friday should utilize existing AM and PM peak hour traffic volumes collected on a Friday. If not, the use of traffic volumes collected on a Tuesday/Thursday to represent Friday traffic conditions should be justified in the traffic report.

4. The traffic study analyzes segment operations on Carmel Valley Road for the AM peak hour and PM peak hour. However, the same traffic volumes were used in each analysis with the directional volumes reversed. There is no discussion in the traffic study to substantiate that AM and PM peak hour volumes on Carmel Valley Road are the same, but reversed on each Carmel Valley Road segment. The accuracy of the traffic volumes used in the traffic analysis for the Carmel Valley Road segment analysis should be verified. The analysis should utilize field collected traffic counts for the analysis of Carmel Valley Road segment operations.

5. The traffic study states on page 9: "In addition, the County's Level of Service Policies and Carmel Valley Master Plan are applicable to only the standard weekday AM and PM peak commute periods." The relevant County and Master Plan policies should be cited to substantiate this statement.

6. The traffic study analyzes impacts during the AM and PM peak commute periods for the Friday event day. According to information provided in the traffic study, the highest project trip generation during the afternoon/evening would occur on Friday between 3:00 pm and 4:00 pm (64 trips). During the peak commute period, the special event would generate an estimated 48 trips during the PM peak hour and impacts associated with this trip generation was analyzed.

Based on the traffic volumes that are documented in the appendix of the traffic study, the highest volume of traffic on Carmel Valley Road west of Valley Greens on Friday at the project site occurs between 2:30 pm and 3:30 pm (1,448 vehicles). This is 123 vehicles higher than the highest one-hour traffic volume on Carmel Valley Road during the Friday commute period (1,325 vehicles between 4:15 pm and 5:15 pm). Based on the project's trip generation analysis and the Carmel Valley Road volumes presented in the traffic study, peak existing Friday afternoon traffic conditions on Carmel Valley Road occur coincident with the peak afternoon trip generation for the project. It is recommended that the traffic analysis include an analysis of peak traffic conditions that will occur during the 3 pm to 4 pm hour.

The MND recognizes that the peak trip generation for the project and peak traffic flows on Carmel Valley Road extend beyond the PM peak commute period by requiring the traffic control mitigation measure to extend between 3 pm and 6 pm. However, analyzing peak conditions in terms of both traffic flow on CVR and project trip generation is important to provide a proper evaluation of project impacts including warrants for traffic signalization.

In addition, it is not certain based on the information provided in the traffic analysis and the MND that there would not be significant impacts on Sunday when the predominate traffic flow will be outbound from the project site in the afternoon. The outbound flow on Sunday would include RV's that are larger than passenger cars and have slower operating characteristics than passenger cars. While traffic volumes on Carmel Valley Road may be lower than experienced on a Friday, that doesn't eliminate the possibility that the project impact on Sunday would not be significant, particularly when the project will be contributing traffic to the Valley Greens Drive approach to Carmel Valley Road. Analysis of traffic conditions on Sunday is recommended.

7. The significant impact criteria described in the report text does not accurately state County of Monterey significance criteria and should be revised.

8. Additional justification of the project trip generation should be provided in the traffic analysis. While the Institute of Transportation Engineers does not publish trip generation rates for this type of use because of the uniqueness of the use, similar facilities currently exist and information may be available from the permitting process for existing facilities that could be applicable for this project. A survey of the trip generating characteristics of a similar type of use would be helpful if trip generation data for a dog training and event center is not available. The proposed use is similar to a horse training facility that provides lessons and holds events on weekends. There are several horse events conducted in Central California throughout the year and trip generation surveys of these events may be useful if attendance and event schedules are similar to the proposed project. Lacking empirical data to justify the distribution of trips throughout the day, additional detail should be provided in the project description regarding the schedules of training classes and the schedule of special event activities. Specific trip generation issues include the following:

    a. Will additional trips be made by RV attendees to local retail and visitor serving destinations using a second vehicle towed to the event?

b. Information describing the format/schedule of the special events should be provided to explain/justify the arrival and departure distribution of attendees.
c. Additional information regarding the schedule of training classes should be provided to explain the reasonableness of the trip generation estimates. The trip generation table contained in the traffic study (Revised Table 3) shows 10 arrivals for a training class between 2 pm and 3 pm, no arrivals or departures between 3 pm and 6 pm, 10 arrivals and 20 departures between 6 pm and 7 pm.
d. What is the basis for assigning a different arrival and departure distribution for RV attendees versus other event attendees?
e. Does the trip generation and parking estimates consider non-participant attendees (spectators) might arrive throughout the day?

9. The parking analysis and site plan may not account for the parking demand create by RVs with second vehicles.

10. Striping the 25 angled parking spaces shown on the east side of the Event Field might provide better operations as it appears the aisle serving these spaces is two-way and the most direct exit path for motorists exiting these space is to the north to Valley Greens Drive.

11. It is recommended that the RV parking area be evaluated using RV turning templates to demonstrate that the layout can adequately allow RVs to enter and exit the parking stalls, circulate in the parking area and enter and exit the parking area from the access road.

12. The traffic report states, "The events will be held within the property, generally but not exclusively on weekends (Fri-Sun)." This statement requires clarification as it implies some special events will be conducted on weekdays.

13. Impacts to regional roadways – The study concludes that the project will have only a minimal effect on the surrounding regional roadways, but does not state if the impact will be significant. The project will generate new vehicle trips that impact the regional road network as evidenced by the project's trip distribution pattern that indicates 32 percent of the project traffic will utilize Highway 1 north of Carmel Valley Road and 23 percent of the project traffic will utilize Laureles Grade. The traffic analysis should analyze impacts to regional roadways (Highway 1, Highway 68 and Laureles Grade) using the County of Monterey impact significance criteria to determine if the impacts to these facilities will be significant..

The MND addresses impacts to regional facilities by stating:

> *The project will generate traffic that impacts regional roadways, but will be required to pay fees to the Transportation Agency of Monterey County for the improvement of regional roadways. The payment of these fees will mitigate the impact for the proposed project and the impact will be Less than Significant.*

This statement is not consistent with traffic impact analyses prepared for other projects in Monterey County. It is accepted that payment of the TAMC Regional Development Impact Fee mitigates a project's cumulative impact. However, payment of the fee does not necessarily mitigate a project's direct project level impact. The traffic analysis

should include an analysis of impacts to Highway 1, Laureles Grade and Highway 68 using the County's impact significance criteria.

14. The level of service calculations should consider the operating characteristics of RV vehicles by converting the RV trips to passenger-car equivalencies or including a RV vehicle conversion factor in the level of service calculation.

15. In the traffic analysis, intersection sight distance is calculated using the "stopping sight distance" formula published by the American Association of State Highway and Transportation Officials (AASHTO). The stopping sight distance is the minimum distance required to stop a vehicle before reaching a stationary object in its path. Stopping sight distance provides the minimum acceptable sight distance for intersection corner sight distance. Providing a corner sight distance that at least equals the stopping sight distance ensures that a vehicle approaching Valley Greens Drive on Carmel Valley Road can stop before reaching the intersection in the event a vehicle is pulling out from Valley Greens Drive onto Carmel Valley Road.

    For intersections of two public roads, Caltrans recommends that the corner sight distance be evaluated using the 7½ second rule, which provides a corner sight distance equal to a gap of 7½ seconds between the intersection and a vehicle approaching the intersection on the major road. This gap allows the driver entering the major road to complete the turning maneuver while the approaching vehicle travels at the assumed design speed of the major road. The 7½ second gap provides adequate time for the motorist on the minor road approach to cross the road or enter the major road without requiring through traffic to radically alter their speed. Caltrans recognizes that sometimes the cost to obtain 7½ seconds of corner sight distance may be excessive due to right of way acquisition, building removal, extensive excavation or immitigable environmental impacts. In these cases, the corner sight distance based on the stopping sight distance may be used.

    Based on Caltrans standards and a 50 mile per hour design speed, a corner sight distance of 550 feet should be provided at the Carmel Valley Road/Valley Greens Drive intersection. This compares to a sight distance of 425 feet recommended in the traffic study based on the AASHTO stopping sight distance standard.

    It is recommended that the corner sight distance for the Carmel Valley Road/Valley Greens Drive intersection be evaluated on the basis of the 7½ second rule. This is especially important because project trips turning from Valley Greens Drive onto Carmel Valley Road will be recreational vehicles and the acceleration rate for most recreational vehicles is less than standard passenger vehicles. It is also recommended that a spot speed study be conducted to verify the prevailing travel speeds on Carmel Valley Road at Valley Greens Drive. Finally, the measurement of corner sight distance from the Valley Greens approach to Carmel Valley Road should consider the height of the eye of the driver of an RV vehicle as well as the eye of the driver of a standard passenger vehicle.

16. The mitigation measure proposed in the MND for impacts to the Carmel Valley Road/Valley Greens Drive intersection during a Friday Special Event would allow the applicant to either close the site and schedule no activities on the site between the hours of 3 pm and 6 pm or contract with a law enforcement agency to control the intersection of Valley Greens Drive and Carmel Valley Road between the hours of 3 pm and 6 pm.

Hatch Mott MacDonald

Closing the site for a three hours on a Friday during a special event does not appear to be a practical mitigation measure. Motorists arriving to the site during this time would park on Valley Greens Drive or in the parking lots of adjacent commercial properties. Attendees knowing that they will be leaving during this time would also park on Valley Greens Drive or adjacent properties to be locked in.

Traffic control by a law enforcement officer is a more practical approach, but there are safety related issues with this alternative. Installation of advance warning signs should be installed on Carmel Valley Road to alert motorists of the possibility of stopped traffic on Carmel Valley Road, especially given the limited sight distance on the west leg of Carmel Valley Road.

If you have any questions regarding this information, please do not hesitate to contact me.

Very truly yours,

Hatch Mott MacDonald

Keith B. Higgins, PE, TE
Vice President
T 408.848.3122 F 408.848.2202
keith.higgins@hatchmott.com

jdt
Enclosures

Before the Board of Supervisors in and for the County of Monterey, State of California

Resolution No. 03-174

Approval of the removal of a 60-foot portion of a non-access strip along the south side of Valley Greens Drive to accommodate construction of a shared driveway connection from four residential lots to the existing Valley Greens Drive Right-of-Way.	)))))

WHEREAS, the Carmel Valley Golf and Country Club Subdivision (Tract No. 445, 1963) included a dedication to the County of a one-foot wide non-access strip along both sides of Valley Greens Drive, off Carmel Valley Road in the Carmel Valley area; and

WHEREAS, property owner Russell T. Wolter ("Owner") requested an encroachment permit from the County of Monterey ("County") in 1986 to construct a driveway connection to his property, fronting on and southerly of Valley Greens Drive (Assessor Parcel Numbers 169-221-005 and 015-172-007), to facilitate the movement of traffic generated by the agricultural use of his property; and

WHEREAS, Owner obtained a license from the County in 1987 to cross the County's non-access strip by executing Agreement No. A-4571 that included the mutual promise that the license is non-assignable and any attempt to assign the license or to use the access for traffic generated by other land uses terminates it; and

WHEREAS, the current Owner, Wolter Property Limited Partnership, has applied for a lot line adjustment of four (4) legal lots of record at said property (Planning and Building Inspection file no. PLN010503), now designated as a Low Density Residential district ("LDR/2.5-D-S"), which will include a 60-foot wide, approximately 410 foot long, shared driveway to four reconfigured lots bordering the Carmel Valley Golf and Country Club and aligned perpendicular to Valley Greens Drive; and

WHEREAS, the proposed lot line adjustment requires removal of a 60 foot long portion of the County's non-access strip at the approximate location of the existing licensed driveway in order to accommodate the proposed residential driveway; and

WHEREAS, the Public Works Department has reviewed the project location and finds that based on existing traffic volumes and roadway configuration, there is adequate sight-distance to accommodate construction of a residential driveway at the requested location if on-street parking is restricted. There is no traffic safety concern with the proposed action.

NOW, THEREFORE, BE IT RESOLVED THAT the Board of Supervisors approves removal of a 60 foot long portion of the County's one-foot non-access strip along Valley Greens Drive, more particularly shown on Exhibit "C" attached hereto, thereby terminating the existing driveway license and Agreement No. A-4571 shown as Exhibit "B" attached hereto, and approving an opening for the proposed, shared right-of-way to four residential lots.

PASSED AND ADOPTED on this 27th day of May, 2003, upon motion of Supervisor Potter, seconded by Supervisor Lindley, by the following vote, to-wit:

AYES: SUPERVISORS CALCAGNO, LINDLEY, JOHNSEN, POTTER and ARMENTA

NOES: NONE.

ABSENT: NONE

I, Sally R. Reed, Clerk of the Board of Supervisors of the County of Monterey, State of California, hereby certify that the foregoing is a true copy of an original order of said Board of Supervisors duly made and entered in the minutes thereof at page X of Minute Book 71, on May 27, 2003.

Dated: 5/27/03

Sally R. Reed, Clerk of the Board of Supervisors,
County of Monterey, State of California.
By _____
Deputy

Mack, David x5096

RECEIVED
JAN 09 2015
MONTEREY COUNTY
PLANNING DEPARTMENT

From: Ann Peterson Mahoney [apmahoney@sbcglobal.net]
Sent: Friday, January 09, 2015 9:28 AM
To: Mack, David x5096
Subject: Fwd: Carmel Canine Sports Center-Comments on NOP

Excuse me, Mr. Mack. I seem to have mistyped your email address in the message below. Hope this one is correct!

Begin forwarded message:

From: Ann Peterson Mahoney <apmahoney@sbcglobal.net>
Subject: Carmel Canine Sports Center-Comments on NOP
Date: January 9, 2015 7:49:06 AM PST
To: novom@co.monterey.ca.us, Dave Potter <district5@co.monterey.ca.us>
Cc: "John H. x5158 Ford" <fordjh@co.monterey.ca.us>, MackD@co.monterey.co.us

FRIENDS OF QUAIL

CARMEL, CALIFORNIA

www.friendsofquail.com

January 9, 2015

To: Monterey County Resource Management Agency

Re: **Notice of Preparation of a Draft Environmental Impact Report**

for the Application Planning File Number: PLN130352

Friends of Quail is a neighborhood organization formed after investigation of the permit application for the Carmel Canine Sports Center proposed for 8100 Valley Greens Drive, Carmel, CA PLN 130352.

We are responding to the above referenced NOP for public input to those charged with drafting an Environmental Impact Report on the subject application, a proposed canine sports center across from Quail Lodge.

Friends of Quail refers the County to the many thoughtful letters submitted by the public and the regulatory agencies on the County's initial study/mitigated negative declaration. Those comments were so lengthy and detailed that Friends does not attempt to recite the comments here. Those comments should be considered as comments in response to the NOP, and we understand that the County has agreed to do so. Friends appreciates the County's step, which will prevent duplicative effort.

One of the most salient and thorough letters written last year was from Quail Lodge resident and Architect Larry Somerton, dated January 23, 2014. We commend you to review his statement, along with the many others that were submitted at that time.

Friends of Quail is looking forward to the receipt of a thorough and accurate Draft Environmental Impact Report for the Carmel Canine Sports Center.

Thank you.

Ann Mahoney, Co-Chair, Friends of Quail

Mack, David x5096

From: Ford, John H. x5158
Sent: Monday, January 12, 2015 10:26 AM
To: Mack, David x5096
Subject: FW: EIR for projected canine center near Quail Lodge

RECEIVED
JAN 12 2015
MONTEREY COUNTY
PLANNING DEPARTMENT

John Ford
RMA - Services Manager
Resource Management Agency -- Planning
(831) 755-5158

To view your project online via Accela Citizen Access, please use the following link:
https://aca.accela.com/monterey/Default.aspx

From: Daniel Matuszewski [mailto:dcmatuszewski@aol.com]
Sent: Thursday, January 08, 2015 7:37 PM
To: Ford, John H. x5158
Cc: Daniel Matuszewski
Subject: EIR for projected canine center near Quail Lodge

strict5@co.monterey.ca.us **January 8, 2015**

novom@co.monterey.ca.us

ford@co.monterey.ca.us

-

Gentlemen,

I am forwarding a perceptive Pine Cone editorial from Paul Miller on the ill-advised plans for a canine center near Quail Lodge.

It is astonishing that such a neighborhood-busting project should continue to go forward when the entire surrounding civic community has spoken out against it.

Virtually every public agency such as California Fish and Wildlife, California Water Resources Control Board, Monterey County Land Use Advisory Committee, National Marine Fisheries Service, as well as independent traffic studies, have objected to the canine project's projected violations of traffic, water, noise, environmental, and quiet community common sense.

In addition, two major residence associations, the Carmel Valley Association (approximately 600 members) and the Friends of Quail (400 plus members) have protested the intrusion of such an alien commercial operation on that site in contravention of existing zoning regulations.

As the EIR is developed, serious attention must be paid to weighting the opinion of over 1000 neighboring households whose safety, welfare, health, and sanctity of their property would clearly be jeopardized by the construction of this commercial entity.

This commercial operation would not only violate existing zoning usage, but would benefit no one but a small group of developers and, furthermore, create only a pitiful handful of new jobs with no real return to the larger economy.

D.C. Matuszewski

7007 Valley Greens Circle

Carmel, California 93923

/ Pine Cone Editorial re projected Canine Project /

Editorial

What time is it when an elephant sits on your fence?

THERE ARE two types of land use projects in this country: The kind a property owner is *entitled* to build — such as a single-family home on a single-family lot — and the kind a property owner is *allowed* to build only if the majority of his fellow citizens (or their elected representatives) decide the project is a good idea and would benefit the community.

ıe Carmel Valley canine center isn't the first type. Its owners have no entitlement or right to open the business, much less locate it at the proposed site on Valley Greens Drive near Quail Lodge. For it to open up shop, the canine center will have to survive the permit process, culminating in an up or down vote from the Monterey County Board of Supervisors.

After several months of debate, it has become obvious that there is almost unanimous opposition to the center from people who live nearby. They don't want the barking, they don't want the generators, they don't want the traffic and they don't want the RVs. Meanwhile, even the most ardent dog lovers in that neighborhood would have a hard time understanding why the canine center is needed. The whole Monterey Peninsula is already a *de facto* dog park, with its accommodating laws (especially in Carmel), more than ample open spaces, and climate that makes it comfortable to be outdoors at least 330 days a year. Any dog who lives here already has to think he's in heaven.

Meanwhile, because the final vote on the dog center will be taken by a county government agency, the dog center will have to weigh its chances of an affirmative vote by the board of supervisors against county-wide land use and political concerns. Will pervisors Lou Calcagno, Simon Salinas, Fernando Armenta, Jane Parker and Dave

Potter find a reason to approve the dog center in the face of overwhelming neighbor opposition? We can't think of any that would even come close.

ıus, it has long been evident that there is no way the center will get the permit it seeks. The ultimate vote by the supervisors seems likely to be 5-0 against. Which means the only sensible thing for its owners to do now would be to put everybody out of their misery — including themselves — by finding another location for the dog center, or by giving up entirely. And why aren't they taking this obviously necessary step? Usually, when somebody seems to be throwing good money after bad, it's

because they've already invested so much they don't have the heart to give up. Or because the upside of getting their project approved is so great that the risk — even against overwhelming odds — is worth it.

In this case, neither circumstance seems to apply. Surely, Martha Diehl and her partners have spent quite a bit, but it's not like they've invested millions. And how much profit could a dog center make, anyway?

So the entire situation leaves us shaking our heads. What are they thinking?

›sides saying goodbye to their hard-earned money and going through a lot of agony themselves, all they're doing is causing their opponents to lose sleep and spend money fighting them. And all for nothing.

It's time for the dog center people to find another, more suitable use for the property where they're trying to set up their business, and for them to find another location for the dog center — one that has no neighbors, or has ones that welcome it.

Come to think of it, an indoor/screened outdoor facility in International Falls, Minn., sounds like a winner. The dogs who live there (and their owners) need someplace to go in January to escape the snow, and in August to get away from the mosquitos.

RECEIVED
JAN 07 2015
MONTEREY COUNTY
PLANNING DEPARTMENT

50 Laurel Drive
Carmel Valley, CA 93924

Dear Monterey County Planning Department Members:

I'm writing to support the Carmel Canine Sports Center. The plan for this project has several benefits. The property owners receive income, and the project has little permanent impact on the land. In fact it is very close to the previous agricultural impact. Only in the last several years has the property become overgrown. Water use remains approximately the same as when in agricultural use.

Parking is within the property itself. There is a limit to event participants, and all are provided parking inside. Noise is minimal, as barking dogs are discouraged, and this is not a rowdy crowd. Competitors come when their classes are scheduled, and leave afterwards, meaning that there is not a specific arrival and departure, causing traffic back ups.

As a member of the Carmel Valley Athletic Club I see traffic from the many events Quail Lodge holds; in no way would CCSC traffic approach that. In fact I have participated in two agility trials at Quail Lodge which went totally unremarked upon.

I urge you to approve the Carmel Canine Sports Center. It's an appropriate use of land, and would be a benefit to the Carmel dog friendly community.

Sincerely,

Judith Rowley

MEMORANDUM

RECEIVED
JAN 08 2015
MONTEREY COUNTY
PLANNING DEPARTMENT

County of Monterey
Office of the Sheriff

Date: January 8th, 2015

To: David Mack, Association Planner, Planning Dept

From: Donna Galletti, Crime Prevention Specialist

Subject: PLN 13-0352, Carmel Canine Sports Center

This project will have a "less than significant impact" on the Sheriff's Office in regards to Police Services.

The project could result in a slight increase in the number of Calls for Service that require a response by the Sheriff's Office. This due to incidents at the project site during construction and after the project is completed.

Monterey County Resource Management Agency – Planning Department
168 W. Alisal Street, 2nd Floor, Salinas, CA 93901
www.co.monterey.ca.us/rma

Attention: Carl P. Holm, AICP, Acting Director
RE: Martha Diehl Dog Park
PLN130352
Our views as an adjacent neighbor
Dec 27, 2014

The sound of barking dogs is our issue.

Our home is about 500 feet away and above the proposed dog park. If Martha Diehl gets her way, our quiet Carmel Valley life will be coming to an end.

Existing Monterey Statutes say it shall be unlawful for any person to keep, maintain, or permit on any lot or parcel of land, any dogs, cats, household pets, or any other animal which by any sound or cry shall disturb the peace and comfort of any neighborhood. (Section 8.36.010)

It is generally acknowledged that a dog's bark is between 60 and 110 decibels. Are two dogs louder than one? Are a hundred dogs louder? How many dogs is Martha asking for? Has anybody in the County tested to determine the actual sound levels of that many happy dogs?

Existing Monterey Statutes also determined that noises exceeding eighty-five (85) dbA measured fifty (50) feet therefrom impairs hearing, impedes convalescence, hinders concentrated mental effort, interferes with relaxation and sleep, depreciates property values, and causes stress and nervous tension and consequent irritability, insomnia, accident proneness, and, cardiovascular diseases. (Section 10.60.010)

Barking dogs would disturb the peace and comfort in our neighborhood and would depreciate the values of our property values and those of adjacent properties such as Quail Lodge.

Noise is noise

At the Carmel Valley Land Use Advisory Committee meeting at the Lutheran Church in January of 2014, I made the following public comments:

In most neighborhoods, sound is strictly regulated. Automobiles, chain saws, lawn mowers and airplanes are all subject to measurable sound restrictions. Noisemakers must be in compliance with codes. Barking dogs are noisemakers and should be likewise regulated. The Monterey Parks District wisely refuses to issue a camping permit when it appears that there will be more than two dogs per

campsite. (14.12.110) And that is in a designated park. Our neighborhood should be at least as quiet as our County parks.

Section 8.36.010 is very clear about the penalties for anyone not in compliance. If you allow Martha Diehl's barking dog park, who in the County will be equipped and have the responsibility to enforce compliance? Who would be liable for the fines? Who would be responsible for the property losses referred to in Section 10.60.010? Would it be the dog owners or would it be Martha Diehl personally?

We love our quiet neighborhood. We love our dogs. If we hear our dogs barking outside, we bring them in. If we hear our neighbor's dogs barking, we call the neighbors and they bring them in. Who will require Martha Diehl to bring her dogs in?

All this makes us wonder: Why aren't these dog events held at the Monterey County Fairgrounds? Isn't this what our Fairgrounds are for?

In summary: Plenty of existing County regulations prohibit a canine event center in our neighborhood. Martha Diehl should not have special consideration for breaking the laws of our County.

Thank you.

Craig Vetter Dec 28. 2014
Carol Vetter

Craig and Carol Vetter
Schulte Road, Carmel
craig@craigvetter.com
carol@craigvetter.com

DEPARTMENT OF TRANSPORTATION
50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3101
FAX (805) 549-3329
TTY 711
http://www.dot.ca.gov/dist05/

RECEIVED
DEC 12 2014
MONTEREY COUNTY
PLANNING DEPARTMENT

Serious drought
Help save water!

December 9, 2014

MON-001-72.92
SCH# 2013121077

David Mack
Monterey County Planning Department
168 West Alisal Street, 2nd Floor
Salinas, CA 93901

Dear Mr. Mack:

COMMENTS TO CARMEL CANINE SPORTS CENTER NOTICE OF PREPARATION

The California Department of Transportation (Caltrans), District 5, Development Review, has reviewed the above referenced project and offers the following comments.

1. Caltrans supports local planning efforts that are consistent with State planning priorities intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety. We accomplish this by working with local jurisdictions to achieve a shared vision of how the transportation system should and can accommodate interregional and local travel.

2. To ensure the traffic study in the Draft EIR includes the information needed to analyze the impacts (both cumulative and project-specific) of this effort, it is recommended that the analysis be prepared in accordance with the Department's *"Guide for the Preparation of Traffic Impact Studies."* An alternative methodology that produces technically comparable results can also be used.

3. Because we are responsible for the safety, operations, and maintenance of the State transportation system, our Level of Service (LOS) standards should be used to determine the significance of the project's impact. We endeavor to maintain a target LOS at the transition between LOS C and LOS D on all State transportation facilities.

4. Our future comments to this, and any subsequent EIR for the project, will stress the importance of using the Association of Monterey Bay Area Governments Model for traffic analysis, and to include all impacted transportation agencies early and often in the discussions.

5. The traffic study should include information on existing traffic volumes within the study area, including the State transportation system, and should be based on recent traffic volumes less than two years old. Counts older than two years cannot be used as a baseline. Feel free to contact us for assistance in acquiring the most recent data available.

6. The methodologies used to calculate the LOS should be consistent with the methods in the current version of the Highway Capacity Manual. All LOS calculations should also be included in the Draft EIR as an appendix made available for review.

7. At any time during the environmental review and approval process, Caltrans retains the statutory right to request a formal scoping meeting to resolve any issues of concern. Such formal scoping meeting requests are allowed per the provisions of the California Public Resources Code Section 21083.9 [a] [1].

If you have any questions, or need further clarification on items discussed above, please don't hesitate to call me at (805) 542-4751.

Sincerely,

JOHN J. OLEJNIK
Associate Transportation Planner
District 5 Development Review Coordinator
john.olejnik@dot.ca.gov

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

Notice of Preparation

RECEIVED
DEC 08 2014
MONTEREY COUNTY
PLANNING DEPARTMENT

December 3, 2014

To: Reviewing Agencies

Re: Carmel Canine Sports Center
SCH# 2013121077

Attached for your review and comment is the Notice of Preparation (NOP) for the Carmel Canine Sports Center draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

David J. R. Mack
Monterey County
168 W. Alisal Street, 2nd Floor
Salinas, CA 93901

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2013121077
Project Title Carmel Canine Sports Center
Lead Agency Monterey County

Type NOP Notice of Preparation

Description Use Permit and Design Approval for the development of a canine training/sports facility and event center for daily member usage and up to 24 "event days" (daily maximum of 250 people/300 dogs) per year, and related improvements. Modular (temporary) structures to include a 700 sq. ft. office trailer, 600 sq. ft. members trailer, 600 sq. ft. restroom trailer and 400 sq. ft. electrical/storage room. Site to also accommodate up to 70 recreational vehicles on a short-term basis during "events" (Maximum of 24 nights per year).

Lead Agency Contact

Name David J. R. Mack
Agency Monterey County
Phone 831-755-5096 **Fax**
email
Address 168 W. Alisal Street, 2nd Floor
City Salinas **State** CA **Zip** 93901

Project Location

County Monterey
City Carmel-by-the-Sea
Region
Cross Streets Valley Green Drive
Lat / Long
Parcel No. 169-431-001 (Multiple)
Township **Range** **Section** **Base**

Proximity to:

Highways Hwy 1
Airports
Railways
Waterways Carmel River
Schools
Land Use LDR/ 2.5-D-S-RAZ (Low Density Residential, 2.5 acre minimum, with Design Control and Site Plan Review Overlays)

Project Issues Biological Resources; Noise; Traffic/Circulation; Water Supply; Landuse

Reviewing Agencies Resources Agency; Department of Conservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Wildlife, Region 4; Native American Heritage Commission; California Highway Patrol; Caltrans, District 5; Air Resources Board; State Water Resources Control Board, Division of Water Quality; Regional Water Quality Control Board, Region 3

Date Received 12/03/2014 **Start of Review** 12/03/2014 **End of Review** 01/02/2015

NOP Distribution List

County: Monterey

SCH# 2013121077

Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Nicole Wong
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Lisa Johansen
- [x] **Dept. of Conservation**
  Elizabeth Carpenter
- [ ] **California Energy Commission**
  Eric Knight
- [ ] **Cal Fire**
  Dan Foster
- [ ] **Central Valley Flood Protection Board**
  James Herota
- [ ] **Office of Historic Preservation**
  Ron Parsons
- [x] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **California Department of Resources, Recycling & Recovery**
  Sue O'Leary
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [x] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Fish and Game

- [ ] **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Wildlife Region 1**
  Donald Ko
- [ ] **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Wildlife Region 2**
  Jeff Drongesen
- [ ] **Fish & Wildlife Region 3**
  Charles Armor
- [x] **Fish & Wildlife Region 4**
  Julie Vance
- [ ] **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6 I/M**
  Heidi Sickler
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Wildlife M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Anna Garbeff
  Environmental Services Section
- [ ] **Delta Stewardship Council**
  Kevan Samsam
- [ ] **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Michael Machado
- [ ] **OES (Office of Emergency Services)**
  Dennis Castrillo
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Leo Wong
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [ ] **State Lands Commission**
  Jennifer Deleong
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- [ ] **Caltrans - Division of Aeronautics**
  Philip Crimmins
- [ ] **Caltrans – Planning HQ LD-IGR**
  Terri Pencovic
- [x] **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Eric Federicks – South
  Susan Zanchi - North
- [ ] **Caltrans, District 4**
  Erik Alm
- [x] **Caltrans, District 5**
  Larry Newland
- [ ] **Caltrans, District 6**
  Michael Navarro
- [ ] **Caltrans, Di t 7**
  Dianna Watson
- [ ] **Caltrans, District 8**
  Mark Roberts
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- [x] All Other Projects
  Cathi Slaminski
  - [ ] Transportation Projects
    Nesamani Kalandiyur
  - [ ] Industrial/Energy Projects
    Mike Tollstrup
- [ ] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Jeffery Werth
  Division of Drinking Water
- [x] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- [ ] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [x] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____
  _____
  _____
- [ ] _____
  Conservancy

Last Updated 10/13/2014

RECEIVED
JAN 02 2015
MONTEREY COUNTY
PLANNING DEPARTMENT

George Howling
8081 Lake Place
Carmel, CA 93923
(831) 622 9988
lake8081@comcast.net

December 22, 2014

To: Monterey Resource Management Agency
168 W. Alisal Street, 2nd Floor
Salinas, CA 93901
www.co.monterey.ca.us/rma

Attn.: John Ford, RMA – Services Manager
David J.R. Mack, Associate Planner

Any and All Responsible Agencies/Interested Parties

Re: Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Application Planning File Number: PLN130352

Dear Mr. Mack:

I am writing in response to your Memorandum entitled "**Notice of Preparation (Revised 12/11/2014)**" and **Notice of Preparation (dated December 2, 2014)**. At the outset, I should point out that your Memorandum purports to provide the requisite 30 days' notice for response by January 9, 2015, but in actuality only **provides 26 calendar days** for review/comment. In fact, the notice is even less than 26 days in view of the **County Eco-Holiday closure of 4 days**, and your own department's **winter recess from December 24, 2014 through January 2, 2015**.

My wife and I reside at Lake Place in Quail Lodge Golf Course area and have lived here for 19 years. Our cul-de-sac street, Lake Place, has about 15 houses all backing onto the golf course, and is located directly to the west of, and less than 100 yards from the entrance of the proposed canine training/sports facility. The only road for ingress and egress into the Quail

Lodge Resort and Golf area is from Valley Greens Drive which runs south from the junction of Monterey County Highway G16, one lane each way, also known as Carmel Valley Road, which begins at State Highway 1 to the west and runs past the entrance to Valley Greens Drive. That four mile stretch between Route 1 going east towards Quail Lodge is a treacherous and dangerous section which has been the scene of many fatal accidents over the years because the road curves downhill, is unlit at night, and the vehicles and through trucks are known to travel in excess of posted speed limits at all hours. All of the residents in this golf course area tend to use the south entrance to Valley Greens Drive to exit because it is near impossible to make a left hand turn onto Carmel Valley Road due to the downhill slope, and the limited sight visibility caused by the curve in the road coming from the west of the intersection.

Based on my knowledge of Valley Greens Drive where the proposed canine sports facility will have its entrance, I have the following concerns and comments:

- **A commercial venture** such as a canine sports facility with over **500 members** and which, by its own admission in its application, will draw huge crowds of over **250 vehicles** per event plus **70 RV recreational campers** from all over the country with various show dogs, 20-30 sheep, goats, and ducks, is completely out of character with the bucolic scenic area which is primarily **residential.**
- The junction of Carmel Valley Road and Valley Greens Drive is the most dangerous in Carmel Valley. For instance, due to the topography of this road as it snakes along between the mountains, there is limited sight visibility. Compounding the traffic problems, there is no other access road for either local residents or through traffic. **There are many elderly residents in this area, as well as two senior facilities located within one mile from the Valley Greens Drive junction**. Adding a sports facility with stadium flood lighting for nighttime use would pose a dangerous hazard, increased traffic, increased noise

from the animals at the sport facility, and increase the likelihood of even more fatal accidents.

- There are three restaurants at the junction of Carmel Valley Road and Valley Greens Drive. They already generate traffic and parking problems especially at night when the cars spill over from the parking lot onto Valley Greens Drive, and block traffic for residents because there is only two way one lane access onto Carmel Valley Road. **The proposed canine sports facility, unlike the restaurants, does not have direct access onto Monterey County G16, Carmel Valley Road**. The proposed canine facility entrance is on the residential Valley Greens Drive.
- The traffic generated by these daily visits by members, and proposed **24 weekend canine events per year** (in other words, **every other weekend**, some of which are apparently three day events), would result in a horrendous chaotic increase in traffic, accidents, and fatalities, on a small winding, mountainous road that is already severely overburdened.

Based on the foregoing concerns, I join with the other interested parties and residents of Quail Lodge area in opposing the approval and issuance of a Use Permit by Monterey County allowing the operation of a commercial canine training/sports facility in a residential area.

Very Truly Yours,

George Howling

cc: State Clearing House,
Office of Planning Research
1400 Tenth Street, Room 212
P.O. Box 3044
Sacramento, CA 95812-3044

Carl P. Holm, AICP, Acting Director
Michael Rodriguez, C.B.O. Director of Building Services
Michael Novo, AICP, Director of Planning
Robert Murdoch, P.E. Director of Public Works

Hatch Mott MacDonald

1300-B First Street
Gilroy, CA 95020
T 408-848-3122 www.hatchmott.com

RECEIVED
JAN 27 2014
MONTEREY COUNTY
PLANNING DEPARTMENT

January 23, 2014

Dale Ellis
Anthony Lombardo & Associates, Inc.
450 Lincoln Avenue, Suite 101
Salinas, CA 93901

RE: Carmel Canine Sports Center, Monterey County, California

Dear Mr. Ellis:

At your request, I have reviewed the traffic study and initial study for the Carmel Canine Sports Center and this letter provides observations and recommendations concerning the traffic study technical procedures, findings and conclusions. The following documents pertaining to the traffic analysis have been reviewed:

1. Carmel Canine Sports Center Mitigated Negative Declaration (MND), County of Monterey, December 23, 2013.
2. Carmel Canine Sports Center Traffic Analysis, Hexagon Transportation Consultants, August 19, 2013.
3. Carmel Canine Sports Center Traffic Analysis Amendment, Hexagon Transportation Consultants, December 6, 2013.
4. Carmel Canine Sports Center Project Description, Paul Davis Group, August 7, 2013 (rev.).

Overall, the traffic analysis for the Carmel Canine Sports Center (CCSC) project does not adequately evaluate traffic impacts associated with the project. The CCSC traffic analysis includes technical procedures and assumptions that require additional explanation and justification. It appears that some technical procedures utilized in the study do not conform to professional standards and County of Monterey procedures bringing into question the validity of the analysis results and conclusions. In addition, the significance of impacts to regional facilities are not analyzed in the traffic study, but it is likely given the characteristics of the project that the project will significantly impact elements of the regional road network that have no improvements programmed for implementation. These impacts would require findings of overriding consideration, which would probably necessitate the preparation of an Environmental Impact Report.

Based on the applicant's trip generation assumptions, the traffic generated by the Carmel Canine Sports Center on a daily basis during normal operations will be equivalent to the trips generated by a 30-unit subdivision. The traffic generated by the Carmel Canine Sports Center on a daily basis during a special event will be equivalent to the trips generated by a 44-unit subdivision, with about 20 percent of the trips on a Friday Special Event made by recreational vehicles.

Specific comments regarding the traffic analysis are provided below.

1. The trip distribution pattern utilized in the traffic analysis reflects the regional orientation of the project with 55 percent of the traffic generation originating outside of Carmel Valley. However, the traffic analysis only analyzes project impacts at the Carmel Valley

Road/Valley Greens Road and Carmel Valley Road/Rancho San Carlos Road intersections and Carmel Valley Road. Analysis of impacts to Highway 1, Laureles Grade, Highway 68 and potentially some intersections on these facilities is warranted given the impact of this project over a wide geographic area and because the project will add traffic, including recreational vehicles, to facilities that are indicated in recent environmental documents to currently operate at Level of Service (LOS) F. The scope of intersections and segments to be analyzed for the study should apply the scoping criteria documented in the "Guide for the Preparation of Traffic Impact Studies," County of Monterey, October 2003.

2. Cumulative traffic conditions are not analyzed in the traffic report or discussed in the MND. Justification for not including an analysis of Cumulative Conditions should be explained in the documents.

3. The analysis does not utilize existing Friday peak hour volumes to analyze impacts associated with conditions during the Friday special event peak hours. Volumes collected on Thursday, June 6, 2013 are used to evaluate Existing Plus Project conditions for both normal activities and Friday Operations with a Special Event at the Valley Greens Road intersection. Volumes collected on Tuesday, February 26, 2013 are used to evaluate Existing Plus Project conditions for Friday Operations with a Special Event at the Rancho San Carlos Road intersection. Use of existing Tuesday/Thursday peak hour data as a basis for evaluating Existing Plus Project conditions for a Friday condition is not discussed or justified in the traffic study. The analysis of special event traffic conditions on a Friday should utilize existing AM and PM peak hour traffic volumes collected on a Friday. If not, the use of traffic volumes collected on a Tuesday/Thursday to represent Friday traffic conditions should be justified in the traffic report.

4. The traffic study analyzes segment operations on Carmel Valley Road for the AM peak hour and PM peak hour. However, the same traffic volumes were used in each analysis with the directional volumes reversed. There is no discussion in the traffic study to substantiate that AM and PM peak hour volumes on Carmel Valley Road are the same, but reversed on each Carmel Valley Road segment. The accuracy of the traffic volumes used in the traffic analysis for the Carmel Valley Road segment analysis should be verified. The analysis should utilize field collected traffic counts for the analysis of Carmel Valley Road segment operations.

5. The traffic study states on page 9: "In addition, the County's Level of Service Policies and Carmel Valley Master Plan are applicable to only the standard weekday AM and PM peak commute periods." The relevant County and Master Plan policies should be cited to substantiate this statement.

6. The traffic study analyzes impacts during the AM and PM peak commute periods for the Friday event day. According to information provided in the traffic study, the highest project trip generation during the afternoon/evening would occur on Friday between 3:00 pm and 4:00 pm (64 trips). During the peak commute period, the special event would generate an estimated 48 trips during the PM peak hour and impacts associated with this trip generation was analyzed.

Based on the traffic volumes that are documented in the appendix of the traffic study, the highest volume of traffic on Carmel Valley Road west of Valley Greens on Friday at the project site occurs between 2:30 pm and 3:30 pm (1,448 vehicles). This is 123 vehicles higher than the highest one-hour traffic volume on Carmel Valley Road during the Friday commute period (1,325 vehicles between 4:15 pm and 5:15 pm). Based on the project's trip generation analysis and the Carmel Valley Road volumes presented in the traffic study, peak existing Friday afternoon traffic conditions on Carmel Valley Road occur coincident with the peak afternoon trip generation for the project. It is recommended that the traffic analysis include an analysis of peak traffic conditions that will occur during the 3 pm to 4 pm hour.

The MND recognizes that the peak trip generation for the project and peak traffic flows on Carmel Valley Road extend beyond the PM peak commute period by requiring the traffic control mitigation measure to extend between 3 pm and 6 pm. However, analyzing peak conditions in terms of both traffic flow on CVR and project trip generation is important to provide a proper evaluation of project impacts including warrants for traffic signalization.

In addition, it is not certain based on the information provided in the traffic analysis and the MND that there would not be significant impacts on Sunday when the predominate traffic flow will be outbound from the project site in the afternoon. The outbound flow on Sunday would include RV's that are larger than passenger cars and have slower operating characteristics than passenger cars. While traffic volumes on Carmel Valley Road may be lower than experienced on a Friday, that doesn't eliminate the possibility that the project impact on Sunday would not be significant, particularly when the project will be contributing traffic to the Valley Greens Drive approach to Carmel Valley Road. Analysis of traffic conditions on Sunday is recommended.

7. The significant impact criteria described in the report text does not accurately state County of Monterey significance criteria and should be revised.

8. Additional justification of the project trip generation should be provided in the traffic analysis. While the Institute of Transportation Engineers does not publish trip generation rates for this type of use because of the uniqueness of the use, similar facilities currently exist and information may be available from the permitting process for existing facilities that could be applicable for this project. A survey of the trip generating characteristics of a similar type of use would be helpful if trip generation data for a dog training and event center is not available. The proposed use is similar to a horse training facility that provides lessons and holds events on weekends. There are several horse events conducted in Central California throughout the year and trip generation surveys of these events may be useful if attendance and event schedules are similar to the proposed project. Lacking empirical data to justify the distribution of trips throughout the day, additional detail should be provided in the project description regarding the schedules of training classes and the schedule of special event activities. Specific trip generation issues include the following:

    a. Will additional trips be made by RV attendees to local retail and visitor serving destinations using a second vehicle towed to the event?

b. Information describing the format/schedule of the special events should be provided to explain/justify the arrival and departure distribution of attendees.
c. Additional information regarding the schedule of training classes should be provided to explain the reasonableness of the trip generation estimates. The trip generation table contained in the traffic study (Revised Table 3) shows 10 arrivals for a training class between 2 pm and 3 pm, no arrivals or departures between 3 pm and 6 pm, 10 arrivals and 20 departures between 6 pm and 7 pm.
d. What is the basis for assigning a different arrival and departure distribution for RV attendees versus other event attendees?
e. Does the trip generation and parking estimates consider non-participant attendees (spectators) might arrive throughout the day?

9. The parking analysis and site plan may not account for the parking demand create by RVs with second vehicles.

10. Striping the 25 angled parking spaces shown on the east side of the Event Field might provide better operations as it appears the aisle serving these spaces is two-way and the most direct exit path for motorists exiting these space is to the north to Valley Greens Drive.

11. It is recommended that the RV parking area be evaluated using RV turning templates to demonstrate that the layout can adequately allow RVs to enter and exit the parking stalls, circulate in the parking area and enter and exit the parking area from the access road.

12. The traffic report states, "The events will be held within the property, generally but not exclusively on weekends (Fri-Sun)." This statement requires clarification as it implies some special events will be conducted on weekdays.

13. Impacts to regional roadways – The study concludes that the project will have only a minimal effect on the surrounding regional roadways, but does not state if the impact will be significant. The project will generate new vehicle trips that impact the regional road network as evidenced by the project's trip distribution pattern that indicates 32 percent of the project traffic will utilize Highway 1 north of Carmel Valley Road and 23 percent of the project traffic will utilize Laureles Grade. The traffic analysis should analyze impacts to regional roadways (Highway 1, Highway 68 and Laureles Grade) using the County of Monterey impact significance criteria to determine if the impacts to these facilities will be significant..

The MND addresses impacts to regional facilities by stating:

> *The project will generate traffic that impacts regional roadways, but will be required to pay fees to the Transportation Agency of Monterey County for the improvement of regional roadways. The payment of these fees will mitigate the impact for the proposed project and the impact will be Less than Significant.*

This statement is not consistent with traffic impact analyses prepared for other projects in Monterey County. It is accepted that payment of the TAMC Regional Development Impact Fee mitigates a project's cumulative impact. However, payment of the fee does not necessarily mitigate a project's direct project level impact. The traffic analysis

should include an analysis of impacts to Highway 1, Laureles Grade and Highway 68 using the County's impact significance criteria.

14. The level of service calculations should consider the operating characteristics of RV vehicles by converting the RV trips to passenger-car equivalencies or including a RV vehicle conversion factor in the level of service calculation.

15. In the traffic analysis, intersection sight distance is calculated using the "stopping sight distance" formula published by the American Association of State Highway and Transportation Officials (AASHTO). The stopping sight distance is the minimum distance required to stop a vehicle before reaching a stationary object in its path. Stopping sight distance provides the minimum acceptable sight distance for intersection corner sight distance. Providing a corner sight distance that at least equals the stopping sight distance ensures that a vehicle approaching Valley Greens Drive on Carmel Valley Road can stop before reaching the intersection in the event a vehicle is pulling out from Valley Greens Drive onto Carmel Valley Road.

    For intersections of two public roads, Caltrans recommends that the corner sight distance be evaluated using the 7½ second rule, which provides a corner sight distance equal to a gap of 7½ seconds between the intersection and a vehicle approaching the intersection on the major road. This gap allows the driver entering the major road to complete the turning maneuver while the approaching vehicle travels at the assumed design speed of the major road. The 7½ second gap provides adequate time for the motorist on the minor road approach to cross the road or enter the major road without requiring through traffic to radically alter their speed. Caltrans recognizes that sometimes the cost to obtain 7½ seconds of corner sight distance may be excessive due to right of way acquisition, building removal, extensive excavation or immitigable environmental impacts. In these cases, the corner sight distance based on the stopping sight distance may be used.

    Based on Caltrans standards and a 50 mile per hour design speed, a corner sight distance of 550 feet should be provided at the Carmel Valley Road/Valley Greens Drive intersection. This compares to a sight distance of 425 feet recommended in the traffic study based on the AASHTO stopping sight distance standard.

    It is recommended that the corner sight distance for the Carmel Valley Road/Valley Greens Drive intersection be evaluated on the basis of the 7½ second rule. This is especially important because project trips turning from Valley Greens Drive onto Carmel Valley Road will be recreational vehicles and the acceleration rate for most recreational vehicles is less than standard passenger vehicles. It is also recommended that a spot speed study be conducted to verify the prevailing travel speeds on Carmel Valley Road at Valley Greens Drive. Finally, the measurement of corner sight distance from the Valley Greens approach to Carmel Valley Road should consider the height of the eye of the driver of an RV vehicle as well as the eye of the driver of a standard passenger vehicle.

16. The mitigation measure proposed in the MND for impacts to the Carmel Valley Road/Valley Greens Drive intersection during a Friday Special Event would allow the applicant to either close the site and schedule no activities on the site between the hours of 3 pm and 6 pm or contract with a law enforcement agency to control the intersection of Valley Greens Drive and Carmel Valley Road between the hours of 3 pm and 6 pm.

Hatch Mott MacDonald

Closing the site for a three hours on a Friday during a special event does not appear to be a practical mitigation measure. Motorists arriving to the site during this time would park on Valley Greens Drive or in the parking lots of adjacent commercial properties. Attendees knowing that they will be leaving during this time would also park on Valley Greens Drive or adjacent properties to be locked in.

Traffic control by a law enforcement officer is a more practical approach, but there are safety related issues with this alternative. Installation of advance warning signs should be installed on Carmel Valley Road to alert motorists of the possibility of stopped traffic on Carmel Valley Road, especially given the limited sight distance on the west leg of Carmel Valley Road.

If you have any questions regarding this information, please do not hesitate to contact me.

Very truly yours,

Hatch Mott MacDonald

Keith B. Higgins, PE, TE
Vice President
T 408.848.3122 F 408.848.2202
keith.higgins@hatchmott.com

jdt
Enclosures

Before the Board of Supervisors in and for the County of Monterey, State of California

Resolution No. 03-174

Approval of the removal of a 60-foot portion of a non-access strip along the south side of Valley Greens Drive to accommodate construction of a shared driveway connection from four residential lots to the existing Valley Greens Drive Right-of-Way.	)))))

WHEREAS, the Carmel Valley Golf and Country Club Subdivision (Tract No. 445, 1963) included a dedication to the County of a one-foot wide non-access strip along both sides of Valley Greens Drive, off Carmel Valley Road in the Carmel Valley area; and

WHEREAS, property owner Russell T. Wolter ("Owner") requested an encroachment permit from the County of Monterey ("County") in 1986 to construct a driveway connection to his property, fronting on and southerly of Valley Greens Drive (Assessor Parcel Numbers 169-221-005 and 015-172-007), to facilitate the movement of traffic generated by the agricultural use of his property; and

WHEREAS, Owner obtained a license from the County in 1987 to cross the County's non-access strip by executing Agreement No. A-4571 that included the mutual promise that the license is non-assignable and any attempt to assign the license or to use the access for traffic generated by other land uses terminates it; and

WHEREAS, the current Owner, Wolter Property Limited Partnership, has applied for a lot line adjustment of four (4) legal lots of record at said property (Planning and Building Inspection file no. PLN010503), now designated as a Low Density Residential district ("LDR/2.5-D-S"), which will include a 60-foot wide, approximately 410 foot long, shared driveway to four reconfigured lots bordering the Carmel Valley Golf and Country Club and aligned perpendicular to Valley Greens Drive; and

WHEREAS, the proposed lot line adjustment requires removal of a 60 foot long portion of the County's non-access strip at the approximate location of the existing licensed driveway in order to accommodate the proposed residential driveway; and

WHEREAS, the Public Works Department has reviewed the project location and finds that based on existing traffic volumes and roadway configuration, there is adequate sight-distance to accommodate construction of a residential driveway at the requested location if on-street parking is restricted. There is no traffic safety concern with the proposed action.

NOW, THEREFORE, BE IT RESOLVED THAT the Board of Supervisors approves removal of a 60 foot long portion of the County's one-foot non-access strip along Valley Greens Drive, more particularly shown on Exhibit "C" attached hereto, thereby terminating the existing driveway license and Agreement No. A-4571 shown as Exhibit "B" attached hereto, and approving an opening for the proposed, shared right-of-way to four residential lots.

PASSED AND ADOPTED on this 27th day of May, 2003, upon motion of Supervisor Potter, seconded by Supervisor Lindley, by the following vote, to-wit:

AYES: SUPERVISORS CALCAGNO, LINDLEY, JOHNSEN, POTTER and ARMENTA

NOES: NONE.

ABSENT: NONE

I, Sally R. Reed, Clerk of the Board of Supervisors of the County of Monterey, State of California, hereby certify that the foregoing is a true copy of an original order of said Board of Supervisors duly made and entered in the minutes thereof at page X of Minute Book 71, on May 27, 2003.

Dated: 5/27/03

Sally R. Reed, Clerk of the Board of Supervisors,
County of Monterey, State of California.
By _____
Deputy

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

RECEIVED
DEC 23 2014
MONTEREY COUNTY
PLANNING DEPARTMENT

December 19, 2014

David J.R. Mack
Monterey County RMA Planning Department
168 West Alisal Street, 2nd Floor
Salinas, CA 93901

SUBJECT: MPWMD COMMENTS ON NOTICE OF PREPARATION OF DRAFT EIR FOR CARMEL CANINE SPORTS CENTER [served by Wolter Properties WDS; APN 169-431-007 (well lot); 7200 Carmel Valley Road, Carmel Valley] COUNTY ID# PLN130352; SCH# 2013121077

Dear Mr. Mack:

This letter from the Monterey Peninsula Water Management District (MPWMD or District) is written in response to the Notice of Preparation of a Draft Environmental Impact Report (DEIR) circulated by Monterey County for the proposed Carmel Canine Sports Center (CCSC). The District serves as a Responsible Agency under CEQA for this project as an MPWMD Water Distribution System (WDS) Permit is needed for the amended water system. Our areas of authority include hydrology/water quality, water/utilities, and the MPWMD Mitigation Program for the Carmel River aquatic habitat, dependent species, and riparian corridor.

Water Quality, Aquatic and Riparian Corridor Issues: The District previously identified its concerns about potential impacts to the riparian corridor, aquatic habitat and the Mitigation Program, along with suggested mitigation measures. Please see the attached comments dated January 22, 2014 (**Enclosure 1**).

Water and Water Rights: As stated previously, MPWMD believes that there is the ability to use water from the subject wells for the proposed CCSC, but the specific amount of water available and how it will be distributed will not be formally determined until completion of the WDS Permit process, including a public hearing before the MPWMD Board of Directors. The Permit will be guided by the District's protocol for wells in the Carmel Valley Alluvial Aquifer (CVAA) at: http://www.mpwmd.dst.ca.us/pae/wds/WDSPermits/WDSMemo3.pdf.

The District's January 2014 letter (**Enclosure 1**) raised some initial water rights issues, which must be clarified before the WDS Permit application is deemed to be complete. Since then, there have been communications between the District and the applicant as well as letters from the State Water Resources Control Board (SWRCB), Division of Water Rights. At this time, District's understanding is as follows:

- For the purposes of the MPWMD WDS Permit, District Counsel, in a February 21, 2014 memo, concluded that "subordinated riparian water rights to Carmel River surface water for APN 169-431-007 and -008 are intact as they abut the Carmel River. In addition, all

parcels overlie the CVAA and retain subsurface riparian rights." Counsel also noted the pending SWRCB Application for an appropriative permit, and stated that "it is unknown if a storage component will be added to the Application and whether year-round pumping will be allowed." Notably, the District does not have the authority to determine water rights; that authority lies solely with the SWRCB. Two communications from the SWRCB regarding the project are noted below.

- In a letter dated January 29, 2014 (**Enclosure 2**), the SWRCB expressed concern about the 1.2- acre storage reservoir and stated that seasonal water storage "cannot be accomplished under riparian rights; an appropriative right is required" (i.e., riparian rights are year-round but may not be stored for later use).

- In a letter dated January 29, 2014 (**Enclosure 2**) and reiterated on May 27, 2014 (**Enclosure 3**), the SWRCB expressed concern about several years when the land lay fallow with no water production. The letters stated that the project proponent has lost the protection of being listed on Table 13 of SWRCB Decision 1632, which may have allowed a year-round season of diversion. The project water rights may now be subject to limited diversions in certain seasons, which could impact the water supply.

Resolving the water rights issues raised by the SWRCB could potentially require changes in the project description. The DEIR should identify the water rights setting and amend the project description as needed to be consistent with the direction by the SWRCB.

My staff and I are available to meet if further coordination is needed. I can be reached at dstoldt@mpwmd.net or 831/658-5650 if you have questions. The staff contact is Henrietta Stern, Project Manager, at henrietta@mpwmd.net or 831/658-5621.

Sincerely,

David J. Stoldt
General Manager

Enclosures:
1-- MPWMD letter of January 22, 2014
2-- SWRCB letter dated January 29, 2014
3-- SWRCB letter dated May 27, 2014

Cc: Ernie Mill, CCSC
Henrietta Stern, MPWMD Project Manager
David Laredo, MPWMD Counsel

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Prepared by H. Stern on 12/16/2014; reviewed by Larry Hampson 12/18/2014

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MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

January 22, ~~2013~~ 2014

Steve Mason
Monterey County RMA Planning Department
168 West Alisal Street, 2nd Floor
Salinas, CA 93901

SUBJECT: MPWMD COMMENTS ON MITIGATED NEGATIVE DECLARATION FOR CARMEL CANINE SPORTS CENTER [served by Wolter Properties WDS; APN 169-431-007 (well lot); 7200 Carmel Valley Road, Carmel Valley] COUNTY ID# PLN130352

Dear Mr. Mason:

This letter from the Monterey Peninsula Water Management District (MPWMD or District) is written in response to the Initial Study/Mitigated Negative Declaration (IS/MND) circulated by Monterey County for the proposed Carmel Canine Sports Center (CCSC). The District serves as a Responsible Agency under CEQA for this project, which will require a MPWMD Water Distribution System (WDS) Permit for the amended water system. In addition, a project that would alter the riparian corridor of the Carmel River would require a valid River Work Permit from the District.

Water and Water Rights: As stated in a previous letter to you on this matter (July 17, 2013, Stoldt to Mason), it is reasonable to assume that MPWMD staff will recommend approval of up to 62.91 acre-feet per year (AFY) if riparian rights are claimed, which is the average of the most recent 10 years of metered well production. The applicant has indicated they could function with this amount, though the most recent water use estimate is a few acre-feet larger (63.35 vs. 62.91 AFY). For reference, the Carmel Valley Alluvial Aquifer protocol is available at: http://www.mpwmd.dst.ca.us/pae/wds/WDSPermits/WDSMemo3.pdf.

Importantly, there currently is a question of whether the proposed project would obtain water under a riparian right or with an appropriative permit yet to be issued by the State Water Resources Control Board. On January 6, 2014, the District determined the application was not complete due, in part, to this question remaining unresolved (letter attached for reference). District and applicant representatives are currently discussing and further evaluating the water rights situation.

The specific amount of water available and how it will be distributed will not be formally determined until completion of the WDS Permit process, including a public hearing before the MPWMD Board of Directors.

Aquatic and Riparian Corridor Issues: The IS/MND describes the applicant's proposal to access and use the riparian area adjacent to the Carmel River as a picnic area; however, details of

this use and any potential impacts were not described in the application. The IS/MND proposes to not allow access into the riparian area or removal of any vegetation (Mitigation Measure 1, p. 23). If access is not allowed for the project, then MPWMD would have no concerns about potential impacts to the riparian corridor. However, it is MPWMD's understanding, based on the January 6, 2014 site tour conducted for the Land Use Advisory Committee, that the applicant has not accepted this mitigation measure.

If Mitigation Measure 1 is changed to allow access, then MPWMD would have several concerns and would request that the County include a permit condition that requires the applicant to obtain a valid River Works Permit from MPWMD. The following paragraphs identify MPWMD concerns and recommendations in more detail.

The District carries out a comprehensive Mitigation Program to offset the impacts of community water use from diversions of the Carmel River, including the Riparian Corridor Management Program. This entails extensive work in the riparian corridor, including fish rescues, fish population surveys, habitat improvement, irrigation of riparian vegetation, and field monitoring. The District appreciates the cooperation of CCSC co-owner Ken Ekelund in providing MPWMD access to carry out program activities at the project site. The IS/MND (p. 21) incorrectly states that there are no visible trails or access points to the river from the project area. Presently, there are two narrow trails within the proposed "picnic area" that are maintained by MPWMD in order to maintain the streamside irrigation system installed by the District and to monitor the health of streamside vegetation.

As proposed, CCSC would greatly increase the number of dogs and people in the riparian "picnic area" as it would be open to the public and advertised as an amenity associated with the CCSC. The IS/MND estimates 100 persons per day patronizing the CCSC and an unspecified number of dogs per person. The District is concerned about potential direct and indirect physical effects to the river and associated riparian habitat with an influx of dogs and owners. The direct effect of dogs on threatened steelhead fish and California Red-Legged Frog habitat and health could include the following, especially at low flows (below 5 cubic feet per second) when the river is quite shallow, sluggish, of poor water quality, and deeper resting pools are limited:

- Direct predation or injury to fish or frogs from hunting behavior;
- Direct damage to riparian frog habitat by dogs or humans and a potential of an increased number of trails being created or dogs romping among protective vegetation;
- Increased sedimentation into the river if nearby riverbanks are disturbed by running or digging behavior;
- Aquatic habitat degradation due to playful behavior in the river, which could stir up anaerobic sediments and reduce oxygen or release noxious chemicals;
- Scaring fish away from the known deep sheltered pool in the area below the Valley Hills Grade Control Structure and into shallow unprotected river areas, where fish are more vulnerable to bird and mammalian predation;
- Water quality impacts of dog feces;
- Health impacts of dog feces to MPWMD river workers, who often must tread both on trails and in dense vegetation near trails;

- Possible harm from uncontrolled dogs to MPWMD staff working in the streamside corridor.

It should also be noted that at very low flows and especially in warm standing water, cyanobacteria, or blue-green algae, can develop in the river. This can be lethal to dogs that drink contaminated water and can cause skin and eye irritation in humans coming into contact with the contaminated water.

Suggested Mitigation Measures if Access to the Riparian Corridor Is Allowed

The District suggests the following mitigation measures to avoid or minimize the concerns about potential effects in the picnic area:

1. Require visitors to have dogs on leash or under immediate voice control, and to immediately clean up after dogs. Provide "mutt mitts" and trashcans in the riparian picnic area, and maintain them daily. It is noted people tend to clean up more rigorously when in a park with a lawn than in a "natural" area, so education and enforcement of the "clean up" rule is essential, including removal of feces from off-trail vegetated areas.
2. During normal hours, limit the number of dogs and owners in the picnic area to reduce habitat impacts and ensure successful feces cleanup. Anecdotal evidence indicates that the swim area at "Hampson's Hole" becomes crowded with 15 people and 10 dogs.
3. Fence off access to the picnic area during all special events (24 days).
4. Fence off access to the picnic area when river flow is between 0.1 and 5 cfs at the USGS Near Carmel Gage at Via Mallorca (real-time flow information is available over the internet). Access is acceptable when the riverbed is dry. Require explanatory signage of why closures are needed to protect threatened species. Low-flow closures would typically be limited to a few weeks – twice a year – during the spring recession and again shortly after the rainy season begins.
5. Fence off picnic area when MPWMD fish rescue crews are scheduled to work when flow is between 5 cfs and 10 cfs. Fish rescues would typically be carried out on approximately five days over a three week period. Advance notification of rescue days can be provided.

My staff and I are available to meet if further coordination is needed. I can be reached at dstoldt@mpwmd.net or 831/658-5650 if you have questions. The staff contact is Henrietta Stern, Project Manager, at henri@mpwmd.net or 831/658-5621.

Sincerely,

David J. Stoldt
General Manager

Enclosure: MPWMD letter of January 6, 2014

Cc: Ernie Mill, CCSC
Henrietta Stern, MPWMD Project Manager
Larry Hampson, District Engineer
David Laredo, MPWMD Counsel

Enclosure 1

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

January 6, 2014

Ernest D. Mill
Carmel Canine Sports Center LLC (lessee/operator)
PO Box 221974
Carmel, CA 93922

SUBJECT: APPLICATION FOR "WOLTER PROPERTIES LIMITED PARTNERSHIP" WATER DISTRIBUTION SYSTEM IS NOT COMPLETE; MPWMD APPLICATION #20131206WOL; APN 169-431-007 (well site) and -001, -002, -003, -006, -008, -011, -012, -013; 8100 Valley Greens Road, Carmel

Dear Mr. Mill:

The Monterey Peninsula Water Management District (MPWMD or District) Rule 20 requires that a written permit be obtained from the District to create or amend a Water Distribution System (WDS). An application for the "Wolter Properties Limited Partnership (Wolter Properties)" WDS was received on December 6, 2013 to provide continued water for agricultural irrigation and new potable (drinking water) supply for facilities associated with the proposed Carmel Canine Sports Center (CCSC) on the parcels referenced above. The State Permit Streamlining Act requires agency review within 30 days to determine whether the application is complete or not, and how to resolve an "incomplete" determination.

Determination of Incomplete Application

This letter is written to notify you that the application to create the Wolter Properties WDS is currently viewed as **incomplete** due to (1) inadequate water rights information, and (2) lack of an adopted environmental document from Monterey County, the lead agency for this project under the California Environmental Quality Act (CEQA).

Water Rights: Based on the water rights information submitted in November 2013 as part of the WDS application, District staff is satisfied that adequate riparian rights have been demonstrated for the wells for use on parcel APN 169-431-007. However, an appropriative water right has not been demonstrated for these wells to serve the adjacent parcels. District Rule 21-A, Required Information for Application, includes a component for water rights as follows:

> 6. Identify type of water right claimed to exist with each Water-Gathering Facility and each Source of Supply for the system (e.g., riparian, pre-1914, appropriative, overlying or other). Provide written verification of legal water rights applicable to type of right claimed. The verification shall include, but shall not be limited to the following forms of documentation: (a) Condition of Title Report, prepared by a title company at the Applicant's expense, and any and all supporting

documentation to indicate whether legal water rights have been subordinated or severed; this documentation may include a judicial declaration of right or a full title opinion prepared by an attorney with expertise in water law; (b) information that describes the legal basis or authority for diversion and extraction of water; (c) if Groundwater is being pumped from a Groundwater basin that has not been adjudicated, a statement to that effect in addition to a copy of the current deed to the property is sufficient documentation to satisfy this requirement; or (d) if the source of the water is subject to permit requirements under the State Water Resources Control Board, a copy of the SWRCB water rights permit or domestic registration must be included.

The District is aware that Wolter Properties is in negotiations with the State Water Resources Control Board (SWRCB) regarding an appropriative permit, but issues regarding instream flow requirements and the potential need for storage facilities have not been resolved. MPWMD needs to receive a copy of an approved SWRCB appropriative permit, pursuant to Rule 21-A-6-d, in order to continue to process the WDS application.

CEQA Document: The District policy is to serve as a CEQA Responsible Agency for larger projects or those that entail multiple environmental issues. The County of Monterey as Lead Agency has initiated the CEQA process, and comments on an Initial Study are due in late January 2014. The District plans to rely on the CEQA document adopted by Monterey County, and we will continue processing the WDS application once the County's CEQA Notice of Determination on this project has been received.

Please note that the District believes there is adequate supply to meet the project needs from a hydrogeologic perspective based on the historical use on the property. District determinations on baseline water use and future limits are guided, in part, by the adopted protocol for wells in the Carmel Valley Alluvial Aquifer (CVAA), available on the District website at:
http://www.mpwmd.dst.ca.us/pae/wds/WDSPermits/WDSMemo3.pdf

Next Steps

This application, as presently configured, will be "on hold" until MPWMD receives both the water rights and CEQA documentation enumerated above. Please advise District staff of the general time frame to complete the SWRCB water rights and Monterey County CEQA processes once you have more definitive information.

This determination of an incomplete application is considered to be a determination of the MPWMD General Manager, and as such, may be appealed to the District Board in writing within twenty-one (21) days of the date of this letter pursuant to MPWMD Rule 70. An appeal may be filed by the affected property owner or by any other person. If an appeal is initiated, the proper form must be completed, submitted and received by the MPWMD on or before 4:30 PM on the 21st day after the date of this letter.

Please contact me at 831/658-5650 or dstoldt@mpwmd.net if you have any policy questions. The staff person assigned to your project is Henrietta Stern, Project Manager, available at 831/658-5621 or henrietta@mpwmd.net.

Sincerely,

David J. Stoldt
General Manager

Cc: Russell Wolter, owner
Henrietta Stern, Project Manager
Larry Hampson, District Engineer
David C. Laredo, District Counsel

U:\mpwmd\WDS_Permits\WDSApplications\169431007_CanineSports\Canine_WDSAppNotComplete_20140103.docx
Prepared by H. Stern on 1/2/2014; reviewed by LH/DS on 1/3/2014

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

2

JAN 29 2014

In Reply Refer to:
KDM:A030511

Mr. John Ford
Monterey County Planning & Building
Inspection Department
168 West Alisal, 2nd Floor
Salinas, CA 93901

Dear Mr. Ford:

MITIGATED NEGATIVE DECLARATION (MND) – CARMEL CANINE SPORTS CENTER PROJECT – RELATED TO APPLICATION 30511 OF WOLTER PROPERTIES LIMITED PARTNERSHIP, CARMEL RIVER SUBTERRANEAN STREAM IN MONTEREY COUNTY

Division of Water Rights (Division) staff has reviewed the MND prepared by Monterey County for the Carmel Canine Sports Center Project (Project). The MND refers to a reservoir on the property. However, no descriptive material was provided regarding the size or location of the reservoir. The MND states that a 1.2 acre pond will be excavated. This is not the same as stating the proposed size of the pond. Please clarify the size. The MND states that the Project may rely on riparian or appropriative rights. Seasonal water storage for irrigation purpose of use cannot be accomplished under riparian rights. An appropriative right is required.

The Project is being developed on the lands covered by water right Application 30511 of Wolter Properties. The application does not include a storage element. Application 30511 seeks a right to directly divert 0.42 cubic foot per second. There is no evaluation in the MND whether this would be adequate for the proposed Project. The environmental document should include an evaluation of the adequacy of the proposed flow rate.

On January 27, 2012, the Division informed Wolter Properties that it intended to condition any permit on Application 30511. The following information was provided to Wolter Properties:

> The State Water Resources Control Board (State Water Board) has an independent obligation to consider the effect of the proposed project on public trust resources and to protect those resources where feasible. (*National Audobon Society v. Superior Court* (1983) 33 Cal.3d 419 [Cal.Rptr. 346].) Division staff has been working with the National Marine Fisheries Service (NMFS) and the Monterey Peninsula Water Management District (District) to determine appropriate Carmel River diversion conditions to address public trust resource needs. The following condition is being utilized in current permits issued, and is based on the NMFS 2002 Carmel River fishery report. It appears that the condition resolves the remaining public trust protests and the project could be permitted with inclusion of the condition. If you are not amenable to the condition, you will need to document a valid methodology for protecting public trust resources.
> (Wat. Code § 1275(b).)

Permit Condition:

For the protection of fisheries, wildlife, and other instream uses in the Carmel River, diversions under this permit shall be subject to maintenance of minimum mean daily instream flows as specified in Table A, Minimum Mean Daily Instream Flow Requirements. No water shall be diverted under this permit if the instream flows would be reduced by such diversion below the minimum mean daily flows specified in Table A. To ensure compliance with these conditions, by September 30 of each year, Permittees shall file a report with the Deputy Director for Water Rights, Department of Fish and Wildlife and NMFS containing the following information:

a. Dates during the previous diversion season when water was diverted under this permit; and
b. Mean daily flows recorded at the monitoring location specified in this condition during the same period.

TABLE A		
MINIMUM MEAN DAILY INSTREAM FLOW REQUIREMENTS		
December 1-April 15	**April 16-May 31**	**June 1- November 30**
Prior to Carmel River lagoon opening to the ocean [1]: May divert with minimum bypass of **40 cfs** at the Carmel River at Highway 1 Bridge gage[2]. **Following Carmel River lagoon opening to the ocean:** May divert with minimum bypass of **120 cfs** at the Carmel River at Highway 1 Bridge gage.	May divert with minimum bypass of **80 cfs** at the Carmel River at Highway 1 Bridge gage	May divert with minimum bypass of **5 cfs** at the Carmel River at Highway 1 Bridge gage.

[1] On December 1, if water in the lagoon is flowing to the ocean, the lagoon shall be deemed to be open to the ocean. If on December 1 water in the lagoon is not flowing to the ocean, the lagoon shall be deemed to be open to the ocean when the lagoon level drops rapidly from a stable elevation to a lower elevation as evidenced by the water surface elevation gage located at the Carmel Area Wastewater District effluent pipeline across the south arm of the lagoon. This elevation gage is operated by the District.

[2] The District operates a stream gage at Highway 1 and reports flows at this location on its website. Reported flows are not provided on a real-time basis and reported flows are subject to revision due to frequent changes in the riverbed at this location. In addition, updates of flow information at this location are carried out when the District has sufficient staff and resources and it should be noted that the District is under no obligation to provide this information on its website.

Although the Project developer has long been aware of the bypass flow condition, the MND does not include a discussion of the flows needed to protect salmonids. The bypass flows listed above have been included in all Table 13 water right permits issued since NMFS developed the flow regime. Division staff requests that the environmental document include the mitigation listed above. This will provide consistency between the two permitting agencies.

Regarding the issue of whether the Division would issue a permit in the quantity of 96 af, the following information should be taken into consideration. In Decision 1632, the State Water Board provided a method for inbasin water users with existing projects to receive a permit with a modified water right priority. Such persons were listed in Table 13 of the decision. After modification, the Wolter Properties quantity was set at 96 af. The MND states that the Wolter Properties lands have been fallow since 2008. Division staff was unaware of the non-use issue until the MND was issued. Decision 1632 does not provide for protection in cases where there is no ongoing use of water. Based on the decision, persons listed in Table 13 may seek a year-round diversion season. However, all others are limited to a four month winter diversion period. In the opinion of Division staff, the Project will likely be limited to a reduced diversion season since there is no longer a basis for protecting ongoing water use. The MND should identify this problem and determine what source of water the Project would use, should the diversion season be limited to four months.

Thank you for the opportunity to comment on the MND. The Division intends to use the final environmental document for permit issuance purposes.

If you require further assistance, I can be contacted at (916) 341-5363. Written correspondence should be addressed to: State Water Resources Control Board, Division of Water Rights, Attn: Katherine Mrowka, P.O. Box 2000, Sacramento, CA 95812.

Sincerely,

Katherine Mrowka

Katherine Mrowka, Senior
Inland Streams Unit

cc: Monterey Peninsula Water
Management District
Mr. Larry Hampson
5 Harris Court, Building G
Monterey, CA 93940
Larry@mpwmd.net

3

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

MAY 27 2014

In Reply Refer to:
KDM:A030511

Mr. Alexander F. Hubbard
Hubbard & Hubbard LLP
400 Camino Aguajito
Monterey, CA 93940

Dear Mr. Hubbard:

MITIGATED NEGATIVE DECLARATION (MND) – CARMEL CANINE SPORTS CENTER PROJECT – RELATED TO APPLICATION 30511 OF WOLTER PROPERTIES LIMITED PARTNERSHIP, CARMEL RIVER SUBTERRANEAN STREAM IN MONTEREY COUNTY

On January 29, 2014, Division of Water Rights (Division) staff commented on the MND prepared by Monterey County for the Carmel Canine Sports Center Project (Project). On April 23, 2014, you asked for clarification of some of the Division remarks. In particular, you request clarification of the Division remarks that, due to non-use of water, Application 30511 may have lost its Table 13 status. As noted in Decision 1632, Table 13 provided a mechanism for persons using established quantities of water within the Carmel River watershed to have an opportunity to obtain a water right permit with a priority superior to the Monterey Peninsula Water Management District permit on Application 27614. The decisions states: "This condition is to protect only persons using established quantities of water who may have questionable rights to the use of water or who wish to make a use of water which cannot be provided under existing water rights." (D1632, pp. 49, 50.)

The decision set forth the time period for review in establishing whether persons had established uses of water. The decision is silent regarding persons who, having established a use of water, subsequently discontinued using water. However, in the opinion of Division staff, Table 13 did not provide a mechanism for obtaining an enhanced water right priority for persons that have ceased using water for a prolonged period of time.

You ask that Division staff clarify the remarks on the MND regarding Table 13. The remarks are listed below:

> Regarding the issue of whether the Division would issue a permit in the quantity of 96 af, the following information should be taken into consideration. In Decision 1632, the State Water Board provided a method for inbasin water users with existing projects to receive a permit with a modified water right priority. Such persons were listed in Table 13 of the decision. After modification, the Wolter Properties quantity was set at 96 af. The MND states that the Wolter Properties lands have been fallow since 2008. Division staff was unaware of the non-use issue until the MND was issued. Decision 1632 does not

provide for protection in cases where there is no ongoing use of water. Based on the decision, persons listed in Table 13 may seek a year-round diversion season. However, all others are limited to a four month winter diversion period. In the opinion of Division staff, the Project will likely be limited to a reduced diversion season since there is no longer a basis for protecting ongoing water use. The MND should identify this problem and determine what source of water the Project would use, should the diversion season be limited to four months.

Division staff does not wish to modify these remarks.

You also ask that staff clarify whether tenants, or successors, to Table 13 applicants will enjoy the same appropriative rights as their Table 13 landlords or predecessors. When an application is re-assigned to another party, there is no change in the processing procedures. Protests, protest resolution documents, instream flow requirements and other matters related to application processing remain intact.

If you require further assistance, I can be contacted at (916) 341-5363 or by email at kmrowka@waterboards.ca.gov. Written correspondence should be addressed to: State Water Resources Control Board, Division of Water Rights, Attn: Katherine Mrowka, P.O. Box 2000, Sacramento, CA 95812.

Sincerely,

Katherine Mrowka

Katherine Mrowka, Senior
Inland Streams Unit
Division of Water Rights

cc: Monterey Peninsula Water Management District
Mr. Larry Hampson
5 Harris Court, Building G
Monterey, CA 93940
Larry@mpwmd.net

Mr. John Ford
Monterey County Planning & Building Inspection Department
168 West Alisal, 2nd Floor
Salinas, CA 93901

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

Edmond G. Brown, Jr., *Governor*

December 24, 2014

RECEIVED
JAN 02 2015
MONTEREY COUNTY
PLANNING DEPARTMENT

David J.R. Mack
Monterey County
168 W. Alisal Street, 2nd Floor
Salinas, CA 93901

RE: SCH # 2013121077 Carmel Canine Sports Center, Monterey County.

Dear Mr. Mack,

The Native American Heritage Commission (NAHC) has reviewed the Notice of Preparation (NOP) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

- ✓ Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on 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.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check. **USGS 7.5-minute quadrangle name, township, range, and section required**
  - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached.**
- ✓ 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) Guidelines §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered cultural items that are not burial associated, which are addressed in Public Resources Code (PRC) §5097.98, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, PRC §5097.98, and CEQA Guidelines §15064.5(e), address the process to be followed in the event of an accidental discovery of any human remains and associated grave goods in a location other than a dedicated cemetery.

Sincerely,

Katy Sanchez

Katy Sanchez
Associate Government Program Analyst

CC: State Clearinghouse

Native American Contacts
Monterey County
December 16, 2014

Jakki Kehl
720 North 2nd Street
Patterson , CA 95363
jakkikehl@gmail.com
510-701-3975
Ohlone/Costanoan

Amah MutsunTribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt , CA 95632
vlopez@amahmutsun.org
(916) 743-5833
Ohlone/Costanoan
Northern Valley Yokuts

Coastanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
240 E. 1st Street
Pomona , CA 91766
rumsen@aol.com
(909) 524-8041 Cell
(909) 629-6081
Ohlone/Costanoan

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road
Woodside , CA 94062
amahmutsuntribal@gmail.
(650) 400-4806 Cell
(650) 332-1526 Fax
Ohlone/Costanoan

Ohlone/Coastanoan-Esselen Nation
Louise Miranda-Ramirez, Chairperson
P.O. Box 1301
Monterey , CA 93942
ramirez.louise@yahoo.com
)8) 629-5189
(408) 205-7579 Cell
Esselen
Ohlone/Costanoan

Ohlone/Coastanoan-Esselen Nation
Christianne Arias, Vice Chairperson
P.O. Box 552
Soledad , CA 93960
(831) 235-4590
Esselen
Ohlone/Costanoan

Trina Marine Ruano Family
Ramona Garibay, Representative
30940 Watkins Street
Union City , CA 94587
soaprootmo@comcast.net
(510) 972-0645
Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

Amah MutsunTribal Band
Edward Ketchum
35867 Yosemite Ave
Davis , CA 95616
aerieways@aol.com
Ohlone/Costanoan
Northern Valley Yokuts

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

Distribution of this list does not relieve any person of the 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 locative Americans with regard to cultural resources for the proposed SCH # 2013121077 Carmel Canine Sports Center, Monterey County.

Native American Contacts
Monterey County
December 16, 2014

ılone/Coastanoan-Esselen Nation
ꞁauline Martinez-Arias, Tribal Council woman
1116 Merlot Way Esselen
Gonzales , CA 93926 Ohlone/Costanoan
maklici0-us@gmail
(831) 596-9897

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 Ohlone/Costanoan
Hollister , CA 95024
ams@indiancanyon.org
(831) 637-4238

Amah MutsunTribal Band of Mission San Juan Bautista
Michelle Zimmer
789 Canada Road Ohlone/Costanoan
Woodside , CA 94062
amahmutsuntribal@gmail.com
ɔ0) 851-7747 Home
(650) 332-1526 Fax

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

Distribution of this list does not relieve any person of the 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 locative Americans with regard to cultural resources for the proposed SCH # 2013121077 Carmel Canine Sports Center, Monterey County.

MONTEREY COUNTY

WATER RESOURCES AGENCY

PO BOX 930
SALINAS , CA 93902
(831)755-4860
FAX (831) 424-7935

DAVID E. CHARDAVOYNE
GENERAL MANAGER

STREET ADDRESS
893 BLANCO CIRCLE
SALINAS, CA 93901-4455

January 9, 2015

David Mack, Associate Planner
Monterey County RMA – Planning Department
168 West Alisal, 2nd Floor
Salinas, CA 93901

SUBJECT: Carmel Canine Sports Center (PLN 130352)
Monterey County Water Resources Agency Comments

Dear Mr. Mack:

Thank you for the opportunity to comment on the Notice of Preparation of a DEIR for the Carmel Canine Sports Center. The Monterey County Water Resources Agency (MCWRA) has reviewed the Notice of Preparation for a Draft Environmental Impact Report, revised date 12/11/2014, and has the following comments:

Hydrology and Water Quality:

FEMA defined 100-year Floodplain
The DEIR should include a discussion of Monterey County Code Chapter 16.16 (Regulations for Floodplains in Monterey County) and consider the regulations for development in the FEMA defined 100-year floodplain. The DEIR should include a map showing all FEMA Special Flood Hazard Areas (SFHA) located in the project area. MCWRA is able to provide a Digital Flood Insurance Rate Map GIS layer with this information upon request.

Water Supply
The 2010 Monterey County General Plan Long-Term Water Supply Goal PS-3 states "new development for which a discretionary permit is required, and that will or require the use of water, shall be prohibited without proof, based on specific findings and supported by evidence, that there is a long-term sustainable water supply, both in quality and quantity to serve the development". MCWRA recommends the DEIR analyze whether or not the proposed project is subject to the 2010 Monterey County General Plan Policy PS-3.2. If the project is subject to PS-3.2, then the DEIR should include a hydrogeologic report which meets the criteria of the PS-3.2, as defined by the RMA-Planning Department, and demonstrates evidence of a long-term sustainable water supply.

Thank you for the opportunity to review the NOP. If you have any questions, please feel free to contact me at (831) 755-4860.

Sincerely,

David E. Chardavoyne

REBECCA SIEGEL

RECEIVED
DEC 15 2014
MONTEREY COUNTY
PLANNING DEPARTMENT

December 8. 2014

Monterey County Resource Management Agency
168 W. Alisal Street, 2nd Floor
Salinas, CA 93901

Subject: Notice of Preparation of a Draft Environmental Impact Report for the Application Planning
File Number: PLN130352

Dear Sir,

I have received the Notice of Preparation on the Environmental Impact Report for the Carmel Canine Sports Center.

With respect to the above I hereby would like to clearly state my opposition to the creation of the Sports Center as well as to the conception of the idea to bring about the operation of the event center in the midst of a beautiful, picturesque and pastoral area. I do not think that you would have considered planting this dog center in the middle of the Pebble Beach golf courses.

The idea of 72 event days a year with overnight parking for 70 RVs and the attendance of 750 people during these days does not make sense and is absurd, taking into account the peaceful area where this would take place and the disturbance it would cause to the people living in Quail Lodge...I am not even taking into account how 70 RVs and some additional traffic would be able to enter the Lodge, being that Carmel Valley Road would have only one lane for these vehicles to approach and the traffic on those days would be impossible to imagine.

We do not need loudspeakers, restrooms and modular structures in this area and to think about the whole idea, it seems preposterous and inconsistent with common sense.

The cost of a Draft Environmental Impact Report could have been saved if clear heads right from the beginning would have scrapped the creation of this Park and seen the impossibility of its formation.

You asked for a response to the plan and I hereby sincerely submit my strong opposition.

Sincerely,

Rebecca Siegel
8068 Lake Place
Carmel, Ca 93923

Phone: (408) 626-0551 Fax: FAX (408) 622-7169

RECEIVED
DEC 05 2014
MONTEREY COUNTY
PLANNING DEPARTMENT

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY

Carl P. Holm, AICP, Acting Director

Michael A. Rodriguez, C.B.O., Director of Building Services
Michael Novo, AICP, Director of Planning
Robert K. Murdoch, P.E., Director of Public Works

168 W. Alisal Street, 2nd Floor
Salinas, CA 93901
www.co.monterey.ca.us/rma

FILED
DEC 01 2014
STEPHEN L. VAGNINI
MONTEREY COUNTY CLERK
_____DEPUTY

NOTICE OF PREPARATION

To: Responsible Agencies/Interested Parties

From: John Ford, RMA - Services Manager
David J. R. Mack, Associate Planner
Monterey County Resource Management Agency – Planning Department

Subject: **Notice of Preparation (NOP) of A Draft Environmental Impact Report for the Application Planning File Number: PLN130352**

The County of Monterey will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the Combined Development Permit application for development of the Carmel Canine Sports Center (Planning File Number: PLN130352). The project proposed by the Carmel Canine Sports Center, LLC, would consist of improvements for and operation of a private membership canine sports and event center on a 48.6-acre site in Carmel Valley, including installation of several modular buildings, recreational vehicle parking/camping area, reservoir, and canine exercise and training fields along with associated crop and livestock farming. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study is attached. The Initial Study is available on the County's website and will be made available upon request.

Due to time limits mandated by state law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice between December ~~3, 2014~~ and January 2, 2015.

Please submit your response to the address shown above. We will need the name for a contact person in your agency.

MR. MACK: HOW CAN THIS BE HAPPENING IN AN AREA ZONED RESIDENTIAL? THIS IS CERTAINLY NOT A RESIDENTIAL USE OF THE PROPERTY

Sincerely,

David J. R. Mack, Associate Planner
(831) 755-5096

Attachments: Project Description
Vicinity Map
Initial Study (dated 12/20/2013)

J. McDonald
34 MIRAMONTE RD C.V.
298 7350

P.S. I TRUST THAT SOME CONFLICTED COUNTY OFFICIALS ARE RECUSING THEMSELVES (?)

PROJECT LOCATION

The project site is located 8100 Valley Greens Drive, within the Carmel Valley Master Plan Area, in Carmel Valley, Monterey County, CA. The project site is comprised of eight parcels (Assessor's Parcel Numbers [APN] 169-431-001, -002, -003, -006, -007, -008, -011, -012).

PROJECT DESCRIPTION

The project applicant is requesting a Use Permit for the development of a canine training/sports facility and event center for daily member usage and up to 24 event days per year. The project would include several small buildings, an RV parking/ camping area, fenced pastures and exercise/ training fields, permeable parking area and walking paths, irrigation system and a reservoir. The sports center would provide space for various types of canine training and exercise (i.e., agility, herding, obedience, etc.), off-leash walking paths, and picnic areas adjacent to the Carmel River with a trail to the River. For herding training and vegetation management, approximately 20-30 sheep, goats, and/or ducks would reside on the property.

The applicant's goal for the sports center is to enroll 500 members with estimated daily average use of the facility by 20% or 100 members per day. A total of 8 employees would operate the facility, with generally 2 employees present on average days and a larger number present to help manage special events. Special events would occur up to 24 event-days per year, which may include 3-day extended weekends (e.g. Friday – Sunday). Event attendance would be capped at a maximum of 250 people per event-day. Associated with these events, the project applicant is proposing overnight parking for up to 70 RVs on a 2.2 acre portion of the site for the duration of an event. A total of 200 parking spaces is proposed and is intended to accommodate all vehicles during special events.

Construction associated with the proposed project would entail installation of several modular structures (i.e., trailers), including an 800 square foot (sf) office, 600 sf member clubhouse 600 sf restroom, and a 400 sf storage trailer as well as site grading. Design approval is also requested for the wood-tone color modular structures and grading to include 90 cubic yards of cut and fill. Vehicle parking, in the form of crushed granite areas, would accommodate 200 parking spaces, including 5 paved handicapped-accessible spaces. Site alteration would be limited, as the majority of the 48.6-acre site would be managed as organic pastures planted in hay, grain, and other pasture crops.

POTENTIAL ENVIRONMENTAL EFFECTS

- Impacts to sensitive species and habitats, including riparian habitat associated with the Carmel River as well as disturbed upland habitat that may provided seasonal cover for sensitive species;
- Water supply impacts associated with the proposed continued use of water at the project site and water quality impacts from canine and livestock waste generation;
- Traffic impacts, particularly during special events, associated with additional trips arriving to and departing from the proposed project entrance on Valley Greens Road;
- Noise impacts on low density residential properties surrounding the project site; and
- Land use compatibility impacts associated with project consistency with the County's General Plan, Carmel Valley Master Plan, and the Zoning Ordinance of the County of Monterey (Title 21, For Inland Areas).

Cc: State Clearinghouse, Office of Planning and Research
1400 Tenth Street, Room 212
P.O. Box 3044
Sacramento, CA 95812-3044

RECEIVED
JAN 02 2015
MONTEREY COUNTY
PLANNING DEPARTMENT

RICHARD & VIRGINIA DUNN
193 Del Mesa Carmel
Carmel, CA 93923-7951
(831) 622-7933

31 December 2014

Monterey County Planning Department
168 W. Alisal St. (2nd Floor)
Salinas, CA 93901

Re: Carmel Canine Sports Center
(Wolter Properties LP)

The scope of the Environmental Impact Report as to the foregoing project must be broadened to include the impact on the three residential developments for senior citizens in close proximity to the project site. Those three developments are Pacific Meadows, Hacienda Carmel and Del Mesa Carmel. To date these developments have been treated as simply the same as any other residences in the general area when, in fact, they are far different and merit special consideration when evaluating the impact of the proposed project.

We are residents at Del Mesa Carmel, just across Roach Canyon from the approved site for the subdivision to be known as September Ranch, and are closer to the project site than either Hacienda Carmel or Pacific Meadows; but all three of these developments are impacted to an equal extent by the traffic which will be generated by it. They are not residential areas in the ordinary sense, but are developments for the older generation, who are especially effected and who themselves are regarded as not the best drivers in the world. The traffic on Carmel Valley Road is already heavier than desirable and with respect to these three developments the increase from the proposed project deserves special consideration and evaluation in the Environmental Impact Report.

Obviously the Environmental Impact Report should also be broadened to include the effect of the noise created by the proposed project on the very senior citizens who are residents of Del Mesa Carmel, Hacienda Carmel, and Pacific Meadows. You know that dogs and the special events proposed will create a never ending cacophony that can have nothing but an especially harmful effect on residents of those three developments.

Very Truly Yours,

The Richard Dunns

RECEIVED
DEC 22 2014
MONTEREY COUNTY
PLANNING DEPARTMENT

Suzi Bluford

6965 Carmel Valley Rd
Carmel, Ca 93923
831-624-9010
suzibluford@gmail.com

December 19, 2014

David Mack
Monterey County Resource Management Agency
168 W. Alisal Street , 2nd floor
Salinas, Ca. 93901

Dear David,

I received the notice of preparation from John Ford, David Mack, and the Monterey County Resource Management Agency-Planning Dept regarding the Preparation of the EIR for the Carmel Canine Sports Center (PLN130352)

As a resident and close neighbor to the project i do have a response for the EIR and hope you will be sure to include in the final report the following:

when looking at the potential impacts on ccsc the EIR recognize that the current conditions include many events this size and larger that occur in the immediate vicinity without complaints or permits

that the many large delivery and construction vehicles servicing the adjacent commercial establishments use these roads without incident now.

I hope the EIR will recognize that the County needs to treat applicants in the same area fairly and equally and that the law be applied to all in the same manner.

Quail lodge presently hosts uniimited numbers of events as big or bigger than those proposed for ccsc throughout their facilities using these same roads and on street parking without any impacts or complaints. Frequent regular events many times larger occur at Quail & other surrounding venues, like the Baja Cantina, HH&F & EBF and do have impacts, yet they have never been regulated or required to obtain permits at all despite complaints. Please ensure that the eir for ccsc correctly identifies and addresses only the impacts from the proposed project, which includes small events of limited size and number and entirely onsite parking for both regular operations and events in the context of what is going on legally in the area already. The rules should be the same for everybody.

Sincerely yours,

Suzi Bluford

APPENDIX B
INITIAL STUDY MITIGATED NEGATIVE DECLARATION (ISMND) AND PRIOR PUBLIC COMMENTS

County of Monterey
State of California

MITIGATED NEGATIVE DECLARATION

FILED
DEC 2 0 2013
STEPHEN L. VAGNINI
MONTEREY COUNTY CLERK
DEPUTY

Project Title:	Carmel Canine Sports Center
File Number:	PLN130352
Owner:	Carmel Canine Sports Center
Project Location:	8100 Valley Greens Drive, Carmel Valley
Primary APN:	169-431-001, 002, 003, 006, 007, 008 011 & 012
Project Planner:	John Ford/Steve Mason
Permit Type:	Use Permit and Design Approval
Project Description:	The project consists of the operation of a private "canine sports & event center". This will include daily training activities and up to 24 special event days. The site improvements will include a 800 square foot modular office trailer, 600 square foot restroom trailer, 600 square foot clubhouse trailer, 400 square foot electrical room and excavation of a 1.2 acre pond. The special events would allow up to 70 RVs to camp on site. There will be provisions for 200 parking spaces.

THIS PROPOSED PROJECT WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AS IT HAS BEEN FOUND:

a) That said project will not have the potential to significantly degrade the quality of the environment.

b) That said project will have no significant impact on long-term environmental goals.

c) That said project will have no significant cumulative effect upon the environment.

d) That said project will not cause substantial adverse effects on human beings, either directly or indirectly.

Decision Making Body:	Monterey County Planning Commission
Responsible Agency:	County of Monterey
Review Period Begins:	December 23, 2013
Review Period Ends:	January 24, 2013

Further information, including a copy of the application and Initial Study are available at the Monterey County Planning & Building Inspection Department, 168 West Alisal St, 2nd Floor, Salinas, CA 93901 (831) 755-5025

Date Printed: 3/12/2002

MONTEREY COUNTY

RESOURCE MANAGEMENT AGENCY – PLANNING DEPARTMENT
168 WEST ALISAL, 2ND FLOOR, SALINAS, CA 93901
(831) 755-5025 FAX: (831) 757-9516

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION
MONTEREY COUNTY PLANNING COMMISSION

NOTICE IS HEREBY GIVEN that the Monterey County Resource Management Agency – Planning Department has prepared a draft Mitigated Negative Declaration, pursuant to the requirements of CEQA, for a Combined Development Permit (Wolter Properties LP (Carmel Canine Sports Center, File Number PLN130352) at 8100 Valley Greens Drive, Carmel Valley (APN #s 169-431-001-000, 169-431-002-000, 169-431-003-000, 169-431-006-000, 169-431-007-000, 169-431-008-000, 169-431-011-000, and 169-431-012-000) (see description below).

The Mitigated Negative Declaration and Initial Study, as well as referenced documents, are available for review at the Monterey County Resource Management Agency – Planning Department, 168 West Alisal, 2nd Floor, Salinas, California, and the Carmel Valley Public Library, 65 W. Carmel Valley Road, Carmel Valley, California. The Mitigated Negative Declaration and Initial Study are also available for review in an electronic format by following the instructions at the following links:
http://www.co.monterey.ca.us/planning/docs/environmental/circulating.htm.
http://www.co.monterey.ca.us/planning/major/Carmel_Canine_Sports_Center/Carmel_Canine_Sports_Center.htm

The Planning Commission will consider this proposal at a meeting on January 29, 2014 at 9AM in the Monterey County Board of Supervisors Chambers, 168 West Alisal, 2nd Floor, Salinas, California. Written comments on this Negative Declaration will be accepted from December 23, 2013 to January 24, 2014. Comments can also be made during the public hearing.

Project Description:
Combined Development Permit: 1) Use Permit for the development of a canine training/sports facility and event center for daily member usage and up to 24 "event days" per year. Project to include fenced pastures and fields, permeable parking area and walking paths, irrigation system and reservoir. Modular structures to include an 800 square foot office trailer, 600 square foot members trailer, 600 square foot restroom trailer and 400 square foot electrical/storage room. Site to also accommodate up to seventy recreational vehicles on a short-term basis during "events", and; 2) Design Approval. All structures to be wood-tone color. Grading to include 90 cubic yards of cut and fill. The property is located at 8100 Valley Greens Drive, Carmel Valley (Assessor's Parcel Numbers 169-431-001-000, 169-431-002-000, 169-431-003-000, 169-431-006-000, 169-431-007-000, 169-431-008-000, 169-431-011-000, and 169-431-012-000), Carmel Valley Master Plan.

We welcome your comments during the 30-day public review period. You may submit your comments in hard copy to the name and address above. The Department also accepts comments via e-mail or facsimile but requests that you follow these instructions to ensure that the Department has received your comments. To submit your comments by e-mail, please send a complete document including all attachments to:

CEQAcomments@co.monterey.ca.us

An e-mailed document should contain the name of the person or entity submitting the comments and contact information such as phone number, mailing address and/or e-mail address and include any and all attachments referenced in the e-mail. To ensure a complete and accurate record, we request that you also provide a follow-up hard copy to the name and address listed above. If you do not wish to send a follow-up hard copy, then please send a second e-mail requesting confirmation of receipt of comments with enough information to confirm that the entire document was received. If you do not receive e-mail confirmation of receipt of comments, then please submit a hard copy of your comments to ensure inclusion in the environmental record or contact the Department to ensure the Department has received your comments.

Facsimile (fax) copies will be accepted with a cover page describing the extent (e.g. number of pages) being transmitted. A faxed document must contain a signature and all attachments referenced therein. Faxed document should be sent to the contact noted above at **(831) 757-9516**. To ensure a complete and accurate record, we request that you also provide a follow-up hard copy to the name and address listed above. If you do not wish to send a follow-up hard copy, then please contact the Department to confirm that the entire document was received.

For reviewing agencies: The Resource Management Agency – Planning Department requests that you review the enclosed materials and provide any appropriate comments related to your agency's area of responsibility. The space below may be used to indicate that your agency has no comments or to state brief comments. In compliance with Section 15097 of the CEQA Guidelines, please provide a draft mitigation monitoring or reporting program for mitigation measures proposed by your agency. This program should include specific performance objectives for mitigation measures identified (CEQA Section 21081.6(c)). Also inform this Department if a fee needs to be collected in order to fund the mitigation monitoring or reporting by your agency and how that language should be incorporated into the mitigation measure.

All written comments on the Initial Study should be addressed to:

County of Monterey
Resource Management Agency – Planning Department
Attn: Mike Novo, Director of Planning
168 West Alisal St, 2nd Floor
Salinas, CA 93901

Re: Wolter Properties LP (Carmel Canine Sports Center); File Number PLN130352

From: Agency Name: _____
Contact Person: _____
Phone Number: _____

___ No Comments provided
___ Comments noted below
___ Comments provided in separate letter

COMMENTS: _____

_____

_____

_____

DISTRIBUTION

1. State Clearinghouse (15 CD copies + 1 hard copy of the Executive Summary) – include the Notice of Completion
2. CalTrans District 5 – San Luis Obispo office
3. County Clerk's Office
4. Association of Monterey Bay Area Governments
5. Monterey Bay Unified Air Pollution Control District
6. California Department of Fish & Wildlife, Marine Region, Attn: Eric Wilkins
7. Monterey Peninsula Water Management District
8. Monterey County Regional Fire Protection District
9. Monterey County Water Resources Agency
10. Monterey County Public Works Department
11. Monterey County Parks Department
12. Monterey County Environmental Health Bureau
13. Monterey County Sheriff's Office
14. Carmel Valley Public Library
15. Ernie Mill, Applicant
16. Martha Diehl & Ken Ekelund, Applicants
17. The Open Monterey Project
18. LandWatch
19. Property Owners within 300 feet (**Notice of Intent only**)

Distribution by e-mail only (Notice of Intent only):

20. U.S. Army Corps of Engineers (San Francisco District Office: Katerina Galacatos: galacatos@usace.army.mil and Paula Gill: paula.c.gill@usace.army.mil)
21. Emilio Hipolito (ehipolito@nccrc.org)
22. United Brotherhood of Carpenters & Joiners (nedv@nccrc.org)
23. Molly Erickson (Erickson@stamplaw.us)
24. Margaret Robbins (MM_Robbins@comcast.net)
25. Michael Weaver (michaelrweaver@mac.com)
26. Monterey/Santa Cruz Building & Construction (Office@mscbctc.com)
27. Tim Miller (Tim.Miller@amwater.com)

Revised 5/28/13

MONTEREY COUNTY

RESOURCE MANAGEMENT AGENCY

PLANNING DEPARTMENT

168 WEST ALISAL ST., 2nd FLOOR, SALINAS, CA 93901

PHONE: (831) 755-5025 FAX: (831) 757-9516

INITIAL STUDY

I. BACKGROUND INFORMATION

Project Title:	Carmel Canine Sports Center
File No.:	PLN130352
Project Location:	8100 Valley Greens Drive, Carmel Valley
Name of Property Owner:	Wolter Properties LP
Name of Applicant:	Carmel Canine Sports Center
Assessor's Parcel Number(s):	169-431-001, 002, 003, 006, 007, 008 011 & 012
Acreage of Property:	43 (approximately)
General Plan Designation:	Residential – Low Density 5-1 Acres/Unit
Zoning District:	Carmel Valley Master Plan
Lead Agency:	County of Monterey – RMA Planning Department
Prepared By:	John Ford (Senior Planner)/Steve Mason (Associate Planner)
Date Prepared:	December 2013
Contact Person:	John Ford/Steve Mason
Phone Number:	(831)755-5158/(831)755-5228

II. DESCRIPTION OF PROJECT AND ENVIRONMENTAL SETTING

A. Description of Project Site:

The project site is comprised of 8 parcels totaling approximately 43 acres. The parcels range in size from 2.6 acres (APN 169-431-002-000) to 12.2 acres (169-431-008-000) and are undeveloped aside from an existing single-family dwelling on the northernmost portion of parcel 169-431-011-000 (abutting Valley Greens Drive.) The existing home is not associated with the proposed project. The site is predominantly level, with trees located around the site periphery. The southernmost edge of the project area is comprised of riparian forest buffering the Carmel River which crosses the site in an east-west direction. A portion of the site is within the Carmel River 100 year floodplain.

The site has been used for row crop farming dating back to the 1800's. The site was recently planting with turf-grass.

The project parcels are zoned "Low-Density Residential", which is described in the Monterey County Zoning Code (Title 21) as: "*A district to accommodate low density and intensity uses in the rural suburban areas of the County of Monterey and to ensure that allowable land uses are compatible in the area.*"

B. Description of Use:

The project consists of the operation of a private "canine sports & event center". The membership goal for the sports center is 500 with an estimated average use of 20% or 100 members per day using the facility. Staff members will be available on-site during operating hours with a projected total of 8 employees. The canine sport center has two components as follows:

1. <u>Daily Training and Exercise</u>:
   a. Areas will be offered for the following types of training:

Agility	Obedience	Socialization
Herding	Nose Work	Tracking
Rally	Responsible Pet Ownership	Field work
Lure Coursing	Fly Ball	Dock Diving

   b. Members will be able to reserve specific spaces and use off-leading walking paths, picnic areas, open exercise areas and the small clubhouse from 7 AM to 8:30 PM daily.
   c. Classes and Workshops for up to 10 participants scheduled throughout the day. This may include members and non-members.

2. Special Events:
    a. Up to 24 event days per year with a maximum of 250 people in attendance (Participants, spectators, employees, vendors and guests)
    b. Space for food and retail vendors to display and sell goods.
    c. Space for up to 70 RVs to park on the event weekends.

C. Site Improvements:

Much of the site has been converted to growing grass which will be used for the activity and training areas. This was undertaken as an agricultural activity. When the site was prepared for planting sod, an irrigation pond was excavated. This pond requires a grading permit and is being evaluated as part of this Initial Study. The applicant is proposing to install the following structures in support of the use:

- Modular office trailer (800 square feet),
- Restroom trailer (600 sf),
- Clubhouse or "member" trailer (600 sf) and
- Electrical/storage room (400 sf).

A large portion of the 40 acres will be maintained in irrigated open field planted in hay, grain, and pasture crops. This area will also be used for dog training activities including herding. Livestock used will be sheep, goats and ducks, with generally 20-30 and no more than 50 sheep and/or goats residing on the property.

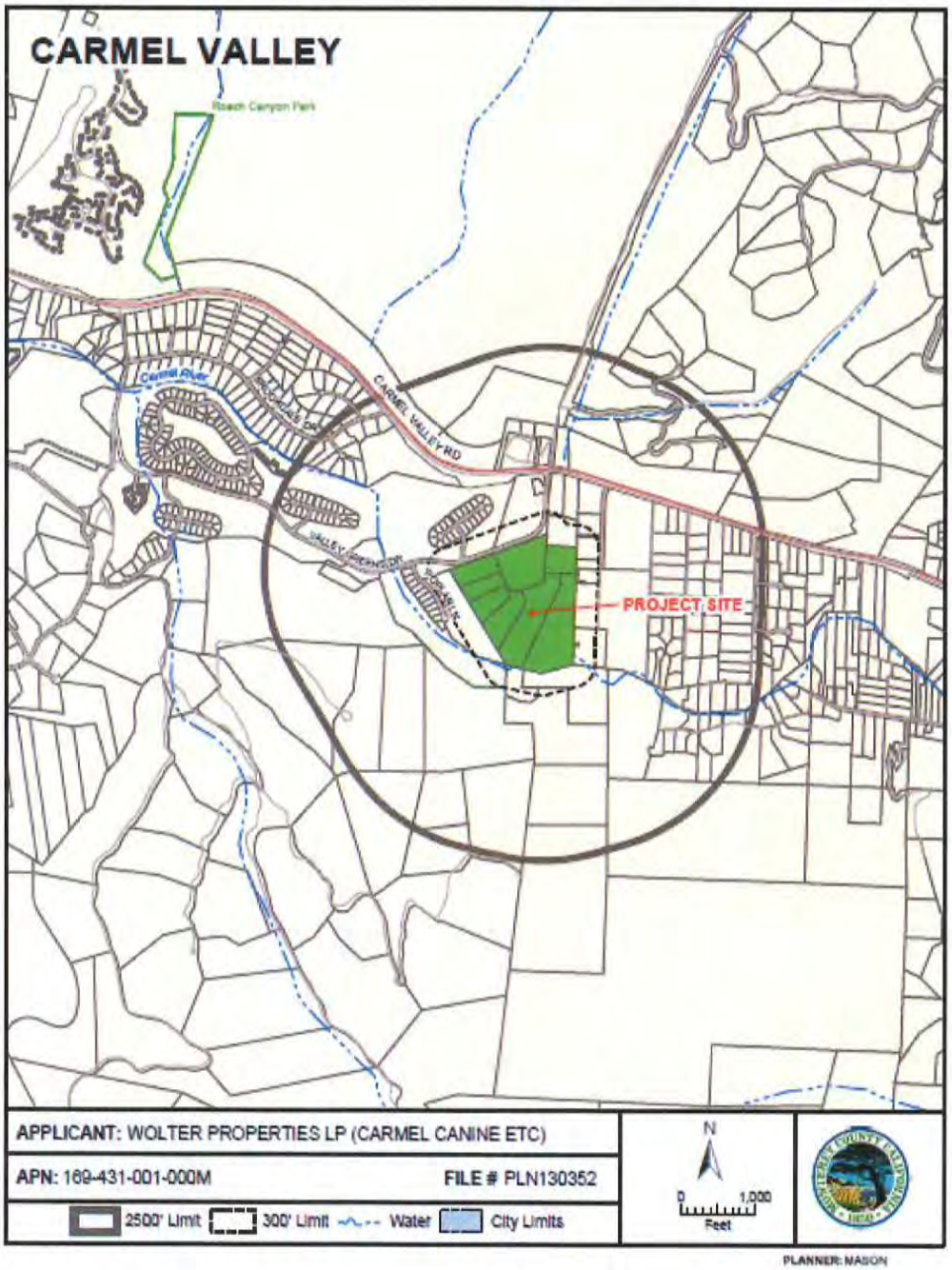
Vehicle parking, in the form of crushed granite areas, would accommodate 200 spaces, including 5 (paved) handicapped-accessible spaces.

The applicant also proposes to make sensitive seasonal use of the riparian area of the property for picnics and walking along existing pathways and in existing disturbed areas.

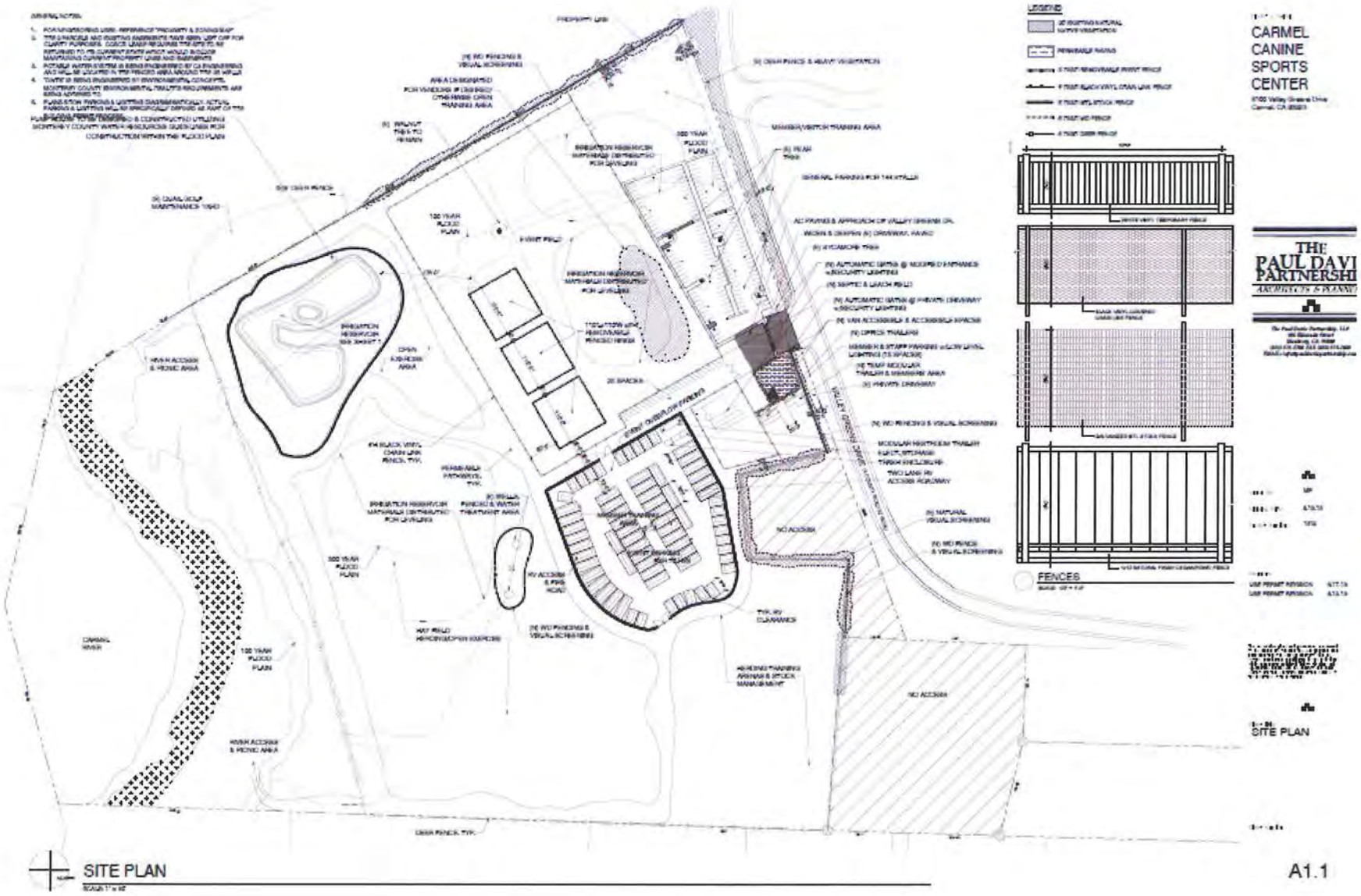
Prior to commencing operations, the following Planning Department Permits must be approved:

A. Use Permit for operation of the Sports Center, including daily activities as well as 24 annual "event days."
B. Design Approval for all structures proposed to be placed on the project site.

Project Vicinity Map:



The project site is located approximately 3.2 miles east from intersection of Highway 1 and Carmel Valley Road, and .2 miles south from intersection of Carmel Valley Road and Valley Greens Drive.


CARMEL
CANINE
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PAUL DAVI
PARTNERSHI
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SITE PLAN
SITE PLAN
A1.1

C. Surrounding Land Uses and Environmental Setting:

The subject site is located in the Carmel Valley, south of the intersection of Carmel Valley Road and Valley Greens Drive. The site is accessed by Valley Greens Drive. To the east of the site is existing farm land, to the north of the site are a mix of uses including farm land, and north of that is a retail center, Quail Lodge and Valley Greens Drive, further north are residences. To the west of the site is a portion of the Quail Lodge Golf club and west of that are residences. The southern portion of the site is the Carmel River Riparian Corridor.

The golf course parcels abutting the project site immediately to the north and west are zoned "Open Space," described pursuant to Monterey County Zoning Code (Title 21): "To promote a rural atmosphere in an otherwise urban or semi-urban development and to hold for future generations open space in which trees and plants can grow."

"Angled" Aerial View of Project Site and Surrounding Area (Facing North)
Quail Lodge & Golf Club is located directly adjacent to the north (across Valley Greens Drive) and west, and the Carmel River abuts the project site to the south. The parcels located immediately to the east are utilized primarily for agricultural purposes.

The parcel at Quail Creek resort directly across the street from the project site which contains the lodge structures is zoned "Visitor Serving/Professional Office Zoning District,": "A district to

establish areas necessary to service the needs of visitors and professional services to Monterey County."

D. Other public agencies whose approval is required:

MPWMD - The use of water for the CCSC require approval of a Water Distribution System Permit from the Monterey Peninsula Water Management District (MPWMD). The applicant has also submitted a Riparian Rights Determination for MPWMD action.

SWRCB - One avenue for the applicant to perfect the water rights for the project site is to obtain an Appropriative Right from the SWRCB. This application has been filed and is in process.

RWQCB – An applicant-submitted Stormwater Pollution Prevention Plan must be reviewed and approved by the Central Coast Regional Water Quality Control Board (RWQCB).

HCD – The design for the proposed recreational vehicle parking and access areas must be reviewed and approved by the State of California Department of Housing and Community Development (HCD). An HCD-issued "Special Occupancy Park Permit" must be obtained by the applicant prior to overnight use by recreational vehicles on the site.

III. PROJECT CONSISTENCY WITH OTHER APPLICABLE LOCAL AND STATE PLANS AND MANDATED LAWS

Use the list below to indicate plans applicable to the project and verify their consistency or non-consistency with project implementation.

General Plan/Area Plan	☒	Air Quality Mgmt. Plan	☒
Specific Plan	☐	Airport Land Use Plans	☐
Water Quality Control Plan	☒	Local Coastal Program-LUP	☐

General Plan/Area Plan.
The proposed project was reviewed for consistency with the 2010 Monterey County General Plan and the Carmel Valley Master Plan. Section IV. 9 below (Land Use and Planning) discusses whether the project physically divides an established community; conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project; or conflicts with any applicable habitat conservation plan or natural community conservation plan. The proposed project would allow a Canine Training and event facility on property historically used for agricultural production and designated in the CVMP for single family residential use. The Zoning Ordinance implements the General Plan and allows uses of a similar nature to those uses allowed within the LDR Zoning District subject to approval of a Use Permit. Upon a finding that the project is of a similar nature and is a conditionally permitted use a Use Permit can be approved by the Planning Commission. Subject to these factors the project is consistent with the General Plan. **CONSISTENT**

Air Quality Management Plan (AQMP).
Consistency with the AQMP is an indication of a project's cumulative adverse impact on regional air quality (ozone levels). It is not an indication of project-specific impacts, which are evaluated according to the Air District's adopted thresholds of significance. Inconsistency with the AQMP is considered a significant cumulative air quality impact. The project is consistent with the 2010 Monterey County General Plan and with the Association of Monterey Bay Area Governments (AMBAG) regional population and employment forecast. The proposed project will not increase the population of the area nor generate additional permanent vehicle trips. Therefore, the project will be consistent with the AQMP. **CONSISTENT**

Water Quality Control Plan.
The Regional Water Quality Control Board (RWQCB) incorporates the County's General Plan in its preparation of regional water quality plans. In addition, the project is consistent with the parameters required for a Regional Board Subsurface Disposal Exemption. Section VI. 8 (Hydrology and Water Quality) below discusses whether the proposed project violates any water quality standards or waste discharge requirements, substantially depletes groundwater supplies or interferes substantially with groundwater recharge, substantially alters the existing drainage pattern of the site or area or creates or contributes runoff water that would exceed the capacity of existing or planned stormwater drainage. **CONSISTENT**

IV. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

A. FACTORS

The environmental factors checked below would be potentially affected by this project, as discussed within the checklist on the following pages.

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

Some proposed applications that are not exempt from CEQA review may have little or no potential for adverse environmental impact related to most of the topics in the Environmental Checklist; and/or potential impacts may involve only a few limited subject areas. These types of projects are generally minor in scope, located in a non-sensitive environment, and are easily identifiable and without public controversy. For the environmental issue areas where there is no potential for significant environmental impact (and not checked above), the following finding can be made using the project description, environmental setting, or other information as supporting evidence.

☐ Check here if this finding is not applicable

FINDING: For the above referenced topics that are not checked off, there is no potential for significant environmental impact to occur from either construction, operation or maintenance of the proposed project and no further discussion in the Environmental Checklist is necessary.

EVIDENCE:

5. **CULTURAL RESOURCES**

The project site has been previously disturbed through the course of over one hundred years of agricultural activity, and additional grading required for the project will be

insignificant (approx. 100 cubic yards). An Archaeological Survey of the eight parcels constituting the project site was prepared in June, 2013, which concluded:

- None of the indicators that define cultural resources in this region were present on the project parcels.
- There are no cultural materials to indicate an archeological deposit on the project parcels.
- There is no reason to delay the project based upon concern for cultural resources.

A standard Planning Department Condition of Approval, included with most projects requiring ground disturbance, will be attached to the project which requires:

> If, during the course of construction, cultural, archaeological, historical or paleontological resources are uncovered at the site (surface or subsurface resources) work shall be halted immediately within 50 meters (165 feet) of the find until a qualified professional archaeologist can evaluate it. Monterey County RMA - Planning and a qualified archaeologist (i.e., an archaeologist registered with the Register of Professional Archaeologists) shall be immediately contacted by the responsible individual present on-site. When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for the discovery.

The excavation of the irrigation pond did not uncover or reveal any artifacts or cultural material which would indicate that the site contains any cultural resources.

6. GEOLOGY AND SOILS

The proposed project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving location in proximity to an earthquake fault, strong seismic ground shaking or failure or landslides. The County Geographic Information System does not identify the site in proximity to an earthquake fault, and the site does not have topographic relief that would pose a landslide risk. The site soils are not unstable and will adequately support the use of the site as a canine training facility and the small ancillary buildings associated with the use.

8. HAZARDS AND HAZARDOUS MATERIALS.

The proposed use will not use regulated hazardous materials nor will hazardous materials be transported as part of the use. There are not any existing buildings which will need to be removed or other material on site that could result in exposure of people to hazardous materials. The site is not located within an airport land use plan or in the vicinity of a private airstrip. The site is not located so as to impair implementation of emergency response plans and will not expose people or property to risk of loss due to wildland fires as the site is not located in a wildland area.

11. MINERAL RESOURCES

No mineral resources or resource recovery sites have been identified on the site or in the immediate area, and, consequently, no impacts to mineral resources are anticipated.

13. POPULATION AND HOUSING

The project does not propose the construction of any residential facilities nor will it create jobs that result in an increased housing demand, and, as such, will not have an effect on long-term population and housing.

15. RECREATION

The project would not result in a substantial increase in use of existing recreational facilities. No parks, trail easements, or other recreational opportunities would be adversely impacted by the proposed project. The subject property is not within close proximity to any public parks, recreational trails or designated historical structures.

B. DETERMINATION

On the basis of this initial evaluation:

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

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

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

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

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

Signature	December 20, 2013 Date
John H Ford	*Senior Planner*

Steve Mason

Signature

December 20, 2013

Date

Steve Mason

Associate Planner

V. EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on project-specific screening analysis).

2) All answers must take into account the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) The explanation of each issue should identify:

a) The significance criteria or threshold, if any, used to evaluate each question; and

b) The mitigation measure identified, if any, to reduce the impact to less than significance.

VI. ENVIRONMENTAL CHECKLIST

1. AESTHETICS **Would the project:**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista? (Source: 1, 6)	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (Source: 1, 6)	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings? (Source: 1, 6)	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Source: 1, 6)	☐	☐	☒	☐

Discussion/Conclusion/Mitigation:

Aesthetics 1. (b) No Impact
The project site is not visible from any State Scenic Highway, nor does it entail proposed damages to any scenic resources (buildings, rock outcroppings, historic buildings, etc.).

Aesthetics 1. (a), (c) & (d) Less Than Significant Impact
The project site is located in an area designated as visually "sensitive" pursuant to the 2010 Monterey County General Plan, which includes the Policy:

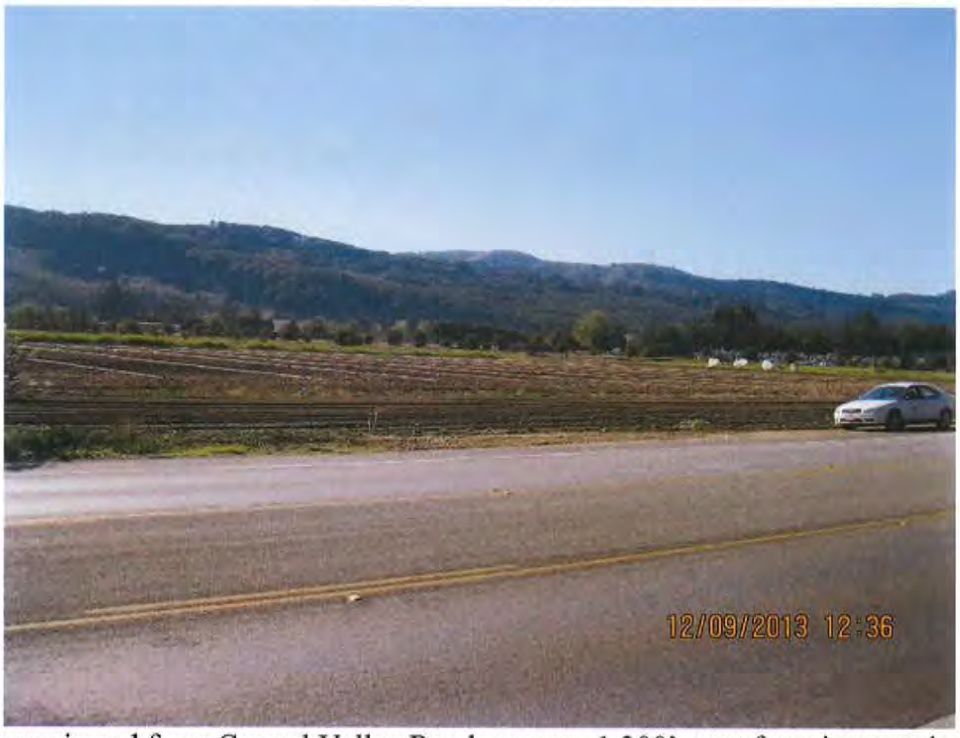
OS-1.2 -- *Development in designated visually sensitive areas shall be subordinate to the natural features of the area.*

Structures proposed to be placed at the project site will consist of an office trailer (800 square feet), restroom trailer (600 sf), "member" trailer (600 sf) and electrical/storage room (400 sf). The tallest of these structures will be the electrical/storage room, at 13'-6". The structures will be screened at many vantage points on Valley Greens Drive by existing vegetation at the project site, though they will be clearly visible through an approximately 350' stretch running east from the project site entrance. Limited views of the structures will be apparent from Valley Greens Drive, Lake Place and Poplar Lane, at distances of approximately 150', 550' and 1,100', respectively. The structures will be comprised of muted, earth-tone colors, and are not expected to create any significant visual impacts. The structures will not constitute ridgeline development, nor will they be visible from a designated Scenic Highway. The balance of the project area will consist of gravel parking area, gravel walking paths, grass-turf fields, a hayfield, fencing (chain link/galvanized metal/natural cedar wood), and an irrigation reservoir. None of these features are atypical in the context of the rural nature of Carmel Valley, nor are they expected to create any significant visual impacts. Any exterior lighting would be required, pursuant to a standard Condition of approval, to be unobtrusive, down-lit, and designed so as to illuminate the immediate area only.

Project site as viewed from directly adjacent on Valley Greens Drive.
Note flagging and staking of proposed structures.

Project site as viewed from Lake Place, approximately 230' north from intersection of Valley Greens Drive. Project site is shielded from view by existing topography.

Project site as viewed from Poplar Lane, approximately 500' south from intersection of Valley Greens Drive. Flagging and staking faintly visible at approx. 1,200' distance.



Project site as viewed from Carmel Valley Road, approx. 1,300' west from intersection of Valley Greens Drive. Project site (1,500'+ distance) is obscured by existing vegetation and topography.

2. AGRICULTURAL AND FOREST RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? (Source: 1, 6)	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? (Source: 1, 2, 3, 4, 6)	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? (Source: 1, 2, 4)	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use? (Source: 1, 6)	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? (Source: 1, 6)	☐	☐	☒	☐

Discussion/Conclusion/Mitigation:

Agricultural and Forest Resources 2. (b), (c) & (d) No Impact

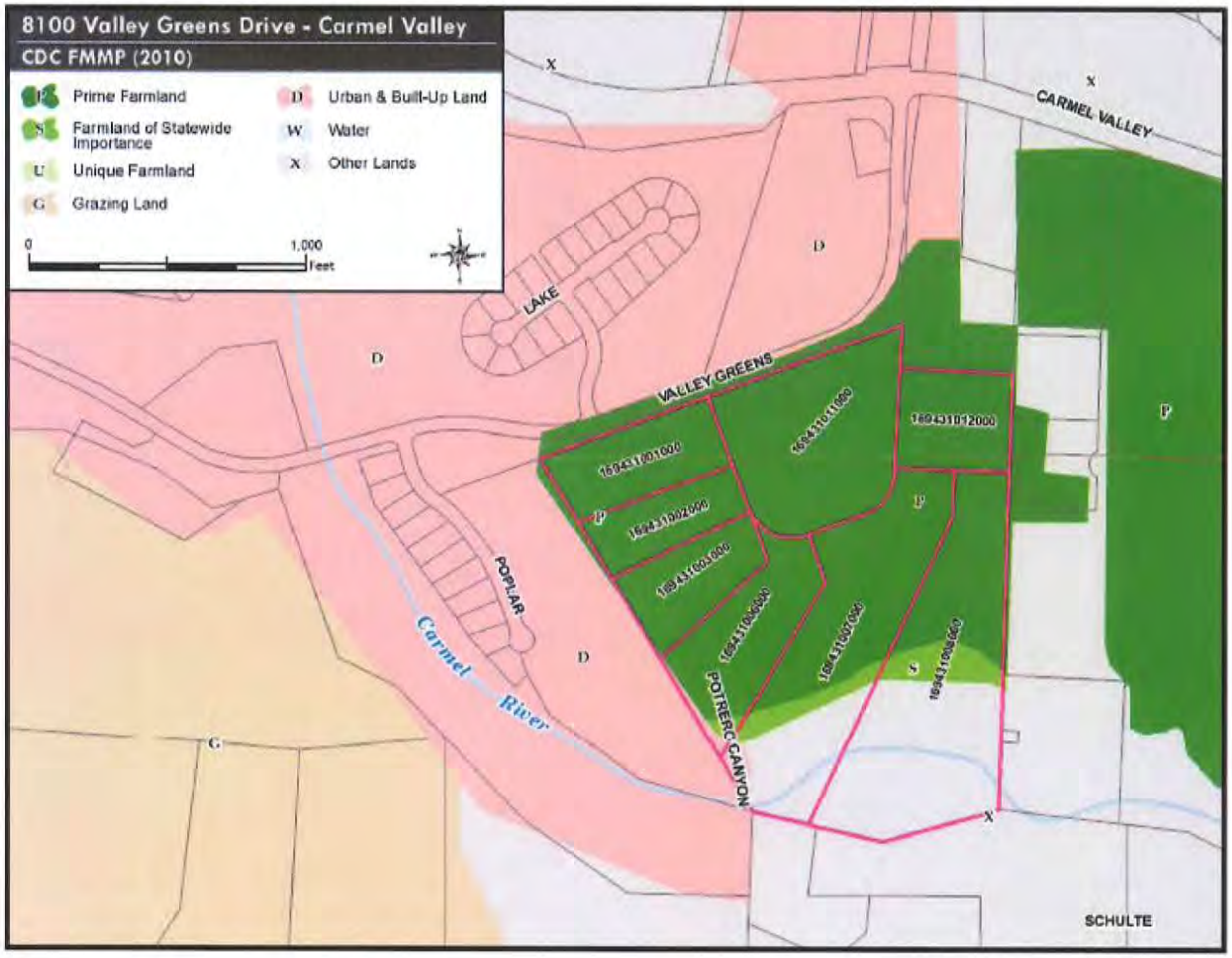
The project site is not under Williamson Act Contract. Operation of the facility, as proposed, should not impact ongoing agricultural operations on adjacent parcels to the east of the project site. No forest land will be affected by the project.

Agricultural and Forest Resources 2. (a) & (e) Less Than Significant Impact

According to the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP), the project site is designated as primarily "Prime" Farmland throughout most of the area proposed for development. (See map below – Project parcel boundaries highlighted in purple). The parcels which constitute the subject site have zoning designations to allow development of single family residences and this could occur subject to approval of a Design Approval and an Administrative Permit. The proposal by the applicant includes the provision that the site must be restored to an organic farm when the use ceases.

With the possible exception of the proposed septic field area (approximately 6,500 square feet), the majority of the proposed project has been designed so that the area can be re-converted to agricultural use in the event that the Canine Sports Center were

The project site is not under Williamson Act Contract. Operation of the facility, as proposed, should not impact the ongoing agricultural operations on adjacent parcels to the east of the project site.



3. AIR QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan? (Source: 1, 2, 5)	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (Source: 1, 5, 13)	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? (Source: 1, 5, 13)	☐	☐	☒	☐
d) Result in significant construction-related air quality impacts? (Source: 1, 5)	☐	☐	☒	☐
e) Expose sensitive receptors to substantial pollutant concentrations? (Source: 1, 5, 6, 14)	☐	☐	☒	☐
f) Create objectionable odors affecting a substantial number of people? (Source: 1, 6)	☐	☐	☒	☐

Discussion/Conclusion/Mitigation:

Air Quality 3. (a), (b), (c), (d), (e) & (f) Less Than Significant Impact

The Monterey Bay Unified Air Pollution Control District (MBUAPCD) has prepared an Air Quality Management Plan (AQMP) for the Monterey Bay Region. The AQMP addresses the attainment and maintenance of State and federal ambient air quality standards within the North Central Coast Air Basin (NCCAB). Consistency with the AQMP is an indication of a project's cumulative adverse impact on regional air quality (ozone levels). It is not an indication of project-specific impacts, which are evaluated according to the Air District's adopted thresholds of significance.

The development on the project site for a canine sports center will be in accordance with the Association of Monterey Bay Area Governments (AMBAG) population projections, which is accommodated in the AQMP. If the population increase resulting from the project would not cause the estimated cumulative population to exceed the relevant forecast, the project would be consistent with the population forecasts in the AQMP.

The CEQA Air Quality Guidelines outline a threshold for construction activities with potentially significant impacts for PM^{10} to be 2.2 acres of disturbance per day. Adherence to this standard will be required.

The construction of the on-site modular structures is not expected to generate a significant amount of greenhouse gasses. Specifically, construction-related PM10 emissions are not expected to exceed the MBUAPCD's daily threshold for PM10. Additionally, construction-related NOX emissions from construction equipment is not expected to exceed the MBUAPCD's daily threshold for NOX.

The nearest residential "sensitive receptors" from the project site are the transient residential units at Quail Lodge Resort (100' distant from the nearest point of the project parcels), single family dwellings at Lake Place (approximately 300') and single family dwellings at Poplar Lane (approximately 375'). Project-related vehicle emissions are not expected to impact any of these "receptors" to a measurable degree.

4. BIOLOGICAL RESOURCES **Would the project:**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (Source: 1, 6)	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? (Source: 1, 2, 3, 4, 6)	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (Source: 1, 6)	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (Source: 1, 6)	☐	☒	☐	☐

4. BIOLOGICAL RESOURCES Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (Source: 1, 2, 3, 4, 6)	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (Source: 1, 6)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation:

Biological Resources 4. (c) & (f) No Impact

The project, as proposed, will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, nor will it conflict with the provisions of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The areas which have been historically farmed do not contain wetlands and this is the primary location of activity. The Carmel River is to the south of the site, but there will not be any formal improvements within the riparian area and there will not be an increase in runoff from the proposed project.

Biological Resources 4. (a), (b), (d) & (e) Less Than Significant Impact With Mitigation Incorporated

Pursuant to the project description and plan set, the applicant is proposing "River Access & Picnic Area" at two points. A site visit by County staff on December 9, 2013, concluded that the entirety of the project area fronting the Carmel River is overgrown by a dense strip of riparian vegetation, with no visible trails or access points to the River from the project area:

View from bed of Carmel River, facing east. Project site is on left.
(See "Aerial View" image under section II.B for additional visual reference)

The 2010 Monterey County General Plan, Carmel Valley Master Plan, Policy CV-3.8 states:

> CV-3.8 Development shall be sited to protect riparian vegetation, minimize erosion, and preserve the visual aspects of the Carmel River. In places where the riparian vegetation no longer exists, it should be planted to a width of 150 feet from the river bank, or the face of adjacent bluffs, whichever is less. Density may be transferred from this area to other areas within a lot.

Monterey County Inland Zoning Code (Title 21) "Regulations for land use in the Carmel Valley floodplain," lists among the "activities herby prohibited":

> 21.64.130. D.1.b Alteration of the living riparian vegetation by removal, thinning, or other means.

The project description and application material do not describe how activities within the Riparian area can occur consistent with these policies, nor have any reports been submitted analyzing potential impacts resulting from removal of riparian vegetation that would be required in order to accommodate the proposed "River Access & Picnic Areas" as proposed. Due to the

lack of any additional information, and the direct conflict of the "Access/Picnic" proposal with CV-3.8 and 21.64.130.D.1.b, a mitigation measure is needed to preclude river access. The following mitigation measure is proposed:

Mitigation Measure 1 :
The proposed "River Access & Picnic Areas" is not approved as a part of the project application. The riparian area shall remain in a natural state and no removal of vegetation is authorized for purposes of allowing activities (hiking, dogs in the river, picnics, etc.,) to occur within the riparian area.

5. CULTURAL RESOURCES Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5? (Source: 1, 6, 11))	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5? (Source: 1, 6, 11)	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Source: 1, 6, 11)	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries? (Source: 1, 6, 11)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation: See Section IV.A.5

6. GEOLOGY AND SOILS Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Source: 1, 14) Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking? (Source: 1, 14)	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction? (Source: 1, 6, 14)	☐	☐	☐	☒
iv) Landslides? (Source: 1, 6, 14)	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil? (Source: 1, 6)	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? (Source: 1, 6, 14)	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Chapter 18A of the 2007 California Building Code, creating substantial risks to life or property? (Source: 1, 6, 14)	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? (Source: 1, 6, 14)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation: See Section IV.A.6

7. GREENHOUSE GAS EMISSIONS Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Source: 1, 5, 6, 13)	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (Source: 1, 5, 6, 13)	☐	☐	☒	☐

Discussion/Conclusion/Mitigation:

Greenhouse Gas Emissions 9. (a) & (b) Less Than Significant Impacts

The Office of Planning and Research (OPR) is the state-wide, comprehensive planning agency responsible for making policy recommendations and coordinating land use planning efforts. The OPR also coordinates the state-level review of environmental documents pursuant to the CEQA. Currently, the OPR's stance on greenhouse gas (GHG) significance thresholds has been to allow each lead agency to determine their own level of significance. At this time, the Monterey Bay Unified Air Pollution Control District (MBUAPCD) has not finalized specific GHG thresholds of significance. However, construction-related air quality impact thresholds are addressed in the MBUAPCD's Air Quality Management Plan (AQMP). The short-term (construction-related) impacts of the proposed project are expected to be well under said threshold. On October 24, 2008, the California Air Resources Board (CARB) released their interim CEQA significance thresholds for GHG impacts dictating that a project would be considered less than significant if it meets minimum performance standards during construction and if the project, with mitigation, would emit no more than approximately 7,000 metric tons of carbon dioxide per year during operation. This project's impact is expected to be below this CARB threshold. There are presently no County-based thresholds for GHG emissions.

The project will not result in population growth and, as such, will not result in an in increase population-related greenhouse gas emissions.

8. HAZARDS AND HAZARDOUS MATERIALS **Would the project:**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Source: 1, 6)	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (Source: 1, 6)	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Source: 1, 6)	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (Source: 1, 6)	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (Source: 1, 6, 14)	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (Source: 1, 6, 14)	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (Source: 1, 6, 14)	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (Source: 1, 6, 14)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation: See Section IV.A.8

9. HYDROLOGY AND WATER QUALITY **Would the project:**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements? (Source: 1, 2)	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? (Source: 1,12)	☐	☒	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? (Source: 1, 14)	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (Source: 1, 14)	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (Source: 1)	☐	☐	☒	☐
f) Otherwise substantially degrade water quality? (Source: 1, 8)	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (Source: 1, 14)	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (Source: 1, 14)	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? (Source: 1, 14)	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow? (Source: 1, 14)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation:

Hydrology and Water Quality 9. (f), (g), (h) & (j) No Impacts
The project site is situated at approximately 60 feet above mean sea level and over four miles distant from the Pacific Ocean, and as such, would likely only be affected by a seiche or tsunami of biblical proportions. There are no known historical records of mudflows occurring within the immediate project area, and the project does not propose the placement of any housing within the 100-year floodplain.

Hydrology and Water Quality 9. (i) Less Than Significant Impacts
The project site is located partially within the 100-year floodplain of the Carmel River. The portion of the site within the floodplain is located within the floodway fringe and not the floodway. The floodway is that area which is needed to convey the 100 year storm assuming that the entire floodway fringe were filled in without resulting in an increase in the water surface elevation of more than one foot. The floodway is not being impacted by this project. The project includes the excavation of an irrigation pond, with the redistribution of the excavated material on the site within the floodway fringe and outside of the floodplain. . There are also fences and a pump house proposed within the floodway fringe. The proposed development is compliant with Monterey County floodplain regulations, and it will not adversely affect the ability of the floodplain to convey floodwaters. Thus, the impact is less than significant.

Hydrology and Water Quality 9. (a) Less Than Significant Impacts With Mitigation Incorporated
The majority of the project area is, and will be, comprised of permeable surfaces (Primarily dirt, grass, hayfield, crushed granite and approximately 6,400 square feet of permeable paving). Of the project site's approximately 1,800,000 square foot coverage area, roughly 13,840 combined square feet (approximately .08%) will be made up of non-permeable surfaces (2,400 SF modular structures and 8,640 SF paved entry driveway, 1,800 SF ADA access sidewalks, 600 SF handicap parking stalls and 400 SF water system pad). Due to the relatively minor coverage area of non-permeable surface proposed, and the flat topography of the project area, alterations to existing drainage patterns at the site are not anticipated. The proposed non-permeable areas are located outside of the FEMA 100-Year Floodplain Area. A Stormwater Pollution Prevention Plan will be required to be submitted the Resource Management Agency – Environmental Services for review and approval prior to the issuance of any Building Permits.

Typically impacts to water quality associated with new develop are the result of either erosion, or contaminants entering the surface water from increased runoff across impervious surfaces. In this particular case the amount of impervious surface is very minor and runoff will not be collected and transported to a water body (the Carmel River.) Therefore there is not expected to be impacts from increased runoff. The site will include the presence of animals for herding and canines as part of the use. The manure produced by these animals if allowed to accumulate or if the concentration of animals was such that it could result in a degradation of water quality. In order to mitigate this, the following mitigation measure will be required:

Mitigation Measure 2:
A Manure Management Plan shall be prepared identifying the following:•

- The number of acres used for grazing. The number of grazing animals shall not exceed one animal for every 20,000 square feet of area devoted to grazing.
- The pasture area shall have all manure removed at least once each week and the manure shall be disposed of in a manner acceptable to the Environmental Health Bureau.
- All dog feces shall be picked up at the end of each day at the end of each day and shall be disposed of in a manner acceptable to the Environmental Health Bureau.
- The property owner will be responsible for monitoring the facility for compliance with these requirements. Monitoring shall be recorded in a log that will be maintained on site and is subject to inspection by the County of Monterey upon request.

Mitigation Measure 3:
A Storwmater Pollution Prevention Plan (SWPPP) must be submitted to, and approved by, the Resource Management Agency.

Hydrology and Water Quality 9. (b) Less Than Significant Impacts With Mitigation Incorporated

The water for the proposed use will come from the Carmel Valley Alluvial Aquifer (CVAA). The use of additional water on the site above that which is considered the baseline would constitute a significant impact due to the over appropriated condition of the CVAA and its status as critical habitat for two threatened species. However if the proposed use of water for the CCSC and the ongoing irrigation is less than the baseline, then the impact would be considered less than significant.

The determination of the baseline for water usage is critical to this determination. The site has been farmed dating back to the 1800's. For the last four years (since 2008) the site has been fallow. Because it is not uncommon to allow irrigated farmland to go fallow for a period of time, and due to the extended history of irrigated agriculture on this site, the determination of the baseline will not rest solely on the most recent years. Instead, the County will consider a broader span of time as well as protocols used by other agencies with regulatory authority over the CVAA.

The State Water Resources Control Board has determined in prior actions (Order 95-10 as amended by subsequent orders, Decision 1632) that the CVAA is a subterranean stream flowing through a known and definite channel making this alluvial aquifer essentially surface water. Surface water rights are divided into two general categories: riparian rights and appropriative rights. Riparian rights are considered the paramount water right and in most situations senior to appropriative rights. Riparian water rights are typically only vested in parcels abutting a watercourse, but in the case of the Carmel Valley Alluvial Aquifer parcels which overlie the underflow of the aquifer may have riparian rights unless they have been lost. In this situation, the property overlies the aquifer and the applicant and the property owner have claimed that the riparian right has not been lost. The applicant has submitted a Riparian Rights Determination to the Monterey Peninsula Water Management District as part of the required documentation for the MPWMD Water Distribution System (WDS) Permit application. This information is presently

being reviewed by MPWMD legal counsel, who will determine whether adequate water rights have been demonstrated pursuant to MPWMD Rule 21-A-6.

The potential for Riparian Rights is seen in SWRCB Decision 1632, which approved an Appropriative Permit for Monterey Peninsula Water Management District to appropriate water from the CVAA as part of the New Los Padres Dam and Reservoir Project. This action also identified those existing users with superior water rights to MPWMD either because of riparian rights or pre-1914 rights. The subject site was identified in Table 13 of Decision 1632 as a site that had the potential to have such rights. The SWRCB action in 1995 reserved 65 acre feet for appropriation to the subject site. This action was modified in 2003 to expand the water reserved for appropriation to 96 acre feet per year (WRO 2003-0014) Decision 1632 did not evaluate whether these rights actually existed. In order to perfect these rights the property owner would either need to receive a Riparian Rights determination or obtain an appropriative permit from the SWRCB to use that amount of water.

The property owner has an existing application with the SWRCB for an appropriative right to allow use of 96 acre feet of water per year. If this appropriative right is approved it is likely that there will be conditions to protect fisheries, wildlife and other in-stream uses in the Carmel River (such as minimum streamflow amounts before water extraction is allowed) that could result in production less than 96 acre-feet per year. In the event the Riparian Rights determination is made for the property an Appropriative Right will not be necessary.

The actions by the SWRCB have indicated that the recognized historical use of water on the site is 96 acre feet. This amount of water is reserved for the subject site as in Decision 1632, Table 13 (as modified by (WRO 2003-0014). It is reasonable to use the prior actions of a State Agency to determine the baseline; in this case that would be 96 acre feet of water per year.

CCSC is a new use on the property in addition to the existing and ongoing agriculture on the site. The new use requires a Water Distribution System Permit from the Monterey Peninsula Water Management District. This application has been submitted, but has not yet been acted upon. Based upon a preliminary review MPWMD stated in a July 17, 2013 letter that "*Based on the evidence available to date, and the District's protocol for wells in the Carmel Valley Alluvial Aquifer (CVAA), it is reasonable to assume (barring unforeseen new information) that MPWMD staff will recommend approval of 62.91 acre-feet per year, (AFY), which is the average of the most recent 10 years of metered well production.*" It is noted the that the 10 years of data did not include the four most recent fallow years.

MPWMD's standard for determining acceptable use from the CVAA is the average water production of the most recent 10 years of metered data, as available. Other time frames may be used if circumstances warrant. This is far less than the 96 acre feet identified by SWRCB. The MPWMD's requirements would prevent the amount of water used to exceed the baseline established above.

The site is currently served by two wells on one parcel which extract water from the Carmel River Alluvial Aquifer for distribution to a total of nine parcels. The existing residence on site

does not receive water from these wells or from another well on site, but rather from Cal-Am Water Company.

In the application to the MPWMD the applicant identifies that the proposed CCSC will use a total of 63.35 acre feet of water as follows:

Water Application	Amount of Water Used
Domestic (Treated water)	1.97
Pond Evaporation	2.44
Irrigation/Agriculture	58.03
Additional Landscaping	.30
Live Stock	.50
Dog Rinse Stations	.11
Total Water Use	**63.35**

The water use evaluated only takes into account the water used for growing the grass and other agricultural products and the water used for the Carmel Canine Sports Center use. This includes domestic water needed for restrooms. The amount of water needed for the proposed use is slightly above the amount of that which the MPWMD has stated they are likely to authorize. In order to insure that the provisions of the MPWMD and SWRCB are adhered to, the project should be conditioned to not allow initiation of the use until a Water Distribution System Permit has been issued by the MPWMD and either an Appropriative Rights determination has been granted by the SWRCB or a Riparian Rights Determination has been granted by the MPWMD. With the following Mitigation Measure, the impact to ground water would be Less than Significant:

Mitigation Measure 4:

Prior to initiation of the use, the applicant shall obtain the following:

1. Water Distribution System Permit from the Monterey Peninsula Water Management District.

   And, either:

2a. Appropriative Right from the State Water Resources Control Board

   Or

2b. Riparian Right Determination from the Monterey Peninsula Water Management District.

Monitoring Action:

The County will not issue any permits until these requirements are satisfied and the applicant shall not initiate any training, classes or other activities on the site until these requirements have been satisfied.

The proposed use will not interfere with groundwater recharge because most of the site will continue to be either grass or some other type of crop. Most of the parking areas will be composed of pervious surfaces, so water will be allowed to infiltrate back into the soil and into the groundwater. The impact to groundwater recharge is less than significant.

Hydrology and Water Quality 9. (c), (d) & (e) Less Than Significant

The project will not alter the manner in which the site drains or significantly increase runoff. The project will not result in the modification of any identified drainage channel. The limited amount of impervious surfaces added to the site will not appreciably affect the amount of runoff as the large area between the impervious surfaces and the Carmel River will allow the runoff to infiltrate into the ground water. Based upon these factors the site will not contribute runoff to either an existing channel or storm drain which would exceed the capacity of the channel or system to handle the additional runoff. Based this, the impact of additional runoff is expected to be less than significant.

10. LAND USE AND PLANNING Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community? (Source: 1, 14)	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? (Source: 1, 2, 3)	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan? (Source: 1, 2, 3, 4)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation:

Land Use and Planning 10. (a) & (c) No Impact

The proposed project will not add any additional physical barriers to divide to the community. The site is currently an agricultural field, with agriculture to the east, and a Country Club to the north and west. The placement of a canine training center is not significantly different in function from the adjacent country club. Both are recreationally based, both have large open lawn areas, and both have special events. There are no known conflicts with any existing Habitat Conservation Plans or Community Conservation Plans. Additionally, there are no National Wildlife Refuges, State-Designated Wildlife Areas, Ecological Reserves, or California Department of Fish & Wildlife (CDFWS) Public Access Lands in the project vicinity.

Land Use and Planning 10. (b) Less than Significant Impact

The project, due largely to its unique nature, does not directly fit within the description of any of the categories: "Uses Allowed," "Uses allowed—Administrative permit required in each case" or "Uses allowed—Use permit required in each case," pursuant to the Monterey County Inland Zoning Code (Title 21), section 21.14: "Regulations for Low Density Residential Zoning Districts or 'LDR' Districts." The code section does, however, include the following provision under "Use Permit" section:

> 21.14.050.X - Other uses of a similar character, density and intensity to those uses listed in this section

Note that among the "other uses" listed within the section are:

> 21.14.050.B - Public and quasi-public uses including churches, parks, playgrounds, schools, public safety facilities, schools, public utilities, but not including uses such as jails, detention facilities, rehabilitation centers or corporation yards;
>
> 21.14.050.C – Country clubs;

The project is not directly pose consistency issues with any policies listed in the 2010 Monterey County General Plan. Consistency is noted with the following General Plan - Carmel Valley Master Plan Policies, specifically:

> CV-1.1 All policies, ordinances, and decisions regarding Carmel Valley shall be consistent with the goal of preserving Carmel Valley's rural character. In order to preserve the rural character of Carmel Valley, development shall follow a rural architectural theme with design review.
>
> CV-1.16 Applications for service and special use facilities (including in Carmel Valley, Hidden Valley Music Seminars), as defined by the General Plan, are to be considered on their merits and shall not automatically be deemed inconsistent with the Plan. They must, however, conform to all applicable plan policies.
>
> CV-1.18 Facilities classified as either Public/Quasi-Public or Special Use (such as schools, churches, hospitals, convalescent homes, rehabilitation centers, hospice facilities, emergency facilities, and public facilities such as community halls) may be considered in any land use category provided that they meet the following criteria:
>
> a. Low visibility
> b. Safe and unobtrusive access away from pedestrian traffic areas.
> c. Low noise impact on surrounding uses.
> d. Development should follow a rural architectural theme with design review.
> e. Conform to all other Plan requirements.
>
> CV-2.7 Off-street parking should be developed at suitable locations within development areas.

11. MINERAL RESOURCES Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (Source: 1, 14)	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (Source: 1, 6, 14)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation: See Section IV.A.11

12. NOISE Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Source: 1, 2, 6, 7)	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (Source: 1, 2, 6, 7)	☐	☒	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (Source: 1, 6, 7)	☐	☒	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (Source: 1, 6, 7)	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (Source: 1, 6, 14)	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (Source: 1, 6, 14)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation:

The applicant sponsored a noise study prepared by Environmental Consulting Services, dated August 9, 2013. The noise study identifies existing noise sources to include Valley Greens Drive, small aircraft over flights, maintenance activities associated with Quail Lodge, and the Quail Lodge Maintenance facility located along the west boundary of the site. Background noise levels of 35-45 dBA come from Carmel Valley Road approximately 1000 feet north of the site.

The closest sensitive receptor locations for noise generated by the project are in three key areas:

1. Quail Lodge Transient residential units across Valley Green Drive
2. Single Family residences on the south side of the Lake Place neighborhood
3. Single family residences in the Poplar Lane neighborhood

Noise 12. (a), (b) (c) & (d) Less Than Significant Impact with Mitigation Measures.

There are several potential contributors to noise associated with the proposed Carmel Canine Sports Center project. The noise generating activities include dog training and competitive activities on site, as well as new vehicle trips on Valley Greens Drive. Other noise sources include RV generators and a low level amplified announcement system. These potential noise sources would have the following impacts:

- **Competitive Events**: The noise levels from barking at the closest receptors would be in the 50-58 dBA range depending on the distance involved. The barking would be clearly audible in nearby areas, but would be less than the 60 dBA acceptable standard contained in the 2010 Monterey County General Plan (see below.) Because the barking noises are brief, they would increase the daytime LEQ noise level at the receptors less than 0.5 dBA. This is considered a less than significant impact.

- **Amplified Sound System**. The noise study submitted by the applicant does not express an impact or recommended mitigation for use of amplified sound. The following Mitigation Measure is needed to insure that the use of amplified sound is consistent with the 2010 Monterey County General Plan

  Mitigation Measure 5: Prior to use of any amplified sound system on site, the applicant shall design a sound system which will not generate noise above 60 dBA at the property line. The system shall be reviewed by an Acoustical Engineer who shall review the system design and volume and attest that the system will not produce sound in excess of 60 dBA at the property line. If there are complaints about the sound system, the applicant shall hire an acoustical consultant to monitor noise at the property boundaries during special events. If it is determined that the sound at the property lines exceed 60 dBA, the sound system shall be modified to maintain a noise level below 60 dBA.

  With this mitigation measure the impact is considered less than significant.

- **RV Generator Noise**. The RV event parking area in the northeast corner of the site will have up to 70 RVs. RVs may have generators which produce noise levels of 45-55 dBA at 50 feet. These generators would not be used between 8:30 pm and 8:00 am. For the closest receptors the noise levels would be at most 40 dBA, which is equivalent to the ambient daytime noise. This is considered a less than significant impact.

- **Daily Canine Training and exercise Activities**. Up to 100 owner/dog visits per day are anticipated, distributed over the daily operating hours of 7 am to 8:30 pm. Only a portion of the 100 users and their dogs would be on site at the same time. Along with sporadic vehicle trips to the site, some intermittent barking by dogs would occur but much less frequently than in the context of the events. Barking would not noticeably increase the noise levels at nearby receptors during normal daily CCSC activities and thus would be considered a less than significant impact.

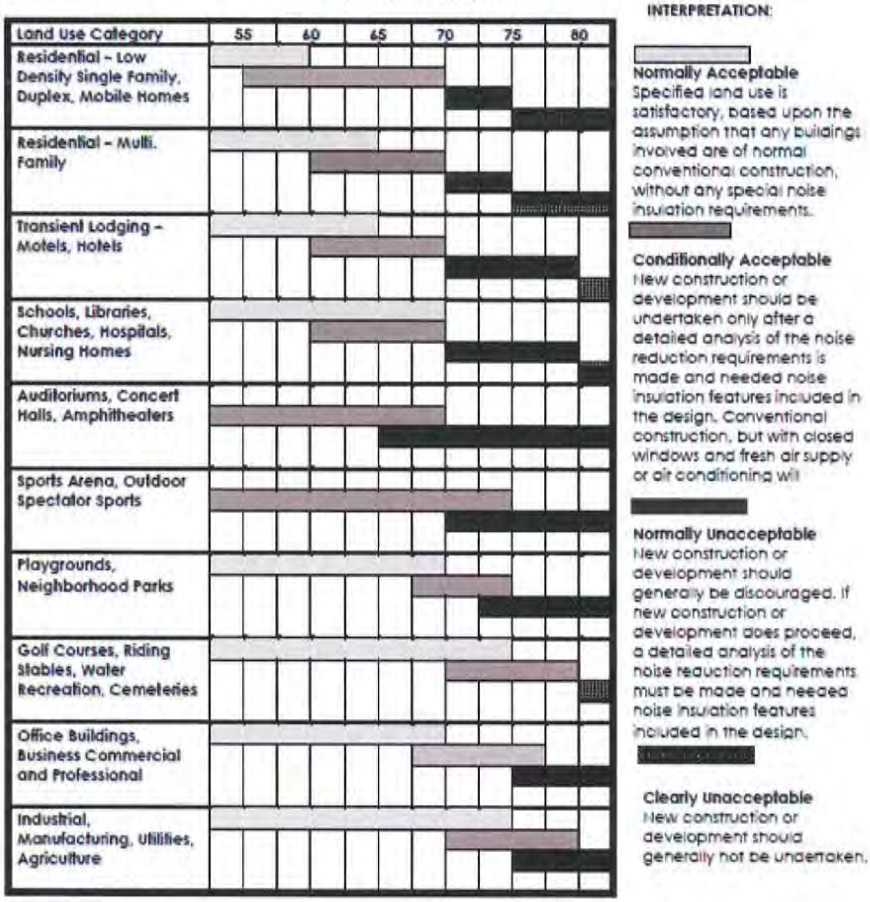
- **Traffic Noise – Daily traffic**. There are 264 trips a day expected associated with daily training activities. These trips on Valley Greens Drive would be spread out throughout the day, with no more than approximately 20 trips per hour, or an average of 1 vehicle every three minutes. Relative to the current traffic of 1-2 vehicles per minute, this traffic increase and the associated noise would be a less than significant impact.

- **Traffic Noise – Special Events**. It is expected that approximately 400 trips will go to and from the site on event days. This would include approximately 132 vehicle arriving during the 6 am to 7 am time period. In the case the closes sensitive receptor would be the Quail Lodge transient units which would experience a noise level of approximately 52-54 dBA. The sensitive receptors at Lake Place and Poplar Lane are further away and the noise impact would be less. Based upon these findings and that the impacts are infrequent (only on event days)

Pursuant to the Monterey County 2010 General Plan Safety Element, section S-7 (Noise Hazards), Table S-2, development with the Land Use Category "Residential – Low Density Single Family, Duplex, Mobile Homes" shall adhere to the following standards:

Normally Acceptable:	Up to 60 decibels
Conditionally Acceptable:	55 to 70 decibels
Normally Unacceptable:	70-75 decibels
Clearly Unacceptable:	75+ decibels

TABLE S-2
Community Noise Exposure
Ldn or CNEL, dB



Source: OPR General Plan Guidelines

The analysis above finds that the project is or can be conditioned to be consistent with the 2010 Monterey County General Plan for noise generation associated with Single Family Residences. The noise study prepared by the applicant finds that the overall increase in noise above the ambient is less than 0.5 dBA. Based upon these factors the noise impact is considered less than significant.

Noise 12. (e) & (f) No Impact.

The project is not within proximity to an airstrip and thus there is no impact.

13. POPULATION AND HOUSING Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (Source: 1)	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (Source: 1)	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (Source: 1)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation: See Section IV.A.13

14. PUBLIC SERVICES Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection? (Source:)	☐	☐	☒	☐
b) Police protection? (Source: 1)	☐	☐	☒	☐
c) Schools? (Source: 1)	☐	☐	☐	☒
d) Parks? (Source: 1)	☐	☐	☐	☒
e) Other public facilities? (Source: 1)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation:

<u>Public Services 14. (c), (d) & (e) No Impact</u>

The project will not feasibly have any impact on local schools or parks. Schools and park demand is related to creation of additional residential units which this project will not do.

Public Services 14. (a) & (b) Less Than Significant Impact

The project may result in a slight increase in the number of required responses by local police and fire services, due to calls resulting from incidents at the project site.

15. RECREATION Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (Source: 1, 14)	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (Source: 1)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation: See Section IV.A.15

16. TRANSPORTATION/TRAFFIC Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? (Source: 1, 2, 3, 6, 10)	☐	☒	☐	☐
b) Conflict with the goals, objectives, and policies of the 2010 Regional Transportation Plan for Monterey County, including, but not limited to level of service standards and travel demand measures, or other standards established by the Transportation Agency for Monterey County (TAMC) for designated roads or highways? (Source: 1, 2, 3, 6, 10)	☐	☐	☒	☐

16. TRANSPORTATION/TRAFFIC Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks? (Source: 1, 6, 10, 14)	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (Source: 1, 6, 10)	☐	☐	☒	☐
e) Result in inadequate emergency access? (Source: 1, 6, 10)	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? (Source: 1, 2, 3, 6)	☐	☐	☐	☒

Discussion/Conclusion/Mitigation:
The site takes access off of Valley Greens Drive, which is a two lane collector providing access to the Quail Meadows neighborhood, and Quail Lodge. Valley Greens Drive intersects with Carmel Valley Road at an un-signalized intersection approximately 1,400 feet northeast of the site intersection. It is expected that most trips will access the site through this intersection via Carmel Valley Road. Valley Greens Drive also intersects with a private road, Rancho San Carlos which is approximately a mile to the west of the site entrance. Rancho San Carlos Road intersects with Carmel Valley Road at a signalized intersection. Rancho San Carlos Road does not function as a private road between Valley Greens Drive and the intersection with Carmel Valley Road.

The evaluation of the traffic impacts requires consideration of the normal daily usage of the site, and that the impact of the 24 special event days be considered. The criteria for determining whether a project has a significant adverse impact upon the environment is contained in the 2010 Monterey County General Plan, specifically the policies contained within the Carmel Valley Master Plan. The relevant portion of CV-2.17 states:

f) The traffic standards (LOS as measured by peak hour conditions) for the CVMP Area shall be as follows:

1) Signalized Intersections – LOS of "C" is the acceptable condition.

2) Unsignalized Intersections – LOS of "F" or meeting of any traffic signal warrant are defined as unacceptable conditions.

3) Carmel Valley Road Segment Operations:

a) LOS of "C" and ADT below its threshold specified in Policy CV-2.17(a) for Segments 1, 2, 8, 9, 10, 11, 12 and 13 is an acceptable condition;

b) LOS of "D" and ADT below its threshold specified in Policy CV-2.17(a) for Segments 3, 4, 5, 6, and 7 is an acceptable condition.

During review of development applications that require a discretionary permit, if traffic analysis of the proposed project indicates that the project would result in traffic conditions that would exceed the standards described above in Policy CV 2.17(f), after the analysis takes into consideration the Carmel Valley Traffic Improvement Program to be funded by the Carmel Valley Road Traffic Mitigation Fee, then approval of the project shall be conditioned on the prior (e.g., prior to project-generated traffic) construction of additional roadway improvements or an Environmental Impact Report shall be prepared for the project, which will include evaluation of traffic impacts based on the ADT methodology. Such additional roadway improvements must be sufficient, when combined with the projects programmed for completion prior to the project generated traffic in the Carmel Valley Traffic Improvement Program, to allow County to find that the affected roadway segments or intersections would meet the acceptable standard upon completion of the programmed plus additional improvements. Any EIR required by this policy shall assess cumulative traffic impacts outside the CVMP area arising from development within the CVMP area.

The applicant has prepared a traffic Study by Hexagon Transportation Consultants dated August 19, 2013, which was updated on December 6, 2013. This analysis uses information contained in that report.

16 (a) Less than Significant with Mitigation Incorporated. The applicable General Plan Policy cited above finds that the appropriate Level of Service along Carmel Valley Road which would be impacted by the Project would be LOS D. If sufficient traffic is generated to degrade the Level of Service of an un-signalized intersection to LOS F or meet traffic signal warrants after completion of Improvements specified in the Carmel Valley Capital Improvement Program, then the project would either need to install additional improvements to mitigate the impact or an EIR would be required.

The Traffic Study finds that the trip generation for the typical daily operation of the site would have no impact upon the level of service. The daily operation of the site would generate 300 trips (150 arrivals/150 departures) only 14 of these trips would be generated during the PM peak hour. This volume of traffic would allow the intersection for through traffic on Carmel Valley Road to function at the current LOS A/B. The LOS for the Valley Greens Drive approach to the intersection is projected to operate at a LOS E. Based upon the criteria of General Plan Policy CV-2.17 this would be a Less than Significant Impact.

The traffic analysis for the 24 special event days assumed that there would be 250 people attending (participants, observers, employees and vendors) which would generate 442 trips (256 arrivals, and 186 departures.) The 256 arrivals allows for in and out trips, and the difference between arrivals and departures is because it is assumed that the RV's will not come and go but will remain on site. This level of traffic will not have an adverse impact upon the LOS for traffic on Carmel Valley Road. This level of traffic will adversely affect the Valley Greens Approach of the intersection with Carmel Valley Road. This approach will be degraded to an LOS F.

The intersection of Carmel Valley Road and Valley Greens Drive is being studied within the Carmel Valley Road Corridor Plan. Improvements are currently being evaluated to install either

a signal or a roundabout at this intersection. These improvements have not been incorporated into the Carmel Valley Capital Improvement Plan and so cannot be considered as mitigation for the impacts associated with this project.

The traffic analysis prepared by the applicant identifies that the threshold for degrading the intersection from LOS E to LOS F during this time is 40 cars. The applicant proposes to have a monitor at the driveway of the site regulating the number of cars leaving the site between 3:00 PM and 6:00PM. The Traffic Control Monitor would direct traffic to either northbound or southbound Valley Greens Drive based on the northbound vehicular queues at the northbound Valley Greens Drive approach to Carmel Valley Road. RMA – Public Works staff reviewed this proposal and is unable to determine if it would be effective in mitigating the impact; in addition this is not a workable proposal because it is not enforceable.

The impact to the Valley Greens Drive intersection with Carmel Valley Road will only be realized on Friday evenings when there are special events taking place. This impact would be mitigated if the improvements proposed in the Carmel Valley Road Corridor Study were to be installed. There is no guarantee at this point that those improvements will be installed so that mitigation cannot be relied upon. There are two potential ways of providing alternative mitigation. One would be to require sworn officers control traffic at the intersection of Carmel Valley Road/Valley Greens Drive on Friday evenings between 3:00 PM and 6:00PM. This would ensure that Valley Greens Drive traffic queues on the approach to Carmel Valley Road would be able to safely move. Another option would be to not allow any operation of the site or exiting from the site between the hours of 3:00 PM and 6:00 PM on Friday evenings for special events. Either of these measures would adequately address the limited duration impact to the intersection. A mitigation measure is being proposed that would either require a sworn officer to control the intersection of Carmel Valley Road and Valley Greens Drive on Friday evenings during event weekends, or require that no activities take place on site during those hours. The mitigation measure is proposed as follows:

Mitigation Measure 6:

On the weekends when special events are scheduled the applicant shall do one of the following:

1. Keep the site closed and schedule no activities on the site between the hours of 3:00 PM and 6:00 PM. The gates shall remain closed and no access to the parking area is permitted. Vehicles coming to the site and parking on Valley Greens Drive would be a violation of this provision; Or
2. Contract with the Highway Patrol or Monterey County Sherriff's Office to control the intersection of Valley Greens Drive and Carmel Valley Road between the hours of 3:00 PM and 6:00 PM.

With the implementation of this Mitigation Measure, the impact to the area roadway system will be reduced to a Less than Significant Level.

16 (b, d, e) Less than Significant. The project will generate traffic that impacts regional roadways, but will be required to pay fees to the Transportation Agency of Monterey County for

the improvement of regional roadways. The payment of these fees will mitigate the impact for the proposed project and the impact will be Less than Significant.

As part of the traffic analysis prepared by the applicant a safety evaluation was provided for the intersection of Carmel Valley Road and Valley Greens Drive. The collision data for this intersection indicate that there have been 8 collisions over the last 5 years. Five of these accidents occurred while a temporary signal was installed while the bridge over the Carmel River on Rancho San Carlos was being repaired. The collision rate for this intersection is lower than the Caltrans average for a rural two-way stop controlled intersection. Based upon the collision rate calculation, there does not appear to be an issue with the functioning of the Carmel Valley Road and Valley Greens intersection.

The traffic study also looked at the sight distance at this intersection. Carmel Valley Road has a posted speed limit of 50 miles per hour and based upon this speed the necessary sight distance according to the American Association of State highway and Transportation Officials is 425 feet. The traffic consultant found that there is over 450 feet of sight distance available at this intersection. Therefore adequate sight distance is available and there is a Less than Significant impact associated with roadway hazards.

Based upon the fact that the roadways and intersections will continue to function at acceptable levels with the mitigation provided, it is not expected that emergency access will be at all impeded. The proposed use will generate traffic and this may place additional cars on the road during an emergency response. The site is located on a collector street and not a arterial (such as Carmel Valley Road) so there will be little impact to emergency response and the impact is Less than Significant.

16 (c, f) No Impact. The proposed project will not have any impact upon air traffic patterns, it is not in a runway approach, and will not install structures that may affect aircraft and thus there is no impact. The site is not located such that it will interfere with any public transportation, bicycle or pedestrian facilities thus there is no impact.

17. UTILITIES AND SERVICE SYSTEMS **Would the project:**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (Source:1)	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Source: 1)	☐	☐	☒	☐

17. UTILITIES AND SERVICE SYSTEMS Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Source:1)	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (Source: 1)	☐	☒	☐	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (Source: 1)	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? (Source:1)	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste? (Source: 1)	☐	☐	☒	☐

Discussion/Conclusion/Mitigation:

Utilities and Service Systems 17. (b), (c), (e) No Impact

The project will be serviced by a private, on-site, septic system and will not be reliant upon a wastewater treatment provider. The project site is 99%+ permeable surface, and would remain so after full build-out of the proposed project. As such, new stormwater drainage facilities will not be required. Therefore there is no impact.

Utilities and Service Systems 17. (a), (d) (f) & (g) Less Than Significant Impact

The Environmental Health Bureau (EHB) has determined that adequate area exists for onsite wastewater disposal for the proposed development. The subject properties are located within sub basin 32 of the Carmel Valley Wastewater Study by Montgomery Consulting Engineers, Inc. (1981), which limits onsite wastewater disposal to 300 gallons per lot per day. The project comprises eight (8) lots, one of which is currently developed with a single family dwelling. Therefore, onsite wastewater disposal generated by the project is limited to 2,100 gallons per day. Wastewater generation shall be calculated based on 8 gallons wastewater/person/day for attendees or vendors and 20 gallons wastewater/person/day for employees. No wastewater producing development beyond the scope of this project will be allowed on the subject properties for as long as this use permit is maintained. The worst case scenario would be during special events where there are 250 people on site. If there are 8 employees and 242 other attendees this

would result in a wastewater discharge of 2,096 gallons, which complies with the 2,100 gallon limitation.

The project, as proposed, will comply with federal, state and local solid waste disposal regulations. Waste produced at the site will not, in and of itself, to cause any local landfills to exceed permitted capacities.

Utilities and Service Systems 17. (d) Less Than Significant With Mitigation Incorporated
See "Hydrology and Water Quality 9. (b)" for a discussion an available water entitlements.

Testing has indicated trace amounts of arsenic in the on-site wells. The Monterey County Environmental Health Bureau has determined, however, that the arsenic level does not warrant treatment of the water due to the fact that the water system is of a "transient non-community" nature. The Environmental Health Bureau has also noted:

> There are two wells located on the property labeled as the small well (installed in 2001) and the large well (installed in 1992). Both wells were originally intended for irrigation use. The applicant has indicated that they will be using the small well for potable water and the large well for irrigation. A transient non-community small water system permit will be required to serve the project, utilizing the small well as the source (serves at least 25 individuals daily at least 60 days out of the year, but does not meet the requirements of a community or non-transient non-community water system). A condition has been added to obtain a water system permit and to submit engineered plans for water system improvements. A condition has been added to require that the small well be protected with fencing so that no potentially contaminating activities occur within the 50' well protection zone required for public water systems.

I. MANDATORY FINDINGS OF SIGNIFICANCE

Does the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? (Source:1)	☐	☐	☒	☐
b) Have impacts that are individually limited, but cumulatively considerable? (Source:) ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? (Source: 1)	☐	☐	☒	☐
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (Source: 1)	☐	☐	☒	☐

Discussion/Conclusion/Mitigation:

Mandatory finding (a) Less than significant.
The proposed project will not significantly degrade the quality of the environment relative to any biological resources. The site portion of the site which has the most environmental sensitivity is the riparian corridor along the Carmel River. This area is not being modified by this project, and a condition has been added to preclude modification of the riparian corridor.

Mandatory finding (b) Less than significant
The proposed project would not have any impact on Population/Housing, Cultural Resources, hazards/Hazardous Materials, Mineral Resources, Utilities Services, Geology and Soils or recreation and thus will not contribute to a cumulative impact. The site consists of agricultural land but will continue to be available for agricultural use in the long term. The impacts to biology are limited because the primary site disturbance is on land which has historically been farmed and there are not biological resources remaining in those locations. A mitigation measure has been added to protect the riparian corridor along the Carmel River. The use of water his heavily regulated within the Carmel Valley Alluvial Aquifer and the project will not use water that is not already reserved for use on this site. The project will contribute to traffic at the

intersection of Carmel Valley Road and Valley Greens Drive, and mitigation has been added to address the impacts of the special events

Mandatory finding (c) Less than significant
The proposed project will not cause impacts to humans either directly or indirectly. The project will not use or generate hazardous materials. There will be additional nighttime illumination of the site, and noise but these impacts are considered less than significant. The project will not result in conditions that are unsafe for humans and thus this impact is considered to be less than significant.

VIII. FISH AND GAME ENVIRONMENTAL DOCUMENT FEES

Assessment of Fee:

The State Legislature, through the enactment of Senate Bill (SB) 1535, revoked the authority of lead agencies to determine that a project subject to CEQA review had a "de minimis" (minimal) effect on fish and wildlife resources under the jurisdiction of the Department of Fish and Game. Projects that were determined to have a "de minimis" effect were exempt from payment of the filing fees.

SB 1535 has eliminated the provision for a determination of "de minimis" effect by the lead agency; consequently, all land development projects that are subject to environmental review are now subject to the filing fees, unless the Department of Fish and Game determines that the project will have no effect on fish and wildlife resources.

To be considered for determination of "no effect" on fish and wildlife resources, development applicants must submit a form requesting such determination to the Department of Fish and Game. Forms may be obtained by contacting the Department by telephone at (916) 631-0606 or through the Department's website at www.dfg.ca.gov.

Conclusion: The project (will/will not) be required to pay the fee.

Evidence: Based on the record as a whole as embodied in the Planning Department files pertaining to PLN130352 and the attached Proposed (Mitigated) Negative Declaration.

IX. REFERENCES

1. PLN130352 Project Application/Plans
2. 2010 Monterey County General Plan
3. Carmel Valley Master Plan
4. Title 21 of the Monterey County Code (Zoning Ordinance)
5. CEQA Air Quality Guidelines, Monterey Bay Unified Air Pollution Control District, Revised February 2008
6. Numerous Site Visits conducted by the project planners from May 9, 2013 through December 9, 2013.
7. "Noise Impact and Mitigation Study" (Monterey County Document No. LIB130301), prepared by H. Stanton Shelley (Environmental Consulting Services), Saratoga, CA, August 9, 2013
8. "CCSC Preliminary Potable Water Quality" (LIB130303), prepared by Frank Campo, P.E. (C3 Engineering), Monterey, CA, August 1, 2013
9. "CCSC Water Rights Application Materials to the Monterey Peninsula Water Management District (MPWMD)," (LIB130425), Numerous preparers and preparation dates, Submitted to Monterey County Planning Department November 15, 2013
10. "Carmel Canine Sports Center Traffic Constraints Analysis" (LIB130235), prepared by Robert Del Rio, T.E. (Hexagon Transportation Consultants), Gilroy, CA, June 26, 2013. Addendum: August 19, 2013 (LIB130302), Addendum: November 14, 2013 (LIB130424), Addendum December 6, 2013 (LIB130490)
11. "Preliminary Cultural Resources Reconnaissance" (LIB130220), prepared by Susan Morley, M.A., June 2013, Marina, CA
12. "Water Rights Application Materials" (LIB130425), Various preparers, submitted to County November 15, 2013
13. "2008 Air Quality Management Plan for the Monterey Bay Region," Prepared by Monterey Bay Unified Air Pollution Control District, August 2008
14. Monterey County Geographic Information Systems (GIS) Sources

APPENDIX C
AIR QUALITY CALCULATIONS

Canine Camp Parking Lot

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	2.21	Acre	2.21	96,267.60	0
Golf Course	34.79	Acre	34.79	1,515,452.40	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - PD says 2 months for grading and paving and 2 months for modular building placement and other site improvements

Trips and VMT - Number of workers for construction is between 3 and 8 depending on activity. 6 was used as an average.

Vender trips per day reflect increased deliveries and trips during construction.

Grading - PD identifies 5 acres will be disturbed

Vehicle Trips - 72 trips identified in the traffic study for regular operation assuming a morning and afternoon groupd of patrons.
6000 trips for 24 events; 6000/365=16.44 average trips per day
added to the normal operational week day trips.
Trips scaled by dividing trips by golf course acreage

Land Use Change -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	740.00	40.00
tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	55.00	20.00
tblConstructionPhase	PhaseEndDate	8/19/2015	8/18/2015
tblConstructionPhase	PhaseEndDate	6/25/2015	6/24/2015
tblConstructionPhase	PhaseStartDate	6/25/2015	6/24/2015
tblConstructionPhase	PhaseStartDate	5/29/2015	5/28/2015
tblGrading	AcresOfGrading	50.00	5.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	264.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	6.00
tblTripsAndVMT	WorkerTripNumber	15.00	6.00
tblTripsAndVMT	WorkerTripNumber	677.00	6.00
tblVehicleTrips	ST_TR	5.82	0.47
tblVehicleTrips	SU_TR	5.88	0.47
tblVehicleTrips	WD_TR	5.04	2.54

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.1693	1.6500	1.0664	1.4200e-003	0.0661	0.0946	0.1607	0.0342	0.0879	0.1221	0.0000	132.5097	132.5097	0.0364	0.0000	133.2734
Total	**0.1693**	**1.6500**	**1.0664**	**1.4200e-003**	**0.0661**	**0.0946**	**0.1607**	**0.0342**	**0.0879**	**0.1221**	**0.0000**	**132.5097**	**132.5097**	**0.0364**	**0.0000**	**133.2734**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.1693	1.6500	1.0664	1.4200e-003	0.0315	0.0946	0.1261	0.0159	0.0879	0.1038	0.0000	132.5095	132.5095	0.0364	0.0000	133.2732
Total	**0.1693**	**1.6500**	**1.0664**	**1.4200e-003**	**0.0315**	**0.0946**	**0.1261**	**0.0159**	**0.0879**	**0.1038**	**0.0000**	**132.5095**	**132.5095**	**0.0364**	**0.0000**	**133.2732**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.34**	**0.00**	**21.52**	**53.62**	**0.00**	**15.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.0540	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	24.6447	24.6447	1.1100e-003	2.3000e-004	24.7396
Mobile	0.0612	0.1410	0.6413	8.2000e-004	0.0530	1.6800e-003	0.0547	0.0142	1.5400e-003	0.0157	0.0000	67.3687	67.3687	4.0300e-003	0.0000	67.4533
Waste						0.0000	0.0000		0.0000	0.0000	6.5668	0.0000	6.5668	0.3881	0.0000	14.7165
Water						0.0000	0.0000		0.0000	0.0000	0.0000	42.2057	42.2057	1.9100e-003	3.9000e-004	42.3681
Total	**8.1152**	**0.1410**	**0.6416**	**8.2000e-004**	**0.0530**	**1.6800e-003**	**0.0547**	**0.0142**	**1.5400e-003**	**0.0157**	**6.5668**	**134.2197**	**140.7865**	**0.3951**	**6.2000e-004**	**149.2783**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.0540	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	24.6447	24.6447	1.1100e-003	2.3000e-004	24.7396
Mobile	0.0612	0.1410	0.6413	8.2000e-004	0.0530	1.6800e-003	0.0547	0.0142	1.5400e-003	0.0157	0.0000	67.3687	67.3687	4.0300e-003	0.0000	67.4533
Waste						0.0000	0.0000		0.0000	0.0000	6.5668	0.0000	6.5668	0.3881	0.0000	14.7165
Water						0.0000	0.0000		0.0000	0.0000	0.0000	42.2057	42.2057	1.9100e-003	3.9000e-004	42.3681
Total	**8.1152**	**0.1410**	**0.6416**	**8.2000e-004**	**0.0530**	**1.6800e-003**	**0.0547**	**0.0142**	**1.5400e-003**	**0.0157**	**6.5668**	**134.2197**	**140.7865**	**0.3951**	**6.2000e-004**	**149.2783**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	-12.4000
Total	**-12.4000**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	5/1/2015	5/28/2015	5	20	
2	Paving	Paving	5/28/2015	6/24/2015	5	20	
3	Construction	Building Construction	6/24/2015	8/18/2015	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Construction	Cranes	1	7.00	226	0.29
Construction	Forklifts	3	8.00	89	0.20
Construction	Generator Sets	1	8.00	84	0.74
Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	6.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	6.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Construction	9	6.00	2.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0629	0.0000	0.0629	0.0334	0.0000	0.0334	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0678	0.7905	0.5084	6.2000e-004		0.0380	0.0380		0.0350	0.0350	0.0000	58.8422	58.8422	0.0176	0.0000	59.2111
Total	**0.0678**	**0.7905**	**0.5084**	**6.2000e-004**	**0.0629**	**0.0380**	**0.1009**	**0.0334**	**0.0350**	**0.0684**	**0.0000**	**58.8422**	**58.8422**	**0.0176**	**0.0000**	**59.2111**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	7.2000e-004	6.4000e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.7144	0.7144	5.0000e-005	0.0000	0.7155
Total	**4.1000e-004**	**7.2000e-004**	**6.4000e-003**	**1.0000e-005**	**7.4000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.7144**	**0.7144**	**5.0000e-005**	**0.0000**	**0.7155**

3.2 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0283	0.0000	0.0283	0.0150	0.0000	0.0150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0678	0.7905	0.5084	6.2000e-004		0.0380	0.0380		0.0350	0.0350	0.0000	58.8421	58.8421	0.0176	0.0000	59.2110
Total	**0.0678**	**0.7905**	**0.5084**	**6.2000e-004**	**0.0283**	**0.0380**	**0.0663**	**0.0150**	**0.0350**	**0.0500**	**0.0000**	**58.8421**	**58.8421**	**0.0176**	**0.0000**	**59.2110**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	7.2000e-004	6.4000e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.7144	0.7144	5.0000e-005	0.0000	0.7155
Total	**4.1000e-004**	**7.2000e-004**	**6.4000e-003**	**1.0000e-005**	**7.4000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.7144**	**0.7144**	**5.0000e-005**	**0.0000**	**0.7155**

3.3 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0232	0.2518	0.1498	2.2000e-004		0.0142	0.0142		0.0130	0.0130	0.0000	21.2272	21.2272	6.3400e-003	0.0000	21.3603
Paving	2.9000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0261**	**0.2518**	**0.1498**	**2.2000e-004**		**0.0142**	**0.0142**		**0.0130**	**0.0130**	**0.0000**	**21.2272**	**21.2272**	**6.3400e-003**	**0.0000**	**21.3603**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	7.2000e-004	6.4000e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.7144	0.7144	5.0000e-005	0.0000	0.7155
Total	**4.1000e-004**	**7.2000e-004**	**6.4000e-003**	**1.0000e-005**	**7.4000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.7144**	**0.7144**	**5.0000e-005**	**0.0000**	**0.7155**

3.3 Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0232	0.2518	0.1498	2.2000e-004		0.0142	0.0142		0.0130	0.0130	0.0000	21.2272	21.2272	6.3400e-003	0.0000	21.3603
Paving	2.9000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0261**	**0.2518**	**0.1498**	**2.2000e-004**		**0.0142**	**0.0142**		**0.0130**	**0.0130**	**0.0000**	**21.2272**	**21.2272**	**6.3400e-003**	**0.0000**	**21.3603**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	7.2000e-004	6.4000e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.7144	0.7144	5.0000e-005	0.0000	0.7155
Total	**4.1000e-004**	**7.2000e-004**	**6.4000e-003**	**1.0000e-005**	**7.4000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.7144**	**0.7144**	**5.0000e-005**	**0.0000**	**0.7155**

3.4 Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0732	0.6006	0.3749	5.4000e-004		0.0423	0.0423		0.0398	0.0398	0.0000	48.7989	48.7989	0.0122	0.0000	49.0560
Total	**0.0732**	**0.6006**	**0.3749**	**5.4000e-004**		**0.0423**	**0.0423**		**0.0398**	**0.0398**	**0.0000**	**48.7989**	**48.7989**	**0.0122**	**0.0000**	**49.0560**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.5000e-004	4.2800e-003	7.6900e-003	1.0000e-005	2.3000e-004	7.0000e-005	3.0000e-004	7.0000e-005	7.0000e-005	1.3000e-004	0.0000	0.7837	0.7837	1.0000e-005	0.0000	0.7839
Worker	8.1000e-004	1.4400e-003	0.0128	2.0000e-005	1.4800e-003	2.0000e-005	1.5000e-003	3.9000e-004	1.0000e-005	4.1000e-004	0.0000	1.4288	1.4288	1.1000e-004	0.0000	1.4311
Total	**1.4600e-003**	**5.7200e-003**	**0.0205**	**3.0000e-005**	**1.7100e-003**	**9.0000e-005**	**1.8000e-003**	**4.6000e-004**	**8.0000e-005**	**5.4000e-004**	**0.0000**	**2.2126**	**2.2126**	**1.2000e-004**	**0.0000**	**2.2150**

3.4 Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0732	0.6006	0.3749	5.4000e-004		0.0423	0.0423		0.0398	0.0398	0.0000	48.7988	48.7988	0.0122	0.0000	49.0559
Total	**0.0732**	**0.6006**	**0.3749**	**5.4000e-004**		**0.0423**	**0.0423**		**0.0398**	**0.0398**	**0.0000**	**48.7988**	**48.7988**	**0.0122**	**0.0000**	**49.0559**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.5000e-004	4.2800e-003	7.6900e-003	1.0000e-005	2.3000e-004	7.0000e-005	3.0000e-004	7.0000e-005	7.0000e-005	1.3000e-004	0.0000	0.7837	0.7837	1.0000e-005	0.0000	0.7839
Worker	8.1000e-004	1.4400e-003	0.0128	2.0000e-005	1.4800e-003	2.0000e-005	1.5000e-003	3.9000e-004	1.0000e-005	4.1000e-004	0.0000	1.4288	1.4288	1.1000e-004	0.0000	1.4311
Total	**1.4600e-003**	**5.7200e-003**	**0.0205**	**3.0000e-005**	**1.7100e-003**	**9.0000e-005**	**1.8000e-003**	**4.6000e-004**	**8.0000e-005**	**5.4000e-004**	**0.0000**	**2.2126**	**2.2126**	**1.2000e-004**	**0.0000**	**2.2150**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0612	0.1410	0.6413	8.2000e-004	0.0530	1.6800e-003	0.0547	0.0142	1.5400e-003	0.0157	0.0000	67.3687	67.3687	4.0300e-003	0.0000	67.4533
Unmitigated	0.0612	0.1410	0.6413	8.2000e-004	0.0530	1.6800e-003	0.0547	0.0142	1.5400e-003	0.0157	0.0000	67.3687	67.3687	4.0300e-003	0.0000	67.4533

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Golf Course	88.44	16.44	16.44	141,680	141,680
Parking Lot	0.00	0.00	0.00		
Total	88.44	16.44	16.44	141,680	141,680

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Golf Course	14.70	6.60	6.60	33.00	48.00	19.00	52	39	9
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.464859	0.039088	0.210752	0.165462	0.051917	0.007362	0.015753	0.027922	0.002976	0.002213	0.008136	0.000842	0.002718

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24.6447	24.6447	1.1100e-003	2.3000e-004	24.7396
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24.6447	24.6447	1.1100e-003	2.3000e-004	24.7396
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	84715.5	24.6447	1.1100e-003	2.3000e-004	24.7396
Total		**24.6447**	**1.1100e-003**	**2.3000e-004**	**24.7396**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	84715.5	24.6447	1.1100e-003	2.3000e-004	24.7396
Total		**24.6447**	**1.1100e-003**	**2.3000e-004**	**24.7396**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.0540	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004
Unmitigated	8.0540	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7594					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.2946					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004
Total	**8.0540**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.6000e-004**	**6.6000e-004**	**0.0000**	**0.0000**	**7.0000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7594					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.2946					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004
Total	**8.0540**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.6000e-004**	**6.6000e-004**	**0.0000**	**0.0000**	**7.0000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	42.2057	1.9100e-003	3.9000e-004	42.3681
Unmitigated	42.2057	1.9100e-003	3.9000e-004	42.3681

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 41.4516	42.2057	1.9100e-003	3.9000e-004	42.3681
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**42.2057**	**1.9100e-003**	**3.9000e-004**	**42.3681**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 41.4516	42.2057	1.9100e-003	3.9000e-004	42.3681
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**42.2057**	**1.9100e-003**	**3.9000e-004**	**42.3681**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.5668	0.3881	0.0000	14.7165
Unmitigated	6.5668	0.3881	0.0000	14.7165

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	32.35	6.5668	0.3881	0.0000	14.7165
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**6.5668**	**0.3881**	**0.0000**	**14.7165**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	32.35	6.5668	0.3881	0.0000	14.7165
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**6.5668**	**0.3881**	**0.0000**	**14.7165**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-12.4000	0.0000	0.0000	-12.4000

10.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Cropland	37 / 35	-12.4000	0.0000	0.0000	-12.4000
Total		**-12.4000**	**0.0000**	**0.0000**	**-12.4000**

Canine Camp Parking Lot

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	2.21	Acre	2.21	96,267.60	0
Golf Course	34.79	Acre	34.79	1,515,452.40	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - PD says 2 months for grading and paving and 2 months for modular building placement and other site improvements, 5 additional days of grading added to account for emissions from grading of pond area.

Trips and VMT - Number of workers for construction is between 3 and 8 depending on activity. 6 was used as an average.

Vender trips per day reflect increased deliveries and trips during construction.

Grading - PD identifies 5 acres will be disturbed

Vehicle Trips - 72 trips in the traffic study for regular ops assuming am and pm groups.
6000 trips for 24 events; 6000/365=16.44 average trips per day
added to the normal operational week day trips.
Trips scaled by dividing trips by golf course acreage

Land Use Change -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	740.00	40.00
tblConstructionPhase	NumDays	75.00	25.00
tblConstructionPhase	NumDays	55.00	20.00
tblConstructionPhase	PhaseEndDate	8/19/2015	8/18/2015
tblConstructionPhase	PhaseEndDate	7/2/2015	6/24/2015
tblConstructionPhase	PhaseStartDate	6/25/2015	6/24/2015
tblConstructionPhase	PhaseStartDate	6/5/2015	5/28/2015
tblGrading	AcresOfGrading	50.00	5.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	264.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	6.00
tblTripsAndVMT	WorkerTripNumber	15.00	6.00
tblTripsAndVMT	WorkerTripNumber	677.00	6.00
tblVehicleTrips	ST_TR	5.82	0.47
tblVehicleTrips	SU_TR	5.88	0.47
tblVehicleTrips	WD_TR	5.04	2.54

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.1863	1.8478	1.1951	1.5800e-003	0.0663	0.1041	0.1704	0.0343	0.0967	0.1309	0.0000	147.3988	147.3988	0.0408	0.0000	148.2550
Total	**0.1863**	**1.8478**	**1.1951**	**1.5800e-003**	**0.0663**	**0.1041**	**0.1704**	**0.0343**	**0.0967**	**0.1309**	**0.0000**	**147.3988**	**147.3988**	**0.0408**	**0.0000**	**148.2550**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.1863	1.8478	1.1951	1.5800e-003	0.0317	0.1041	0.1358	0.0159	0.0967	0.1126	0.0000	147.3987	147.3987	0.0408	0.0000	148.2549
Total	**0.1863**	**1.8478**	**1.1951**	**1.5800e-003**	**0.0317**	**0.1041**	**0.1358**	**0.0159**	**0.0967**	**0.1126**	**0.0000**	**147.3987**	**147.3987**	**0.0408**	**0.0000**	**148.2549**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.19**	**0.00**	**20.30**	**53.54**	**0.00**	**14.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.0540	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	24.6447	24.6447	1.1100e-003	2.3000e-004	24.7396
Mobile	0.0612	0.1410	0.6413	8.2000e-004	0.0530	1.6800e-003	0.0547	0.0142	1.5400e-003	0.0157	0.0000	67.3680	67.3680	4.0300e-003	0.0000	67.4526
Waste						0.0000	0.0000		0.0000	0.0000	6.5668	0.0000	6.5668	0.3881	0.0000	14.7165
Water						0.0000	0.0000		0.0000	0.0000	0.0000	42.2057	42.2057	1.9100e-003	3.9000e-004	42.3681
Total	**8.1152**	**0.1410**	**0.6416**	**8.2000e-004**	**0.0530**	**1.6800e-003**	**0.0547**	**0.0142**	**1.5400e-003**	**0.0157**	**6.5668**	**134.2190**	**140.7858**	**0.3951**	**6.2000e-004**	**149.2775**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.0540	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	24.6447	24.6447	1.1100e-003	2.3000e-004	24.7396
Mobile	0.0612	0.1410	0.6413	8.2000e-004	0.0530	1.6800e-003	0.0547	0.0142	1.5400e-003	0.0157	0.0000	67.3680	67.3680	4.0300e-003	0.0000	67.4526
Waste						0.0000	0.0000		0.0000	0.0000	6.5668	0.0000	6.5668	0.3881	0.0000	14.7165
Water						0.0000	0.0000		0.0000	0.0000	0.0000	42.2057	42.2057	1.9100e-003	3.9000e-004	42.3681
Total	**8.1152**	**0.1410**	**0.6416**	**8.2000e-004**	**0.0530**	**1.6800e-003**	**0.0547**	**0.0142**	**1.5400e-003**	**0.0157**	**6.5668**	**134.2190**	**140.7858**	**0.3951**	**6.2000e-004**	**149.2775**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	-12.4000
Total	**-12.4000**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	5/1/2015	6/4/2015	5	25	
2	Paving	Paving	5/28/2015	6/24/2015	5	20	
3	Construction	Building Construction	6/24/2015	8/18/2015	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Construction	Cranes	1	7.00	226	0.29
Construction	Forklifts	3	8.00	89	0.20
Construction	Generator Sets	1	8.00	84	0.74
Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	6.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	6.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Construction	9	6.00	2.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0629	0.0000	0.0629	0.0334	0.0000	0.0334	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0847	0.9881	0.6355	7.7000e-004		0.0475	0.0475		0.0437	0.0437	0.0000	73.5528	73.5528	0.0220	0.0000	74.0139
Total	**0.0847**	**0.9881**	**0.6355**	**7.7000e-004**	**0.0629**	**0.0475**	**0.1104**	**0.0334**	**0.0437**	**0.0771**	**0.0000**	**73.5528**	**73.5528**	**0.0220**	**0.0000**	**74.0139**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	9.0000e-004	8.0000e-003	1.0000e-005	9.3000e-004	1.0000e-005	9.4000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8930	0.8930	7.0000e-005	0.0000	0.8944
Total	**5.1000e-004**	**9.0000e-004**	**8.0000e-003**	**1.0000e-005**	**9.3000e-004**	**1.0000e-005**	**9.4000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.8930**	**0.8930**	**7.0000e-005**	**0.0000**	**0.8944**

3.2 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0283	0.0000	0.0283	0.0150	0.0000	0.0150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0847	0.9881	0.6355	7.7000e-004		0.0475	0.0475		0.0437	0.0437	0.0000	73.5527	73.5527	0.0220	0.0000	74.0138
Total	**0.0847**	**0.9881**	**0.6355**	**7.7000e-004**	**0.0283**	**0.0475**	**0.0758**	**0.0150**	**0.0437**	**0.0587**	**0.0000**	**73.5527**	**73.5527**	**0.0220**	**0.0000**	**74.0138**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	9.0000e-004	8.0000e-003	1.0000e-005	9.3000e-004	1.0000e-005	9.4000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8930	0.8930	7.0000e-005	0.0000	0.8944
Total	**5.1000e-004**	**9.0000e-004**	**8.0000e-003**	**1.0000e-005**	**9.3000e-004**	**1.0000e-005**	**9.4000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.8930**	**0.8930**	**7.0000e-005**	**0.0000**	**0.8944**

3.3 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0232	0.2518	0.1498	2.2000e-004		0.0142	0.0142		0.0130	0.0130	0.0000	21.2272	21.2272	6.3400e-003	0.0000	21.3603
Paving	2.9000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0261**	**0.2518**	**0.1498**	**2.2000e-004**		**0.0142**	**0.0142**		**0.0130**	**0.0130**	**0.0000**	**21.2272**	**21.2272**	**6.3400e-003**	**0.0000**	**21.3603**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	7.2000e-004	6.4000e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.7144	0.7144	5.0000e-005	0.0000	0.7155
Total	**4.1000e-004**	**7.2000e-004**	**6.4000e-003**	**1.0000e-005**	**7.4000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.7144**	**0.7144**	**5.0000e-005**	**0.0000**	**0.7155**

3.3 Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0232	0.2518	0.1498	2.2000e-004		0.0142	0.0142		0.0130	0.0130	0.0000	21.2272	21.2272	6.3400e-003	0.0000	21.3603
Paving	2.9000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0261**	**0.2518**	**0.1498**	**2.2000e-004**		**0.0142**	**0.0142**		**0.0130**	**0.0130**	**0.0000**	**21.2272**	**21.2272**	**6.3400e-003**	**0.0000**	**21.3603**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	7.2000e-004	6.4000e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.7144	0.7144	5.0000e-005	0.0000	0.7155
Total	**4.1000e-004**	**7.2000e-004**	**6.4000e-003**	**1.0000e-005**	**7.4000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.7144**	**0.7144**	**5.0000e-005**	**0.0000**	**0.7155**

3.4 Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0732	0.6006	0.3749	5.4000e-004		0.0423	0.0423		0.0398	0.0398	0.0000	48.7989	48.7989	0.0122	0.0000	49.0560
Total	**0.0732**	**0.6006**	**0.3749**	**5.4000e-004**		**0.0423**	**0.0423**		**0.0398**	**0.0398**	**0.0000**	**48.7989**	**48.7989**	**0.0122**	**0.0000**	**49.0560**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.5000e-004	4.2800e-003	7.6900e-003	1.0000e-005	2.3000e-004	7.0000e-005	3.0000e-004	7.0000e-005	7.0000e-005	1.3000e-004	0.0000	0.7837	0.7837	1.0000e-005	0.0000	0.7839
Worker	8.1000e-004	1.4400e-003	0.0128	2.0000e-005	1.4800e-003	2.0000e-005	1.5000e-003	3.9000e-004	1.0000e-005	4.1000e-004	0.0000	1.4288	1.4288	1.1000e-004	0.0000	1.4311
Total	**1.4600e-003**	**5.7200e-003**	**0.0205**	**3.0000e-005**	**1.7100e-003**	**9.0000e-005**	**1.8000e-003**	**4.6000e-004**	**8.0000e-005**	**5.4000e-004**	**0.0000**	**2.2126**	**2.2126**	**1.2000e-004**	**0.0000**	**2.2150**

3.4 Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0732	0.6006	0.3749	5.4000e-004		0.0423	0.0423		0.0398	0.0398	0.0000	48.7988	48.7988	0.0122	0.0000	49.0559
Total	**0.0732**	**0.6006**	**0.3749**	**5.4000e-004**		**0.0423**	**0.0423**		**0.0398**	**0.0398**	**0.0000**	**48.7988**	**48.7988**	**0.0122**	**0.0000**	**49.0559**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.5000e-004	4.2800e-003	7.6900e-003	1.0000e-005	2.3000e-004	7.0000e-005	3.0000e-004	7.0000e-005	7.0000e-005	1.3000e-004	0.0000	0.7837	0.7837	1.0000e-005	0.0000	0.7839
Worker	8.1000e-004	1.4400e-003	0.0128	2.0000e-005	1.4800e-003	2.0000e-005	1.5000e-003	3.9000e-004	1.0000e-005	4.1000e-004	0.0000	1.4288	1.4288	1.1000e-004	0.0000	1.4311
Total	**1.4600e-003**	**5.7200e-003**	**0.0205**	**3.0000e-005**	**1.7100e-003**	**9.0000e-005**	**1.8000e-003**	**4.6000e-004**	**8.0000e-005**	**5.4000e-004**	**0.0000**	**2.2126**	**2.2126**	**1.2000e-004**	**0.0000**	**2.2150**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0612	0.1410	0.6413	8.2000e-004	0.0530	1.6800e-003	0.0547	0.0142	1.5400e-003	0.0157	0.0000	67.3680	67.3680	4.0300e-003	0.0000	67.4526
Unmitigated	0.0612	0.1410	0.6413	8.2000e-004	0.0530	1.6800e-003	0.0547	0.0142	1.5400e-003	0.0157	0.0000	67.3680	67.3680	4.0300e-003	0.0000	67.4526

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Golf Course	88.44	16.44	16.44	141,679	141,679
Parking Lot	0.00	0.00	0.00		
Total	88.44	16.44	16.44	141,679	141,679

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Golf Course	14.70	6.60	6.60	33.00	48.00	19.00	52	39	9
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.464859	0.039088	0.210752	0.165462	0.051917	0.007362	0.015753	0.027922	0.002976	0.002213	0.008136	0.000842	0.002718

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24.6447	24.6447	1.1100e-003	2.3000e-004	24.7396
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24.6447	24.6447	1.1100e-003	2.3000e-004	24.7396
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	84715.5	24.6447	1.1100e-003	2.3000e-004	24.7396
Total		**24.6447**	**1.1100e-003**	**2.3000e-004**	**24.7396**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	84715.5	24.6447	1.1100e-003	2.3000e-004	24.7396
Total		**24.6447**	**1.1100e-003**	**2.3000e-004**	**24.7396**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.0540	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004
Unmitigated	8.0540	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7594					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.2946					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004
Total	**8.0540**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.6000e-004**	**6.6000e-004**	**0.0000**	**0.0000**	**7.0000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7594					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.2946					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.0000e-004
Total	**8.0540**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.6000e-004**	**6.6000e-004**	**0.0000**	**0.0000**	**7.0000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	42.2057	1.9100e-003	3.9000e-004	42.3681
Unmitigated	42.2057	1.9100e-003	3.9000e-004	42.3681

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 41.4516	42.2057	1.9100e-003	3.9000e-004	42.3681
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**42.2057**	**1.9100e-003**	**3.9000e-004**	**42.3681**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 41.4516	42.2057	1.9100e-003	3.9000e-004	42.3681
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**42.2057**	**1.9100e-003**	**3.9000e-004**	**42.3681**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.5668	0.3881	0.0000	14.7165
Unmitigated	6.5668	0.3881	0.0000	14.7165

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	32.35	6.5668	0.3881	0.0000	14.7165
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**6.5668**	**0.3881**	**0.0000**	**14.7165**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	32.35	6.5668	0.3881	0.0000	14.7165
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**6.5668**	**0.3881**	**0.0000**	**14.7165**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-12.4000	0.0000	0.0000	-12.4000

10.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Cropland	37 / 35	-12.4000	0.0000	0.0000	-12.4000
Total		**-12.4000**	**0.0000**	**0.0000**	**-12.4000**

Canine Camp Parking Lot

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	2.21	Acre	2.21	96,267.60	0
Golf Course	34.79	Acre	34.79	1,515,452.40	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - PD says 2 months for grading and paving and 2 months for modular building placement and other site improvements

Trips and VMT - Number of workers for construction is between 3 and 8 depending on activity. 6 was used as an average.

Vender trips per day reflect increased deliveries and trips during construction.

Grading - PD identifies 5 acres will be disturbed

Vehicle Trips - 72 trips identified in the traffic study for regular operation assuming this a morning flight of people and an afternoon flight of people.
250 trips identified for 1 special event.
Trip rates scaled by dividing by golf course acreage.

Land Use Change -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	740.00	40.00
tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	55.00	20.00
tblConstructionPhase	PhaseEndDate	8/19/2015	8/18/2015
tblConstructionPhase	PhaseEndDate	6/25/2015	6/24/2015
tblConstructionPhase	PhaseStartDate	6/25/2015	6/24/2015
tblConstructionPhase	PhaseStartDate	5/29/2015	5/28/2015
tblGrading	AcresOfGrading	50.00	5.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	264.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	6.00
tblTripsAndVMT	WorkerTripNumber	15.00	6.00
tblTripsAndVMT	WorkerTripNumber	677.00	6.00
tblVehicleTrips	ST_TR	5.82	0.00
tblVehicleTrips	SU_TR	5.88	7.19
tblVehicleTrips	WD_TR	5.04	2.07

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	9.4633	104.3488	67.1401	0.0860	6.4405	5.2186	11.6591	3.3795	4.8011	8.1806	0.0000	8,992.7361	8,992.7361	2.6467	0.0000	9,048.3158
Total	**9.4633**	**104.3488**	**67.1401**	**0.0860**	**6.4405**	**5.2186**	**11.6591**	**3.3795**	**4.8011**	**8.1806**	**0.0000**	**8,992.7361**	**8,992.7361**	**2.6467**	**0.0000**	**9,048.3158**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	9.4633	104.3488	67.1401	0.0860	2.9825	5.2186	8.2011	1.5431	4.8011	6.3442	0.0000	8,992.7361	8,992.7361	2.6467	0.0000	9,048.3158
Total	**9.4633**	**104.3488**	**67.1401**	**0.0860**	**2.9825**	**5.2186**	**8.2011**	**1.5431**	**4.8011**	**6.3442**	**0.0000**	**8,992.7361**	**8,992.7361**	**2.6467**	**0.0000**	**9,048.3158**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.69**	**0.00**	**29.66**	**54.34**	**0.00**	**22.45**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	44.1316	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.3484	0.7631	3.4633	5.0200e-003	0.3188	9.7500e-003	0.3285	0.0852	8.9500e-003	0.0941		451.7571	451.7571	0.0259		452.3011
Total	**44.4800**	**0.7631**	**3.4673**	**5.0200e-003**	**0.3188**	**9.7600e-003**	**0.3285**	**0.0852**	**8.9600e-003**	**0.0941**		**451.7652**	**451.7652**	**0.0259**	**0.0000**	**452.3097**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	44.1316	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.3484	0.7631	3.4633	5.0200e-003	0.3188	9.7500e-003	0.3285	0.0852	8.9500e-003	0.0941		451.7571	451.7571	0.0259		452.3011
Total	**44.4800**	**0.7631**	**3.4673**	**5.0200e-003**	**0.3188**	**9.7600e-003**	**0.3285**	**0.0852**	**8.9600e-003**	**0.0941**		**451.7652**	**451.7652**	**0.0259**	**0.0000**	**452.3097**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	5/1/2015	5/28/2015	5	20	
2	Paving	Paving	5/28/2015	6/24/2015	5	20	
3	Construction	Building Construction	6/24/2015	8/18/2015	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Construction	Cranes	1	7.00	226	0.29
Construction	Forklifts	3	8.00	89	0.20
Construction	Generator Sets	1	8.00	84	0.74
Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	6.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	6.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Construction	9	6.00	2.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2872	0.0000	6.2872	3.3389	0.0000	3.3389			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**6.2872**	**3.8022**	**10.0894**	**3.3389**	**3.4980**	**6.8369**		**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0407**	**0.0631**	**0.6610**	**9.7000e-004**	**0.0766**	**8.0000e-004**	**0.0774**	**0.0203**	**7.2000e-004**	**0.0211**		**83.2972**	**83.2972**	**5.8400e-003**		**83.4199**

3.2 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8293	0.0000	2.8293	1.5025	0.0000	1.5025			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**2.8293**	**3.8022**	**6.6314**	**1.5025**	**3.4980**	**5.0005**	**0.0000**	**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0407**	**0.0631**	**0.6610**	**9.7000e-004**	**0.0766**	**8.0000e-004**	**0.0774**	**0.0203**	**7.2000e-004**	**0.0211**		**83.2972**	**83.2972**	**5.8400e-003**		**83.4199**

3.3 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3172	25.1758	14.9781	0.0223		1.4148	1.4148		1.3016	1.3016		2,339.8984	2,339.8984	0.6986		2,354.5681
Paving	0.2895					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6067**	**25.1758**	**14.9781**	**0.0223**		**1.4148**	**1.4148**		**1.3016**	**1.3016**		**2,339.8984**	**2,339.8984**	**0.6986**		**2,354.5681**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0407**	**0.0631**	**0.6610**	**9.7000e-004**	**0.0766**	**8.0000e-004**	**0.0774**	**0.0203**	**7.2000e-004**	**0.0211**		**83.2972**	**83.2972**	**5.8400e-003**		**83.4199**

3.3 Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3172	25.1758	14.9781	0.0223		1.4148	1.4148		1.3016	1.3016	0.0000	2,339.8984	2,339.8984	0.6986		2,354.5681
Paving	0.2895					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6067**	**25.1758**	**14.9781**	**0.0223**		**1.4148**	**1.4148**		**1.3016**	**1.3016**	**0.0000**	**2,339.8984**	**2,339.8984**	**0.6986**		**2,354.5681**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0407**	**0.0631**	**0.6610**	**9.7000e-004**	**0.0766**	**8.0000e-004**	**0.0774**	**0.0203**	**7.2000e-004**	**0.0211**		**83.2972**	**83.2972**	**5.8400e-003**		**83.4199**

3.4 Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**		**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0284	0.2066	0.2916	4.3000e-004	0.0119	3.6000e-003	0.0155	3.3800e-003	3.3100e-003	6.6900e-003		43.3496	43.3496	4.0000e-004		43.3581
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0691**	**0.2698**	**0.9526**	**1.4000e-003**	**0.0885**	**4.4000e-003**	**0.0930**	**0.0237**	**4.0300e-003**	**0.0277**		**126.6469**	**126.6469**	**6.2400e-003**		**126.7779**

3.4 Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**	**0.0000**	**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0284	0.2066	0.2916	4.3000e-004	0.0119	3.6000e-003	0.0155	3.3800e-003	3.3100e-003	6.6900e-003		43.3496	43.3496	4.0000e-004		43.3581
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0691**	**0.2698**	**0.9526**	**1.4000e-003**	**0.0885**	**4.4000e-003**	**0.0930**	**0.0237**	**4.0300e-003**	**0.0277**		**126.6469**	**126.6469**	**6.2400e-003**		**126.7779**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3484	0.7631	3.4633	5.0200e-003	0.3188	9.7500e-003	0.3285	0.0852	8.9500e-003	0.0941		451.7571	451.7571	0.0259		452.3011
Unmitigated	0.3484	0.7631	3.4633	5.0200e-003	0.3188	9.7500e-003	0.3285	0.0852	8.9500e-003	0.0941		451.7571	451.7571	0.0259		452.3011

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Golf Course	72.00	0.00	250.00	181,917	181,917
Parking Lot	0.00	0.00	0.00		
Total	72.00	0.00	250.00	181,917	181,917

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Golf Course	14.70	6.60	6.60	33.00	48.00	19.00	52	39	9
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.464859	0.039088	0.210752	0.165462	0.051917	0.007362	0.015753	0.027922	0.002976	0.002213	0.008136	0.000842	0.002718

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	44.1316	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003
Unmitigated	44.1316	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.6404					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	34.4908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9000e-004	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003
Total	**44.1316**	**4.0000e-005**	**3.9100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.1000e-003**	**8.1000e-003**	**2.0000e-005**		**8.5900e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.6404					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	34.4908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9000e-004	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003
Total	**44.1316**	**4.0000e-005**	**3.9100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.1000e-003**	**8.1000e-003**	**2.0000e-005**		**8.5900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Canine Camp Parking Lot

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	2.21	Acre	2.21	96,267.60	0
Golf Course	34.79	Acre	34.79	1,515,452.40	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - PD says 2 months for grading and paving and 2 months for modular building placement and other site improvements, added 5 days of grading to account for pond area grading

Trips and VMT - Number of workers for construction is between 3 and 8 depending on activity. 6 was used as an average.

Vender trips per day reflect increased deliveries and trips during construction.

Grading - PD identifies 5 acres will be disturbed

Vehicle Trips - 72 trips identified in the traffic study for regular operation assuming this a morning flight of people and an afternoon flight of people.
250 trips identified for 1 special event.
Trip rates scaled by dividing by golf course acreage.

Land Use Change -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	740.00	40.00
tblConstructionPhase	NumDays	75.00	25.00
tblConstructionPhase	NumDays	55.00	20.00
tblConstructionPhase	PhaseEndDate	8/19/2015	8/18/2015
tblConstructionPhase	PhaseEndDate	7/2/2015	6/24/2015
tblConstructionPhase	PhaseStartDate	6/25/2015	6/24/2015
tblConstructionPhase	PhaseStartDate	6/5/2015	5/28/2015
tblGrading	AcresOfGrading	50.00	5.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	264.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	6.00
tblTripsAndVMT	WorkerTripNumber	15.00	6.00
tblTripsAndVMT	WorkerTripNumber	677.00	6.00
tblVehicleTrips	ST_TR	5.82	0.00
tblVehicleTrips	SU_TR	5.88	7.19
tblVehicleTrips	WD_TR	5.04	2.07

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	9.4633	104.3488	67.1401	0.0860	5.1831	5.2186	10.4016	2.7117	4.8011	7.5128	0.0000	8,992.7361	8,992.7361	2.6467	0.0000	9,048.3158
Total	**9.4633**	**104.3488**	**67.1401**	**0.0860**	**5.1831**	**5.2186**	**10.4016**	**2.7117**	**4.8011**	**7.5128**	**0.0000**	**8,992.7361**	**8,992.7361**	**2.6467**	**0.0000**	**9,048.3158**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	9.4633	104.3488	67.1401	0.0860	2.4167	5.2186	7.6353	1.2426	4.8011	6.0437	0.0000	8,992.7361	8,992.7361	2.6467	0.0000	9,048.3158
Total	**9.4633**	**104.3488**	**67.1401**	**0.0860**	**2.4167**	**5.2186**	**7.6353**	**1.2426**	**4.8011**	**6.0437**	**0.0000**	**8,992.7361**	**8,992.7361**	**2.6467**	**0.0000**	**9,048.3158**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.37**	**0.00**	**26.60**	**54.18**	**0.00**	**19.55**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	44.1316	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.3484	0.7631	3.4634	5.0200e-003	0.3188	9.7500e-003	0.3285	0.0852	8.9500e-003	0.0941		451.7659	451.7659	0.0259		452.3099
Total	**44.4800**	**0.7631**	**3.4673**	**5.0200e-003**	**0.3188**	**9.7600e-003**	**0.3285**	**0.0852**	**8.9600e-003**	**0.0941**		**451.7740**	**451.7740**	**0.0259**	**0.0000**	**452.3185**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	44.1316	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.3484	0.7631	3.4634	5.0200e-003	0.3188	9.7500e-003	0.3285	0.0852	8.9500e-003	0.0941		451.7659	451.7659	0.0259		452.3099
Total	**44.4800**	**0.7631**	**3.4673**	**5.0200e-003**	**0.3188**	**9.7600e-003**	**0.3285**	**0.0852**	**8.9600e-003**	**0.0941**		**451.7740**	**451.7740**	**0.0259**	**0.0000**	**452.3185**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	5/1/2015	6/4/2015	5	25	
2	Paving	Paving	5/28/2015	6/24/2015	5	20	
3	Construction	Building Construction	6/24/2015	8/18/2015	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Construction	Cranes	1	7.00	226	0.29
Construction	Forklifts	3	8.00	89	0.20
Construction	Generator Sets	1	8.00	84	0.74
Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	6.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	6.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Construction	9	6.00	2.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.0298	0.0000	5.0298	2.6711	0.0000	2.6711			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**5.0298**	**3.8022**	**8.8320**	**2.6711**	**3.4980**	**6.1691**		**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0407**	**0.0631**	**0.6610**	**9.7000e-004**	**0.0766**	**8.0000e-004**	**0.0774**	**0.0203**	**7.2000e-004**	**0.0211**		**83.2972**	**83.2972**	**5.8400e-003**		**83.4199**

3.2 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2634	0.0000	2.2634	1.2020	0.0000	1.2020			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**2.2634**	**3.8022**	**6.0656**	**1.2020**	**3.4980**	**4.7000**	**0.0000**	**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0407**	**0.0631**	**0.6610**	**9.7000e-004**	**0.0766**	**8.0000e-004**	**0.0774**	**0.0203**	**7.2000e-004**	**0.0211**		**83.2972**	**83.2972**	**5.8400e-003**		**83.4199**

3.3 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3172	25.1758	14.9781	0.0223		1.4148	1.4148		1.3016	1.3016		2,339.8984	2,339.8984	0.6986		2,354.5681
Paving	0.2895					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6067**	**25.1758**	**14.9781**	**0.0223**		**1.4148**	**1.4148**		**1.3016**	**1.3016**		**2,339.8984**	**2,339.8984**	**0.6986**		**2,354.5681**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0407**	**0.0631**	**0.6610**	**9.7000e-004**	**0.0766**	**8.0000e-004**	**0.0774**	**0.0203**	**7.2000e-004**	**0.0211**		**83.2972**	**83.2972**	**5.8400e-003**		**83.4199**

3.3 Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3172	25.1758	14.9781	0.0223		1.4148	1.4148		1.3016	1.3016	0.0000	2,339.8984	2,339.8984	0.6986		2,354.5681
Paving	0.2895					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6067**	**25.1758**	**14.9781**	**0.0223**		**1.4148**	**1.4148**		**1.3016**	**1.3016**	**0.0000**	**2,339.8984**	**2,339.8984**	**0.6986**		**2,354.5681**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0407**	**0.0631**	**0.6610**	**9.7000e-004**	**0.0766**	**8.0000e-004**	**0.0774**	**0.0203**	**7.2000e-004**	**0.0211**		**83.2972**	**83.2972**	**5.8400e-003**		**83.4199**

3.4 Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**		**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0284	0.2066	0.2916	4.3000e-004	0.0119	3.6000e-003	0.0155	3.3800e-003	3.3100e-003	6.6900e-003		43.3496	43.3496	4.0000e-004		43.3581
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0691**	**0.2698**	**0.9526**	**1.4000e-003**	**0.0885**	**4.4000e-003**	**0.0930**	**0.0237**	**4.0300e-003**	**0.0277**		**126.6469**	**126.6469**	**6.2400e-003**		**126.7779**

3.4 Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**	**0.0000**	**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0284	0.2066	0.2916	4.3000e-004	0.0119	3.6000e-003	0.0155	3.3800e-003	3.3100e-003	6.6900e-003		43.3496	43.3496	4.0000e-004		43.3581
Worker	0.0407	0.0631	0.6610	9.7000e-004	0.0766	8.0000e-004	0.0774	0.0203	7.2000e-004	0.0211		83.2972	83.2972	5.8400e-003		83.4199
Total	**0.0691**	**0.2698**	**0.9526**	**1.4000e-003**	**0.0885**	**4.4000e-003**	**0.0930**	**0.0237**	**4.0300e-003**	**0.0277**		**126.6469**	**126.6469**	**6.2400e-003**		**126.7779**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3484	0.7631	3.4634	5.0200e-003	0.3188	9.7500e-003	0.3285	0.0852	8.9500e-003	0.0941		451.7659	451.7659	0.0259		452.3099
Unmitigated	0.3484	0.7631	3.4634	5.0200e-003	0.3188	9.7500e-003	0.3285	0.0852	8.9500e-003	0.0941		451.7659	451.7659	0.0259		452.3099

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Golf Course	72.00	0.00	250.00	181,919	181,919
Parking Lot	0.00	0.00	0.00		
Total	72.00	0.00	250.00	181,919	181,919

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Golf Course	14.70	6.60	6.60	33.00	48.00	19.00	52	39	9
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.464859	0.039088	0.210752	0.165462	0.051917	0.007362	0.015753	0.027922	0.002976	0.002213	0.008136	0.000842	0.002718

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	44.1316	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003
Unmitigated	44.1316	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.6404					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	34.4908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9000e-004	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003
Total	**44.1316**	**4.0000e-005**	**3.9100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.1000e-003**	**8.1000e-003**	**2.0000e-005**		**8.5900e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.6404					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	34.4908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9000e-004	4.0000e-005	3.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.1000e-003	8.1000e-003	2.0000e-005		8.5900e-003
Total	**44.1316**	**4.0000e-005**	**3.9100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.1000e-003**	**8.1000e-003**	**2.0000e-005**		**8.5900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

APPENDIX D
BIOLOGICAL RESOURCES REPORT

BIOLOGICAL RESOURCES ASSESSMENT FOR PROPOSED CARMEL CANINE SPORTS CENTER

Carmel Valley Land Use Area, Monterey County
PLN 130352

APN 169-431-001
APN 169-431-002
APN 169-431-003
APN 169-431-006
APN 169-431-007
APN 169-431-008
APN 169-431-011
APN 169-431-012

Prepared For:
Carmel Canine Sports Center
8100 Valley Greens Drive
Carmel, CA 93923

Prepared By:
Nicole Nedeff, Consulting Ecologist
11630 McCarthy Road
Carmel Valley, CA 93924
831.659.4252
nikki@ventanaview.net

February 17, 2014

PROPERTY PROFILE
CARMEL CANINE SPORTS CENTER

DATE: February 17, 2014

PREPARED BY: Nicole Nedeff, Consulting Ecologist, nikki@ventanaview.net
11630 McCarthy Rd., Carmel Valley, CA 93924, 831.659.4252

SITE NAME: Carmel Canine Sports Center

PHYSICAL ADDRESS: 8100 Valley Greens Dr., Carmel, CA, 93923

ACREAGE: 43 acres in leasehold, approximately 37 acres in project area

USGS QUAD: Seaside 7.5' topographic quad, site in unsurveyed sections, T16S, R1E &2E.

OWNER: Wolter Properties, LP

PROJECT APPLICANT: Carmel Canine Sports Center, c/o Ken Ekelund, 831.915.6654

MONTEREY COUNTY ZONING: Carmel Valley Master Plan, Zoned LDR/2.5-D-S-RAZ and RG/10-D-S-RAZ, Carmel Valley Master Plan, Title 21 Monterey County Zoning Code (Low Density Residential designed to accommodate low density and low intensity land uses in the rural suburban areas of Monterey County). The subject property is outside the Coastal Zone.

LAND USE: Historic site of stream gravel extraction and organic farming operation. Currently maintained in farmed acreage and irrigated turf, with small garden areas. The riparian habitat along the lower terrace and floodplain of the Carmel River is densely vegetated with robust riparian vegetation and the right (north) bank is the site of the Monterey Peninsula Water Management District's "Valley Hills Restoration Project".

SITE LOCATION AND PRIMARY ACCESS: Approximately 3.5 miles inland from Highway 1 in lower Carmel Valley. Primary access from controlled entrance at 8100 Valley Greens Drive, as well as from ungated entry at the California-American Water Co. Valley Hills well at the end of Williams Ranch Road. Public access along the riverbed is available at all times.

PROJECT DESCRIPTION: The project applicant proposes to develop a private training and event facility for dogs, with open exercise fields, several small structures, a hay field, livestock pens, and a multi-purpose reservoir for irrigation and dog recreation. Up to five picnic tables are proposed for historically disturbed sites adjacent to the farm fields above the Carmel River. All other improvements are located on level agricultural fields which are entirely encircled with a food safety fence installed by the former leasee, Earthbound Farms. Existing trails in the restored riparian habitat on the lower terrace are proposed for passive, recreational use by people and

dogs. Events of up to 250 people may be hosted on various training fields on no more than 24 days per year.

HABITAT IN PROJECT AREA: There are three basic "habitat" areas in the CCSC project area: agricultural fields formerly used for organic truck crops, ruderal disturbed areas used formerly for ancillary farming and gravel mining activities, and the riparian corridor of the Carmel River.

SIGNIFICANT BIOLOGICAL ATTRIBUTES:

- √ Steelhead South/Central Coast ESU
- √ Steelhead Trout*, Onchorhynchus mykiss irideus*, FT
- √ California Red-legged Frog, *Rana draytonii*, FT
- √ Dusky-footed Woodrat, *Neotoma fuscipes,* SSC
- √ Western Pond Turtle, *Emys marmorata,* SSC
- √ Central Coast Willow Riparian
- √ Central Coast Riparian Scrub
- √ Black Cottonwood Forest
- √ Potential habitat for nesting/foraging/roosting passerine birds, raptors, water fowl
- √ Potential habitat for Coast Range Newt, *Taricha torosa torosa*, SSC
- √ Potential habitat for California Tiger Salamander, *Ambystoma californiense,* FT, CT
- √ Potential habitat for Legless Lizard, *Anniella pulchra pulchra/nigra,* SSC
- √ Potential habitat for Pacific Lamprey, *Entosphenus tridentatus*

BIOLOGICAL RESOURCES ASSESSMENT
CARMEL CANINE SPORTS CENTER

1. SUMMARY

In early January 2014, I was contacted by Carmel Canine Sports Center (CCSC) partners and asked to conduct a Biological Resources Assessment for their proposed private canine training and event center. I was provided with the Site Plan and a draft of the "Natural Area Management Plan". Site surveys were conducted, information was gathered, and observations and recommendations are forwarded in the body of this report.

The proposed project occurs over three biologically distinct use areas: existing agricultural fields, ruderal habitat formerly associated with farm operations, and the floodplain terrace of the Carmel River riparian corridor.

This Biological Resources Assessment describes biological and landscape features on the historic agricultural fields proposed for development as the CCSC training facility, as well as on the ruderal habitat and floodplain terrace situated on the north bank of the Carmel River. There is no CCSC use or access proposed for the left (south) bank of the Carmel River riparian corridor. The entire property will be retained in private ownership by the Wolter Properties LP, and has been leased by the CCSC for a ten-year period.

Proposed Land Use:

- No significant land modifications are proposed for the agricultural fields, other than the excavation of a 1.2-acre reservoir that will serve as a source of irrigation water and a training/recreation amenity for dogs. The majority of the agricultural fields will remain farmed in hay and irrigated grass to support dog training activities and events. The hay field may provide additional income. Four small, modular and removable structures and a permeable parking area for up to 70 recreational vehicles during events are proposed near the gated entry at Valley Greens Drive. RV parking on up to 24 days per year will be located on a portion of the hay field and one of the training fields. A small orchard and several garden areas are proposed. Livestock pens and housing will be constructed – goats and sheep will be used for herding activities, weed/turf control and fiber production.

- A minimalist picnic area with 4 to 5 tables is proposed for the ruderal habitat area. No services or utilities will be available.

- Potentially intensified use of existing trails is proposed for the floodplain terrace adjacent to the Carmel River channel.

This Biological Resources Assessment reviews potential impacts to plants, animals and natural communities resulting from the implementation of the CCSC proposal. The report suggests management and monitoring actions to avoid potential environmental impacts associated with

CCSC operations in order to maintain the ecological integrity of the riparian corridor, protect sensitive species and their habitat, prevent potential conflict between dogs and agency personnel, and allow for continued limited use of the area outside the agricultural safety fence by the property owners, the CCSC and authorized groups.

In my professional opinion, with the implementation of the Draft CCSC Natural Area Management Plan and with the application of suggestions to avoid, reduce or eliminate potential environmental impacts, the anticipated CCSC use of the Wolter agricultural fields, ruderal habitat and northern (right bank) riparian portion of the Wolter Properties LP lands will result in less than significant impacts to the sensitive habitat areas and species found on the subject parcels.

As the author of this report, I'd like to disclose that I have considerable personal experience working in the riparian portion of the CCSC project site. I served as the Riparian Projects Coordinator for the Monterey Peninsula Water Management District between 1993 and 2000 and was directly responsible for coordinating riparian vegetation restoration and monitoring activities on the Valley Hills Restoration Project during that time. I have maintained an active interest in the restoration of this reach of the Carmel River riparian corridor for the past 20+ years.

Occurrences of habitat and wildlife protected under the federal or state Endangered Species Acts, and/or local ordinances are known from the Carmel River riparian corridor in the project area.

Implementation of the Carmel Canine Sports Center project will not significantly affect landscape features or biological resources in any portion of the project area if suggestions to avoid or minimize potential environmental impacts outlined in this report are followed.

2. SITE DESCRIPTION

The CCSC facility is located on long-abandoned Carmel River floodplain terraces in lower Carmel Valley approximately 3.5 miles inland from Highway 1. These ancient terraces are veneered with rich, alluvial soils and historically supported a variety of farming, dairy and orchard establishments. Although many of these areas today have been developed for rural residential and commercial uses, including golf courses and shopping centers, a few agricultural endeavors persist and are notable for their maintenance of the rural character of Carmel Valley. Figure 1 is a regional area map depicting the CCSC project site in lower Carmel Valley.

The gated access point for the CCSC facility is at 8100 Valley Greens Drive, a short distance from Carmel Valley Road and the Valley Hills Shopping Center. The proposed training and event center is situated adjacent to the Quail Lodge Golf Resort on the north and west, and the Cañada Woods mixed use commercial development being built next to its sediment detention/water treatment pond on the east. Several private parcels with residences are located to the south of the project area. The Valley Hills well, owned and operated by California-American Water Company, is immediately adjacent to the subject property on the east. Figure 2 is a GoogleEarth image of the general project vicinity.

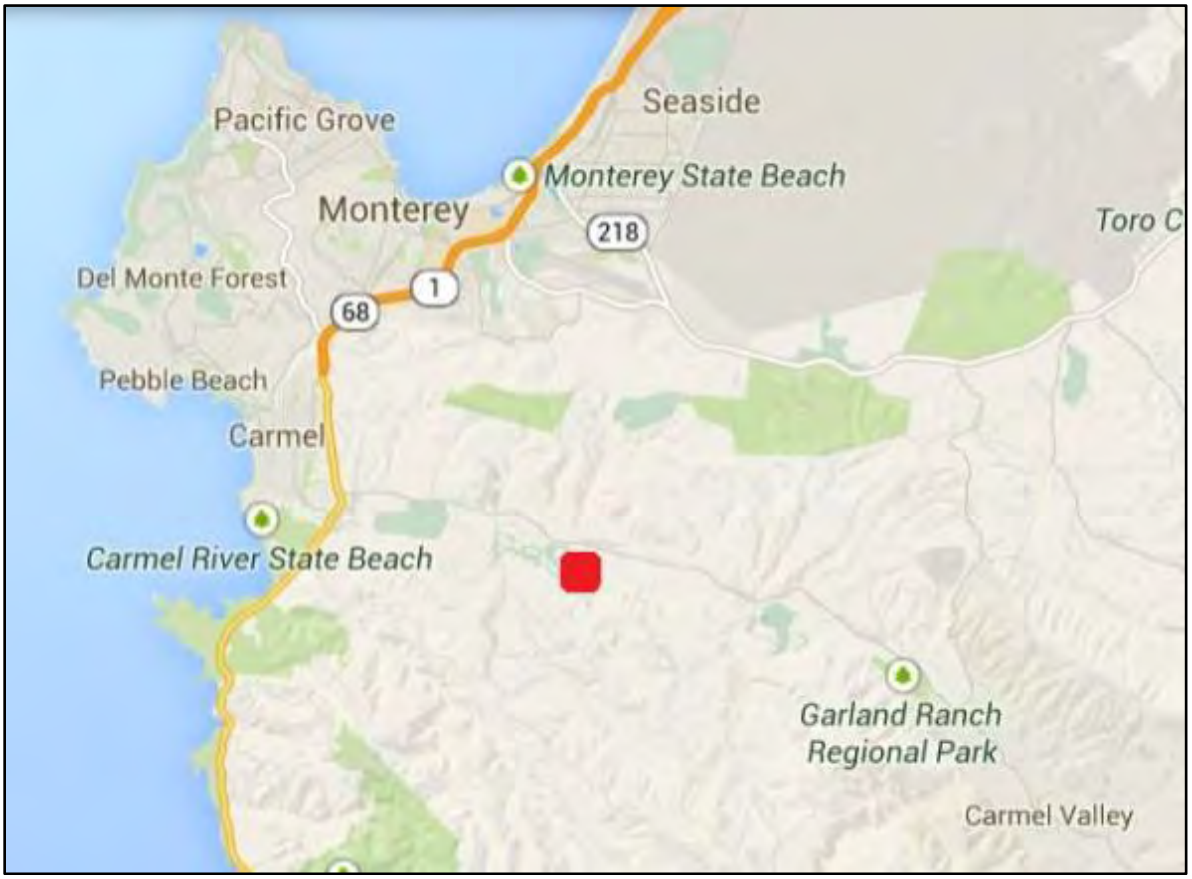


Figure 1 – Project area map. Red square marks CCSC project area.

Figure 2 – GoogleEarth image from May 5, 2012. The undeveloped agricultural fields in the CCSC project area are just left of center, with portions of the Quail Lodge Golf Resort visible on the northwest and west. The large pond in the center of the image is operated by the Cañada Woods development and the Rana Creek Nursery is immediately east of the pond. The Carmel River and its riparian corridor are located towards the bottom of the image. North is at the top of the photograph.

The CCSC property is leased from the Wolter Properties LP, a local family partnership with a long, pioneering tradition of organic farming in Carmel Valley. The entire leased property spans approximately 43 acres and includes eight Monterey County Assessor's Parcels on both sides of the Carmel River. There is no formal access to the left (south) bank of the Carmel River, however the Carmel River channel is an unrestricted public throughway for hiking when the river channel is dry and boating/floating when the river has sufficient flow. The approximately 5-acre riparian area on the left (south) bank of the Carmel River was not surveyed pursuant to this Biological Resources Assessment, as there is no access available from the CCSC training fields and the south bank riparian habitat is not included in any proposed CCSC use area. It is likely that habitat conditions on the left and right bank of the river in the CCSC leasehold property are functionally similar and support comparable plant and wildlife species.

There are three basic "habitat" areas in the 37-acre CCSC project area: agricultural fields, adjoining ruderal areas utilized for farm equipment storage and ancillary farming activities, and the floodplain terrace of the Carmel River riparian corridor.

The agricultural fields were historically farmed by the Wolter family and more recently were reconfigured and leased by Earthbound Farms for irrigated, organic truck crops. The agricultural fields comprise approximately 31.5 acres of the 43-acre CCSC leasehold. The agricultural operation is fenced with an 8-foot tall food safety fence of wrapped livestock wire. Gates through

the food safety fence remain locked. After the departure of Earthbound Farms in 2008, Mr. Wolter disked the former farm fields on an annual basis to control weeds. It is not known whether the fields were irrigated at any time after the departure of Earthbound Farms.

Outside the food safety fence on the south side of the agricultural fields is an area of ruderal disturbed habitat that was associated with the farming operation. The approximately 3-acre ruderal area outside the fence was used by the Wolters and Earthbound to store farm equipment and irrigation pipe. During the farming tenure of the Wolter family, the area also served as a stockpile for organic fertilizer derived from fresh manure. A number of old habitation sites (foundations and debris) remain under large eucalyptus and Monterey pine and cypress trees and remnant tools associated with both farming and a former gravel mining operation (rock sorter) are still in place. At one time a pig farm was located on the western edge of this area just outside the agricultural safety fence, along with additional large pieces of farm equipment.

The lower terrace and floodplain of the Carmel River riparian corridor occur at the southern edge of the proposed CCSC project area. CCSC proposes to utilize existing trails in the 2.5-acre riparian habitat and along the river channel in order to provide a passive recreational experience for members and their dogs. This entire area on the right (south) bank of the Carmel River is part of the Monterey Peninsula Water Management District (MPWMD) Valley Hills restoration project. Agency restoration and monitoring activities along this reach of the river have been supported voluntarily by the Wolter family and the benefit to overall riverine conditions has been tremendous.

MPWMD maintains an active soil and plant monitoring program in the restoration site and seasonally operates an extensive drip irrigation system to maintain riparian vegetation. The existing trail system was installed by MPWMD to access soil monitoring equipment, conduct vegetation monitoring activities and maintain the irrigation network. These trails are also utilized by MPWMD fisheries staff to conduct fish rescues and research and monitoring of aquatic features.

The area between the food safety fence and the Carmel River includes several topographically distinct benches that correspond with the contemporary floodplain and higher elevation terraces in the floodway and floodway fringe. For complete definitions of these topographic and hydrologic distinctions, please refer to Section 21.64.130 in the Monterey County Zoning Ordinance, Title 21, which pertains to Carmel Valley Floodplain Regulations for Land Use in the Floodplain.

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3. PROJECT DESCRIPTION

The CCSC proposes to develop a private canine training and event facility on existing farm fields inside the agricultural safety fence. The CCSC anticipates an average of 100 daily facility visits at project capacity. To support the operation of the center, four small structures are planned. The structures are:

- 800 square foot modular office trailer
- 600 square foot modular restroom trailer
- 600 square foot clubhouse trailer
- 400 square foot electrical room.

A permeable surface parking area will be designated for up to 70 recreational vehicles anticipated for a maximum of 24 days annually during events at the facility. RV parking will be located on one of the training fields and on the hay field when it is not in production. No external lighting or amplification is proposed in the training fields. Safety lighting will be installed at the front gate and near the modular restroom trailer, office and clubhouse. Livestock pens and sheds may be installed.

A 1.2-acre reservoir is proposed for irrigation water and as a recreation amenity for dogs. The pond will fully fenced and will have a partial gunnite perimeter for safe entry/exit and to reduce erosion around the edge resulting from canine activity.

The CCSC has continued the Wolter and Earthbound farming land use tradition by planting a hay field and small organic garden areas. Greenbelts will divide the irrigated training fields and the CCSC intends to honor the organic farming tradition instituted many decades ago by Russell Wolter.

A component of the proposed Carmel Canine Sports Center (CCSC) involves continued passive recreational use of approximately 5.5 acres of the subject property that are situated outside the fenced area utilized for canine training. The project applicant proposes to allow continued access to the 3-acre ruderal area outside the food safety fence for the land owners, CCSC members and authorized groups for dog walking and picnicking. In addition, the land owners and CCSC proponents intend to continue using the short trail network on the right (north) bank of the 2.5-acre lower floodplain/terrace in the Carmel River riparian corridor. Canine walking and occasional river swimming for CCSC members would be controlled with a reservation system under the CCSC proposal being considered. No access either to the ruderal area or the lower floodplain terrace riparian area will be authorized during events. No CCSC activity will be authorized on the left (south) side of riparian corridor. No activities will be undertaken to control public access along the river channel itself, because it is a public right-of-way. Figure 3 is a Site Plan for the CCSC facilities.

Figure 3 – Site Plan for the Carmel Canine Sports Center. The lower floodplain terrace riparian area under consideration in this Biological Resources Assessment is confined to the right bank (north side) of the Carmel River in a portion of the blue-shaded area labeled "River Access and Picnic Area". The pond and all green-shaded CCSC areas are situated inside the food safety fence.
The Site Plan is oriented with North located on the right side of the map sheet.

The ruderal area was part of the historic Wolter and Earthbound farming operations and over the years has been used to stockpile fertilizer, store equipment and irrigation pipe, as well as other ancillary agricultural and gravel mining activities. Structures were formerly located in the ruderal area, which was also the site of a pig farm at one time. A large rock sorter is still in-place from the years when a gravel mining operation was active on the floodplain below.

The lower terrace floodplain on the subject property is included in the Monterey Peninsula Water Management District (MPWMD) Valley Hills Restoration Project. MPWMD has a two-decade long history of intensive restoration, habitat monitoring and fisheries management focused on reducing erosion hazards, restoring riparian and aquatic habitat function and conducting stream-related research. This floodplain portion of the site includes important aquatic habitat serviced by MPWMD staff during annual endeavors to monitor and rescue federally threatened Steelhead Trout as Carmel River flows wane each summer and fall.

As noted above, all areas situated outside the agricultural safety fence encircling the canine training facilities will not be accessible to CCSC guests during events. Access to either the picnic area or the lower terrace riparian habitat will only be available by reservation for members and authorized groups. Figures 4 and 5 are aerial images depicting Assessor's Parcel lines, habitat areas and significant anthropogenic features in the southern portion of the CCSC leasehold land.

Figure 4- The blue lines indicate the trails used by MPWMD personnel on the upper terrace and in the riparian floodplain area of the CCSC Natural Area in the Valley Hills Restoration Project. Trails are used for access to vegetation monitoring sites and for irrigation system maintenance. The trails also provide key access to the river channel for fisheries work (courtesy of Thomas Christensen, MPWMD Riparian Projects Coordinator, January 2014. Date of aerial photograph unknown).

Figure 5 – Map of southern CCSC ruderal and lower terrace floodplain area. Map prepared using base provided by MPWMD in January 2014 (Figure 4, above). Note red food safety fence and locations of locked gates. The "Upper Terrace" corresponds to the ruderal disturbed habitat in the CCSC project area and locations of large farming and industrial artifacts are noted. Access to the MPWMD Valley Hills Restoration Site is provided to District staff at the ungated Cal-Am Valley Hills well.

4. CCSC PROPOSED NATURAL AREA MANAGEMENT PLAN

The draft Natural Area Management Plan outlined in the following section was prepared by CCSC proponents on January 4, 2014. This Draft Plan pertains to the proposed use and control of the ruderal disturbed area and the terrace floodplain on the right (north) bank of the Carmel River riparian corridor. These areas comprise approximately 5.5 acres of the 11.5 acres of the Wolter property outside the food safety fence.

DRAFT NATURAL AREA MANAGEMENT PLAN –

There are approximately 11.5 acres of the Wolter property included in the CCSC lease that are outside the 8' food safety fence. The Carmel River divides this area approximately in half. This area includes the riparian corridor immediately adjacent to the river as well as several existing raised terrace areas well above the floodway.

CCSC proposes access to part of this area for members to enjoy the natural amenities using existing clearings and trails while otherwise maintaining it in its current undeveloped state. This part of the property has been managed in three parts:

First, over the years there have been a number of structures including industrial equipment (for example the large industrial gravel mining sorter that remains on site), storage, houses and other non-standard living arrangements in the higher areas of the property outside the immediate riparian corridor on the north side of the river. Fragments of foundations, fences, walls, and so on exist throughout this area as do larger trees. This area also contains abandoned equipment and has been a historical site for the dumping of green waste related to the historical farming operation. One part of this area was also the site of the Wolters' hog farming operation, and the foundations of these associated structures still remain. Recently this area has been left essentially unattended and poison oak along with invasive non-native plants have grown up in parts of it. There are however, still existing trails and cleared areas, which CCSC proposes to continue to maintain. This will allow for both management activities like continued removal of trash, poison oak and weeds/invasive plants and provide areas for members to picnic and walk dogs. The only proposed fixtures to be added to this area would be 4-5 scattered picnic tables and a number of regularly serviced dog waste collection stations.

The second area is the riparian corridor in the immediate vicinity of the Carmel River. This area is the site of an extensive and highly successful environmental restoration project conducted by the MPWMD. This project commenced in 1993.The MPWMD Valley Hills Restoration project was implemented to address a long-standing stream bank erosion issue in this reach of the river. The channel was realigned into a stable configuration and both tie-back revetments and an in-channel grade control were installed. The area was then revegetated. Project work was conducted under recorded permits as well as an agreement with the Wolter family allowing their continued enjoyment of the natural areas on the property in recognition of their voluntary commitment of private lands for environmental restoration to benefit the river. This work continues to be maintained and closely monitored by the District, with visits including photo documentation occurring approximately every two weeks. CCSC would work closely with District staff to support and advance this worthwhile project, which has helped this section of the Carmel River to be one of the most supportive for steelhead spawning in the entire length of the river.

Irrigation and trails used and regularly maintained by District staff currently transect this part of the property. These trails provide an opportunity for members to access the riverfront when appropriate. For safety reasons this would not be allowed during periods of very high river flow or when the river's flow has stopped and cyanobacteria are potentially present. Otherwise both people and dogs would enjoy seasonal swimming in Hampson's Hole, a very deep (>10') section of the river channel toward the western side of the property that was formed as a result of the restoration activities and which has been enjoyed by the landowners' families and others since that time.

CCSC also hopes to partner with the District and local steelhead advocacy groups to create an accessible viewing area toward the eastern side of the property overlooking the river where it would be possible – and safe – to view the river and possibly steelhead when in season. Trails maintained by the District currently access these areas as well, and again CCSC would assist with ongoing trail maintenance and add/service dog waste collection stations as seasonally necessary.

To estimate the overall use of this area, of the estimated 100 average facility visits over the course of a day (daylight hours between 7AM-8:30PM) expected at build-out, around 30% may wish to use this area. Uses would be mainly for brief walks to enjoy the natural environment, swimming for people and dogs when the river level is appropriate, (in 2013 this would have occurred between late December and mid-May) or for picnics in the areas under the large trees in the areas immediately outside the food safety fence and outside the riparian corridor proper. It should be noted that the riverbed itself is public, so people - and dogs - pass through the area at will now either by boat when the river is running or on foot when it is dry.

The third part of this area, approximately 4-5 acres, lies on the south side of the Carmel River and is not easily accessed from the main part of the property. It is in a natural state and does not appear to have been managed by anyone recently. CCSC has no plans to provide access to this area.

5. SURVEY METHODS

In order to assess existing ecological conditions and potential biological impacts associated with the proposed development of the CCSC training facility and the implementation of the draft management plan for the CCSC Natural Area, an information search and literature review was conducted prior to field survey of the project area. In addition to field survey, information for this Biological Resources Assessment was derived from local maps, published work, unpublished material, Internet-based searches and consultations with knowledgeable individuals. The on-line California Department of Fish and Wildlife, California Natural Diversity Database (CNDDB) records for the Monterey, Seaside, Mt. Carmel and Carmel Valley 7.5' topographic quadrangles were also reviewed prior to field work for documentation of sensitive resources recorded and mapped in the vicinity of the CCSC/Wolter land.

In addition to multiple visits to the Carmel River riparian corridor over the past 20 years, the CCSC training fields, ruderal habitat and riparian portions of APN 169-431-007 and APN 169-431-008 were surveyed on foot on January 14, 2014 and February 4, 2014. Field work consisted of floristic surveys and visual surveys for special status wildlife species and birds. No protocol surveys were conducted for California Tiger Salamander, California Red-legged Frog, Western Pond Turtle, or Legless Lizard.

The January and February 2014 field survey dates were not appropriate for the identification of many nesting bird species and most flowering plants. Typically, riparian habitat areas can support numerous avian species during migration periods and spring nesting, but few flowering plants that would not be identifiable during the Winter 2014 survey period.

Ecological field assessment of the CCSC project area focused on the following objectives:

- Identify, assess and map the natural communities in the project area.
- Identify and map special status plants and wildlife species.
- Note significant anthropogenic and landscape features.
- Consider ways to eliminate or offset potential environmental impacts from use of the CCSC project area by people and dogs.

To identify known element occurrences of special status natural communities, plants and wildlife species in the CCSC riparian area, California Natural Diversity Data Base (CNDDB) on-line records and mylar overlays for this portion of Carmel Valley and the surrounding vicinity were reviewed prior to field survey. The USGS quadrangles reviewed were: Carmel Valley, Seaside, Mt. Carmel and Monterey. Collectively, these four USGS 7.5' topographic quads include the course of the Carmel River through all of lower Carmel Valley downstream of Carmel Valley Village.

The CCSC project site is located on the Seaside USGS 7.5' quadrangle. CNDDB on-line records note a number of significant biological occurrences either within the CCSC project area or within a 1-mile radius of any portion of the canine training facility. These include:

- *Pinus radiata*, Monterey Pine Forest
- *Malacothrix saxatilis* var. *arachnoidea*, Carmel Valley malacothrix
- *Malacothamnus palmeri* var. *involucratus*, Carmel Valley bush mallow
- *Euphilotes enoptes smithi*, Smith's Blue Butterfly
- *Delphinium californicum* ssp. *interius*, Hospital Canyon larkspur
- *Onchorhynchus mykiss irideus*, Steelhead Trout (mapped on CCSC project site)
- *Rana draytonii*, California Red-legged Frog (mapped on CCSC project site)
- *Emys marmorata,* Western Pond Turtle (mapped adjacent to CCSC project site)
- Steelhead South/Central California Coast ESU (mapped through CCSC project site)

Monterey Pine Forest is not native to the CCSC site and both Carmel Valley malacothrix and bush mallow are perennial upland species found in soils of the Monterey Formation – no appropriate habitat is located on any of the CCSC site for natural occurrences of these three plants. However, Monterey pine is recruiting into the riparian habitat and becoming invasive on the floodplain. Smith's Blue Butterfly is a federally endangered species that only occurs in association with two required buckwheat host plants, *Eriogonum parvifolium* and/or *E. latifolium,* and neither of these coastal or upland sub-shrubs is found in Carmel Valley riparian habitat. The CNDDB label for *Delphinium californicum* sp. *interius*, Hospital Canyon larkspur, on the Seaside quadrangle, seems out-of-place because the closest observation recorded of this taxon is some distance away at the Pinnacles National Park (Calflora.org).

Other sensitive and special status plants and animals are mapped by CNDDB on the four USGS quads covering the Carmel River corridor, however most of these element occurrences are associated with coastal habitats or Monterey Pine Forest on the Monterey Peninsula.

During January and February 2014 field surveys of the subject property, no special status species documented on the CNDDB maps were observed. However, the Carmel River was dry during this time and the absence of special status fish and herps was a seasonal abnormality.

In addition to Steelhead Trout, California Red-legged Frog and Western Pond Turtle, the following special status plants and animals are known from the CCSC project site or the vicinity:

- *Ambystoma californiense*, California Tiger Salamander (known in vicinity)
- *Anniella pulchra (nigra),* Northern California Legless Lizard (the Silvery Legless Lizard and the, *A.p.p*. and the Black Legless Lizard, *A.p. nigra,* may now considered melanistic forms of the Northern California Legless Lizard , although it each taxon is still noted by the California Department of Fish and Wildlife. A Legless Lizard was documented approximately four years ago by Big Sur Land Trust staff from near the Carmel Valley Trail and Saddle Club approximately 10 miles upstream of the CCSC project site)
- *Taricha torosa torosa*, Coast Range Newt (known from Garland Park riparian corridor)
- *Neotoma fuscipes luciana*, Monterey Dusky-Footed Woodrat (known on project site)
- Central Coast Riparian Scrub (known on project site)
- Central Coast Willow Riparian (known on project site)
- Black Cottonwood Forest Alliance (known on project site)

- Potential habitat for passerine birds, raptors and waterfowl of Special Concern (known on project site)
- Potential habitat for over-wintering *Danaus plexippus*, Monarch Butterflies (known from coastal locations near the project site)
- Potential habitat for Pacific Lamprey, *Entosphenus tridentatus*, (known from the Carmel River)

Table 1 presents a comprehensive list of element occurrences documented on the Seaside quadrangle by the CNDDB.

Appendix A is a list of birds documented in 2010 by the Big Sur Wildlife Society during MPWMD-sponsored avian studies at the Valley Greens Bridge (just downstream of the CCSC project site).

Appendix B is a list of plants observed during the January and February 2014 CCSC project site surveys. Plants noted in Appendix B were observed outside the food safety fence – numerous weedy, invasive species occur inside the fence on the old farm fields, in addition to planted turf and hay.

Appendix C is a list of mammals, reptiles and amphibians observed and potentially occurring along the lower Carmel River riparian corridor.

Common names for plants and wildlife species are generally used in the text of this report, with scientific names included in the Appendices. Scientific nomenclature for plants follows protocols in Baldwin, et al (2012). Descriptive names for plant communities follows the 2010 CNDDB classification system.

Figure 6 is a screen shot of the CNDDB on-line map (available to CNDDB subscribers) covering the project area, with an aerial photograph as the base layer. The red mapping color in the CCSC project area corresponds to documented element occurrences of California Red-legged Frog, Western Pond Turtle and Steelhead Trout, and the beige and green color overlays designate potential habitat supporting Legless Lizard, Monterey pine, and other special status upland plants that have no appropriate setting in the CCSC project area.

Figure 6 – CNDDB map downloaded February 10, 2014.
The CCSC project area is in the center of the image.
The bright green feature to the right of center is the Cañada Woods water treatment pond.

TABLE 1

FEDERAL, STATE and CALIFORNIA NATIVE PLANT SOCIETY STATUS FOR
SIGNIFICANT PLANTS, WILDLIFE AND HABITATS
IN AND AROUND THE CCSC PROJECT AREA
(CNDDB - California Natural Diversity Data Base, Seaside Quadrangle)

Scientific Name	Common Name	Federal	State	CNPS	Habitat	Project Area Found/Not Found
PLANTS						
Allium hickmanii	Hickman's onion			1B.2	CP, G	No potential
Arctostaphylos hookeri ssp. *hookeri*	Hooker's manzanita			1B.2	MC,MPF	No potential
Arctostaphylos montereyensis	Toro manzanita			1B.2	MC, PPF	No potential
Arctostaphylos pajaroensis	Pajaro manzanita			1B.1	MC	No potential
Arctostaphylos pumila	sandmat manzanita			1B.2	MC, MPF	No potential
Castilleja latifolia	seaside painted cup			4.3	D, CBS	No potential
Centromadia parryi ssp. *congdonii*	Congdon's tarplant			1B.1	CP	No potential
Chorizanthe douglasii	Douglas' spineflower			4.3	G,OW,NCS	No potential
Chorizanthe pungens var. *pungens*	Monterey spineflower	T		1B.2	D, MC	No potential
Clarkia jolonensis	Jolon clarkia			1B.2	G	No potential
Clarkia lewisii	Lewis' clarkia			4.3	OW	No potential
Cordylanthus rigidus ssp. *littoralis*	seaside bird's-beak		E	1B.1	MC, NCS	No potential
Cryptantha rattanii	Rattan's cryptantha			4.3	G, OW	No potential
Delphinium californicum ssp. *interius*	Hospital Canyon larkspur			1B.2	OW, G	No potential
Eriastrum virgatum	virgate eriastrum			4.3	D, MC	No potential
Ericameria fasciculata	Eastwood's goldenbush			1B.1	MC, MPF	No potential
Erysimum ammophilum	sand-loving wallflower			1B.2	D, MC	No potential
Gilia tenuiflora ssp. *arenaria*	Monterey gilia	E	T	1B.2	D, MC	No potential
Horkelia cuneata var. *sericea*	Kellogg's horkelia			1B.1	MC	No potential
Lasthenia conjugens	Contra Costa goldfields	E		1B.1	CP, G	No potential
Malacothamnus palmeri var. *involucratus*	Carmel Valley bush-mallow			1B.2	NCS	No potential
Malacothrix saxatilis var. *arachnoidea*	Carmel Valley malacothrix			1B.2	NCS	No potential
Microseris paludosa	marsh microseris			1B.2	CP, G	No potential
Ophioglossum californicum	Western adder's tongue			4.2	G, pools	No potential
Pinus radiata	Monterey pine			1B.1	MPF	individual trees
Piperia yadonii	Yadon's rein orchid	E		1B.1	MC, MPF	No potential
Stebbinsoseris decipiens	Santa Cruz microseris			1B.2	CP, G	No potential
Trifolium polyodon	Pacific Grove clover		Rare	1B.1	CP, G	No potential
Trifolium buckwestiorum	Santa Cruz clover			1B.1	CP, G	No potential

TABLE 1 - continued

Scientific Name	Common Name	Federal	State	CNPS	Habitat	Project Area Found/Not Found
ANIMALS						
Reptiles/Fish/Amphibians						
Ambystoma californiense	CA Tiger Salamander	T	T,SSC		CP,G,NCS	Low potential
Anniella pulchra nigra	Black Legless Lizard		SSC		D, R	Moderate potential
Emys marmorata	Western Pond Turtle		SSC		R	KNOWN
Oncorhynchus mykiss irideus	Steelhead - south/central Californa coast DPS	T	SSC		R	KNOWN
Phrynosoma blainvillii	Coast Horned Lizard		SSC		G,OW,NCS	Moderate potential
Rana draytonii	CA Red-legged Frog	T	SSC		R	KNOWN
Taricha torosa	Coast Range Newt		SSC		R,RW,OW	Moderate potential
BIRDS						
Agelaius tricolor	Tricolored Blackbird		SSC		G	Moderate potential
Athene cunicularia	Burrowing Owl		SSC		CP, D, G	Low potential
Charadrius alexandrinus nivosus	Western Snowy Plover	T	SSC		D	No potential
Lanius ludovicianus	Lggerhead Shrike		SSC		G, OW	Moderate potential
Strix occidentalis occidentalis	CA Spotted Owl		SSC		RW, OW	Low potential
MAMMALS						
Neotoma fuscipes luciana	Mont. Dusky-footed Woodrat		SSC			KNOWN
Reithrodontomys megalotis distichlis	Salinas Harvest Mouse				salt marsh	No potential
Taxidea taxus	American Badger		SSC		CP, G	Low potential
INVERTEBRATES						
Coelus globosus	Globose Dune Beetle				D	No potential
Danaus plexippus	Monarch Butterfly				MPF	Low potential
Euphilotes enoptes smithi	Smith's Blue Butterfly	E			D, NCS	No potential
Linderiella occidentalis	California Linderiella				vernal pools	No potential
NATURAL COMMUNITIES MAPPED BY CNDDB ON SEASIDE QUAD:						
Central Maritime Chaparral						No potential
Monterey Pine Forest						Low potential*
Valley Needlegrass Grassland						No potential

* The occurrence of individual Monterey pine trees does not constitute a Monterey Pine Forest natural community. Trees at this location are recruiting in disturbed and riparian habitat.

Abbreviations for Status Codes
E = Endangered
T = Threatened
R = Rare
SSC = Species of Special Concern, * indicates potential status change
CP = Protected under California Code of Regulations
FP = Protected under California Fish and Game Codes

cont. next page

FSS = Forest Service Sensitive Species
1B = Plants rare, threatened or endangered in California and elsewhere
1B.1 = Seriously endangered in California
1B.2 = Fairly endangered in California
1B.3 = Not very endangered in California
4 = Plants of limited distribution in California - Watch List
4.2 = Fairly Endangered in California
4.3 = Not very endangered in California

Habitat Abbreviations
C = Chaparral
CBS = Coastal Bluff Scrub
CM = Coastal Marsh
CP = Coastal Prairie
D = Coastal Dunes
G = Foothill and Valley Grassland
MC = Maritime Chaparral
MEF = Mixed Evergreen Forest
MPF = Monterey Pine Forest
NCS = Northern Coastal Scrub
OW = Oak Woodland
R = Riparian Corridor
RW = Redwood Forest

6. EXISTING BIOLOGICAL CONDITIONS and SURVEY RESULTS

6.1. Area Enclosed By Food Safety Fence, including training fields, structure footprints, hay field, irrigation/recreation pond, and gardens:

This entire 31.5-acre area has a long history of soil disturbance related to agricultural practices. There is no natural, native habitat in any portion of this fenced area, however a narrow strip of arroyo willow scrub (*Salix lasiolepis*) is growing in a drainage ditch between the agricultural fence and Valley Greens Drive at the extreme western margin of the CCSC property. This very narrow willow thicket is the only native cover between Quail Lodge, Valley Greens Drive and the CCSC training facility and it may provide a useful habitat corridor for wildlife moving between the Carmel River and upland Coastal Scrub communities across Carmel Valley Road.

The farm fields continue to be maintained with turf grass and hay, with some recruitment of non-native, invasive weedy forbs and grasses. Unimproved roadways for farm equipment and walkers with dogs encircle many of the fields and chipped woody material has been placed under all parking areas and along many of the walkways between gardens and fields.

At the time of field survey, the 1.2-acre reservoir feature was dry, although recent rains may have resulted in some water collection. No plants or wildlife of any kind were observed in the recently excavated, empty pond.

Although no native plants or special status species were observed inside the food safety fence, it is possible that California Tiger Salamander, Coast Range Newt and perhaps California Red-legged Frog utilize abandoned rodent burrows and puddled irrigation water on an occasional basis around the farm fields. Few pocket gopher or ground squirrel burrows were observed on the subject property and a combination of rodent control, efficient irrigation practices and continued observation will help avoid potential impacts to special status amphibian species in the event they move across the CCSC training facility terrain.

Figure 7- Agricultural safety fence around CCSC training facility and recently seeded hay field, January 14, 2014.

6.2. Ruderal Disturbed Area:

The 3-acre ruderal habitat on the upper terrace between the food safety fence and the Carmel River floodplain is primarily vegetated with a number of non-native and invasive species, including very large eucalyptus and a variety of horticultural garden escapes. This area was used by the Wolter family and Earthbound Farms for equipment storage during their agricultural endeavors, but also supported habitation sites, a pig farm and a stream gravel mine. There are broad, open areas covered with imported chipped material and abundant non-native, annual grasses and forbs, which appear to have been mowed at some point last fall. Numerous Monterey pine and Monterey cypress seedlings are invading – neither of these forest species is in its natural habitat at this location, although other native upland tree species are well-established at this site, including coast live oak, sycamore and California bay. A pocket of Oak Woodland vegetation occurs along the sloping transitional area between the river terrace at the elevation of the farm fields and the riparian floodplain below. Riparian plant species occur along the toe of this slope.

Highly invasive, non-native Cape ivy occurs in many portions of the disturbed habitat and has begun to climb a number of trees around abandoned farm equipment. Discarded Earthbound Farms machinery and materials dating to the Wolter farming and gravel extraction years are scattered throughout the ruderal habitat. Miscellaneous debris, car tires, non-native periwinkle, ice plant, poison hemlock, Bermuda buttercup, French broom and other weedy species indicate a long history of past disturbance in this portion of the CCSC project area. In addition, old structure foundations remain near the proposed picnic site and near the Wolters' pig farm.

This disturbed upland habitat may provide seasonal cover for California Red-legged Frogs during periods when these amphibians migrate or disperse overland and it is possible that Western Pond Turtles move up to this elevation above the floodplain to nest or overwinter in thick leaf duff. I have observed California Red-legged Frog in xeric habitat some distance from probable breeding locations in Carmel Valley and have personally witnessed Western Pond Turtles overwintering away from the Carmel River in thick eucalyptus duff on the Cooper Ranch addition to Garland Ranch Regional Park. It is also possible that Coast Range Newt and California Tiger Salamander utilize the ruderal habitat, however it is unlikely that the passive picnic and gathering activities, or weed eradication would lead to potential impacts for any of these special status species.

It is probable that a variety of mammals and nesting and migratory birds breed, forage and find cover among the various vegetation elements in the disturbed habitat, however it seems unlikely that occasional passive recreational or educational activities would lead to potential impacts for any of these species.

Access to this area for farming activities was not controlled in any way until agricultural security concerns resulted in the installation of the tall food safety fence around the farm fields. CCSC proposes to remove most of the abandoned machinery, equipment and debris and mow weedy annual grasses. Only mechanical or hand control of other undesirable species is proposed and no chemical treatment of weedy invasives will occur, as use of herbicides violates the longtime organic practices advocated by the Wolter family.

Figure 8 – Ruderal habitat and proposed picnic area. Vegetation in the MPWMD Valley Hills Restoration Project is illuminated in the sunlight on lower terrace/floodplain at the center-right of the photograph, January 14, 2014.

The ruderal habitat on the upper terrace where the picnic area is proposed was not a component of the MPWMD Valley Hills Restoration Project, other than as an occasional staging area for District activities and vehicles. Current MPWMD riparian management and fish rescue activities that stage or walk through the picnic site are provided access to this portion of the Natural Area via the driveway for the adjacent Cal-Am Valley Hills well. The original road access through the Wolter's agricultural fields (currently the CCSC training fields) was rerouted in the early 2000's to accommodate expanded agricultural activities by the former leasee, Earthbound Farms.

The ruderal upper terrace/picnic area is frequented by the Wolter family and is proposed as a casual picnic and gathering site by the CCSC. The current Agreement between the Wolter family and MPWMD specifies that Water District personnel are required to provide the Wolter family with advance notice before accessing the property, however the family has been relaxed about requiring notification prior to District visits. CCSC will request MPWMD staff to notify them prior to entering the property at the Valley Hills well, so that coordination and scheduling for CCSC members can occur and potential conflicts avoided. The advance registration for access to the picnic area and trails on the lower floodplain terrace by CCSC members and authorized guests, and the advance notice to CCSC by the Wolter family and agency personnel will also greatly facilitate the identification of trespassers. There currently is unrestricted access to the ruderal area and riparian corridor from several access points outside the food safety fence and the

incidence of trespass is particularly noticeable during spring and summer months when the river attracts numerous unauthorized visitors.

This portion of the CCSC project area is sandwiched on an upper terrace between the food safety fence and the lower terrace floodplain habitat along the Carmel River riparian corridor. Open portions of this area will continue to be lightly mowed to reduce weedy thatch. An invasive plant removal campaign may be initiated. Four picnic tables are proposed for the area depicted in Figure 8 and one picnic table is proposed for the concrete slab at the site of the old Wolter pig farm. The proximity of the pig farm to one of the locked gates makes this proposed picnic table site appropriate for handicapped access. No utilities are proposed in this area and dog waste collection receptacles will be provided and regularly serviced.

6.3. Lower Terrace Floodplain of the Carmel River Riparian Corridor:

The 2.5-acre riparian portion of the proposed CCSC project covers the sections of APN 169-431-007 and APN 169-431-008 that are located along the north (right) bank of the Carmel River. The portions of the Assessor's Parcels that are located across the channel on the south (left) bank of the river are inaccessible (no trails, no access during high water) and therefore not proposed for any use by the private land owners or the CCSC. The area south of the Carmel River channel was not surveyed pursuant to this Biological Resources Assessment.

All of the riparian habitat and proposed land uses described in the following section of the Biological Resources Assessment are outside the CCSC training fields, which are enclosed by a tall agricultural safety fence and secured with locked gates. The riparian natural area will remain locked behind the agricultural safety fence at all times and will only be accessible to CCSC members, authorized guests and dogs by reservation during the normal CCSC hours of operation, when appropriate. The land owners, MPWMD personnel and other resource management agency staff will be able to access the river and riparian area at any time, with advance notice to the CCSC site manager for coordination purposes. The lower terrace/floodplain could be off-limits to all CCSC members and their dogs during high water, low water, or fish rescue activities. Access for the CCSC will be controlled and be by reservation only. Note that public access to the Carmel River channel can not be controlled beyond the CCSC agricultural safety fence because the river bed is a public right-of-way and there are a number of open access points beyond the ag safety enclosure. Members of the public (and their dogs and horses) can walk upstream or downstream, kayak, boat, and float in the river channel without restriction.

On the terrace level below the picnic area, the lower riparian bench and contemporary floodplain are densely vegetated with native streamside plants. Central Coast Riparian Scrub, Central Coast Willow Riparian and Black Cottonwood Forest natural communities occur on-site. Potential habitat for passerine birds, raptors and waterfowl is abundant in the multi-layered habitat. The aquatic environment along the margin of the Carmel River channel could support potential habitat for Pacific Lamprey, *Entosphenus tridentatus*, which is known from upstream locations along the Carmel River.

This entire area was devoid of vegetation when the MPWMD initiated its Valley Hills Restoration Project in 1993. Photographs from the early 1990's illustrate the labor and equipment-intensive efforts undertaken to reconfigure the river channel and banks, and revegetate the riparian corridor at the Valley Hills Restoration site. Figures 9 and 10 depict the Carmel River channel and adjoining floodplain during the early years of the MPWMD restoration efforts.

The restoration site had historically been dramatically disturbed by gravel mining, as well as by various farm-related activities. Combined with gravel extraction, the watertable draw-down in the alluvial aquifer resulting from operation of the large municipal and private wells contributed to riparian vegetation mortality and the overall instability of the Carmel River channel in this reach.

Figure 9 – Photo of MPWMD Valley Hills Restoration site in June 1993 approximately three months after willow cuttings were installed and irrigated on the reconfigured floodplain (photo courtesy of MPWMD).

Figure 10 – Photo of the MPWMD Valley Hills Restoration Site in April 1995 only one month after the second large flow event of 1995 covered the entire foreground in the image with floodwater. The author is standing right of center and is co-hosting a field trip of fluvial geomorphology graduate students from the University of California, Berkeley (photo courtesy of MPWMD).

Today, the lower terrace restoration area supports robust riparian vegetation with planted and self-sustaining black cottonwood, arroyo willow, sycamore, box elder, alder and occasional creek dogwood. Healthy natural recruitment in the riparian habitat ensued after flood events inundated the planting area in 1995 and 1998, and now the restoration site includes high quality habitat with wild blackberry, Santa Barbara sedge, rushes, manroot, coffeeberry, mugwort, horsetail and abundant poison oak, in addition to the variety of trees and large shrubs noted above. Invading Monterey pines are beginning to occupy the area and threaten to eventually shade out some of the native riparian species. The lower terrace, much like the upper terrace where the picnic area is proposed, has begun to support a number of native upland species, including coast live oak, California bay, California sagebrush, coyotebrush and an occasional eucalyptus sapling, as well as invasive Monterey pine and cypress.

The vigorous riparian vegetation on the floodplain terrace is an excellent example of a highly successful restoration project where the floristically diverse habitat is largely self-perpetuating. However, the operation of the nearby Valley Hills well and other private wells affect the watertable throughout this portion of the Carmel Valley alluvial aquifer and the riparian vegetation along the river in this reach occasionally requires irrigation to compensate for a lack of moisture in the vadose zone of the plant roots. The robust vegetation makes it difficult to recognize this area as a built environment sustained in part by supplemental irrigation and the installation of erosion control, gabion fencing and a massive grade-control structure embedded in the river channel (which forms the deep “Hampson’s Hole”). Soil moisture is regularly monitored in the restoration area, which is irrigated by MPWMD staff when soils and riparian plants indicate moisture deficiency.

The Carmel River in this reach is important habitat for Steelhead Trout, California Red-legged Frog, Western Pond Turtle and a variety of bird species. Small, and likely large mammals, too, utilize the riparian corridor since the river channel and attendant vegetation provide important habitat function for numerous wildlife species. Figures 11 and 12 depict the riparian habitat along the small paths installed by MPWMD staff. The vegetation is quite dense and challenging to photograph in a manner that demonstrates its vigor.

Figures 11 and 12 – Photographs along MPWMD use trails in the lower terrace floodplain of the CCSC riparian natural area. Trails are well-established and receive some maintenance by MPWMD staff. Riparian vegetation in this area is very dense and difficult to photograph adequately.

7. PROPOSED CCSC LAND USE and POTENTIAL ENVIRONMENTAL IMPACTS

7.1.1. Summary of Proposed Uses and Visitation Protocols in CCSC Project Area:

The following section summarizes activities that have been proposed by the CCSC in the fenced, ruderal and riparian habitats within the project area. The ensuing description of proposed activities is a summary only and is not intended to characterize in detail every sort of activity that may occur on-site.

The CCSC proposes to develop a canine training and event center on 31.5 acres of farmland in lower Carmel Valley. This membership-based, private facility includes irrigated training fields, small garden areas, four modular structures, parking for routine use, overflow parking to accommodate up to 250 people and 70 recreational vehicles for events (no more than 24 days per year), a 1.2-acre reservoir, and a network of internal farm equipment roadways. The 31.5-acre training area is entirely enclosed by an 8-foot food safety fence and is situated on lands with a long history of agricultural use.

The training fields are augmented by a proposed minimalist picnic area with 4 to 5 picnic tables on 3 acres of ruderal habitat previously used for equipment and farm materials storage. No services will be provided, other than dog waste collection receptacles. The picnic area would be available by reservation for casual recreational use by members, educational groups, and natural resource-based outings (for example, groups like the Audubon Society and Native Plant Society).

The CCSC also proposes to continue to offer the opportunity to walk in the riparian corridor and visit the active channel of the Carmel River in a 2.5-acre terrace floodplain area on the north bank of the river. Access to this area would be provided by reservation only and could be limited by river conditions and/or agency activities, as determined on a day-to-day basis. This riparian area is the site of the MPWMD Valley Hills Restoration project.

Access to all parts of the CCSC facility, both inside and outside the food safety fence, will be by reservation during operating hours, with specific fields, herding areas, picnic site and riparian walking trails utilized only after establishing advance arrangement (similar to the reservation of tennis courts at an athletic club). Visitors to the CCSC project area outside the fenced training fields will walk in from the parking location near Valley Greens Drive, although the proximity of the pig farm to one of the two gates in the food safety fence lends itself to establishing this potential picnic site as handicapped accessible.

No access to any portion of the CCSC lands outside the locked agricultural safety fence will be granted during CCSC events to event participants or their guests.

7.1.2. Numbers:

According to information provided by the CCSC proponents, it is anticipated that 100 members and their dogs could visit the facility on an average day at project build-out. There could be over 100 dogs present during the course of an average day, and more than 100 dogs during events.

7.1.3. Safety:

CCSC staff proposes to disseminate information to all members interested in visiting the area outside the food safety fence regarding safety protocols and potential hazards in the riparian corridor. This will also provide the opportunity to communicate the sensitivity of the riparian habitat. Informational materials could be prepared with input from MPWMD. Members wishing to visit the areas outside the food safety fence may be required to sign a liability release when they check-in at the office to reserve a time and receive the access key or gate code.

Recreational dog use at the CCSC facility would likely be similar to canine use of the Carmel River and riparian corridor trails at Garland Park, however the CCSC property would have controlled access for members by reservation only. Dogs at Garland Park are required to be under immediate voice control or on leash at all times and similar rules would apply in the CCSC training facility and outside the food safety fence. It will be important for agency personnel to notify CCSC before entering the Natural Area in order to communicate whether potential dog visitors are also be in the area. CCSC members wishing to access the area outside the food safety fence will be notified of agency use and asked to maintain leash control, if appropriate.

7.1.4. Hours/Times of Potential Use:

The CCSC facility will be accessible during hours of operation, currently proposed for daylight hours between 7 AM and 8 PM. It is anticipated that peak use of the picnic area and lower terrace riparian natural area would be seasonal during periods of moderate or no flow of the Carmel River, however access may be available during high stream flows if deemed appropriate on a case-by-case basis . Access to the area outside the food safety fence could be denied by CCSC at any time. Information about hazards will be shared during times of high or low flow, during periods of MPWMD fish rescue, and/or during times agreed to between CCSC and MPWMD. Access can be determined on a day-to-day basis, after consideration of agency needs and potential hazards, including cyanobacteria in drying pools (toxic for dogs).

Access to specific training fields will be available to registered guests during a maximum of 24 event days per year. Seventy parking spaces will be available for recreational vehicles during planned events. No sewage hookups or waste-water discharge services will be available for RV's.

7.2. Potential Impacts:

There are potential direct and indirect impacts to sensitive resources associated with the implementation of the CCSC project and the Draft Natural Area Management Plan. However much of the project area encompasses land that has a long history of on-going disturbance and is not likely to support special status species. The key areas of concern occur in the 5.5 acres of the 37-acre project area that are located outside the agricultural safety fence, particularly along the lower terrace riparian corridor along the Carmel River (the Natural Area).

Potential impacts from CCSC project implementation (incorporating member and canine use of the training fields and Natural Area), include:

- Predation or injury to special status species, including but not limited to Steelhead Trout, California Red-legged Frog, Western Pond Turtle, California Tiger Salamander, Lamprey, Dusky-footed Woodrat, migratory and nesting birds, Coast Range Newt resulting from driving, mowing, trampling, canine attack.

- Disruption of critical habitat function and natural activities of special status species, including nesting songbirds, raptors and waterfowl resulting from regular activities and events.in the training fields and intensified canine use of the Natural Area outside the food safety fence.

- Degradation of riparian and aquatic habitat function from trail use, erosion, vegetation trampling, digging and damage to natural recruitment sites.

- Degradation of aquatic habitat function from water quality contamination or sediment (dog feces, soil disruption from digging, playing, walking, disking of agricultural fields).

- Health impacts to MPWMD, agency personnel, CCSC members, authorized CCSC guests (e.g. school groups) and the general public (public accessing the riparian corridor from the public river bed) from uncollected dog waste, or potential injury from canine attacks.

- Damage to MPWMD property, including irrigation network, monitoring devices, monuments and gabion fencing.

- Direct and cumulative impacts to riparian and riverine habitat resulting from water diversion from the Carmel River alluvial aquifer to irrigate the training fields.

- Creation of potential habitat for special status species (amphibians) and/or potentially predatory species (bullfrogs) in the irrigation reservoir.

8. RECOMMENDATIONS

Implementation of the Carmel Canine Sports Center project will not significantly affect landscape features or biological resources in any portion of the project area if suggestions to avoid, minimize or eliminate potential environmental impacts outlined in this report are followed.

It is understood and acknowledged by the CCSC project proponents that on-going maintenance and management of the Valley Hills Restoration Project by MPWMD will help promote the continued success of the riparian corridor restoration project and the long-term vitality of the Carmel River.

The following suggested activities will help avoid, reduce or eliminate potential environmental impacts and personnel safety issues associated with the proposed CCSC project:

8.1. Control Access and Provide Education:

Many of the potential direct and indirect impacts to natural habitat, water quality, special status species and agency personnel can be avoided, minimized or eliminated by controlling access, numbers and behavior of CCSC members, guests and dogs. The proposal to maintain strict enforcement of a reservation system during operating hours and to institute an educational program for all visitors will help communicate the importance of maintaining control of dogs and the sensitivity of the training grounds and habitat areas outside the food safety fence.

It is recommended that a daily cap of 30 dogs per day visiting the area outside the food safety fence be established during the first year of CCSC operation. The initial cap on dog visitation will control the number of animals visiting the picnic area and sensitive riparian habitat, and allow for an assessment after one full year of operation. Numbers of people and dogs visiting the area outside the fence will be logged as a component of the reservation/registration process. After one year of operation, the CCSC partners should meet with MPWMD personnel to determine whether any adverse impacts associated with canine use have occurred, whether remedial steps might need to be taken. When canine use and environmental conditions in the areas outside the food safety fence are reviewed after one full year of operation, the limit on numbers of dogs could be adjusted. Regular photo-monitoring by MPWMD staff currently occurs in the Valley Hills Restoration area and could serve as baseline documentation of environmental conditions.

Dog waste collection, interpretive materials, signage, membership agreements, peer-enforcement of canine behavior standards, use area reservations and caps on visitation outside the food safety fence will reduce potential impacts to a less than significant level.

Dog visitors will likely be canines trained at a higher level than most “general public dogs”, however, all dogs on the training fields or visiting the area outside the food safety fence for picnics or walks along the trails and to the river channel should be under immediate voice control

and/or leashed in the event river maintenance personnel are encountered, or trespassers or people and their dogs and horses are utilizing the river channel.

To assist with controlling unauthorized entry to the CCSC area outside the fenced training fields, CCSC could approach MPWMD and Cal-Am regarding the installation of a locked gate at the uncontrolled access point currently available via the Valley Hills Well site.

8.2. Riparian Habitat:

It is recommended that no modifications of riparian habitat or MPWMD equipment in the Valley Hills Restoration site be conducted without prior consultation with MPWMD staff.

CCSC staff should collaborate with MPWMD personnel to continue the control of invasive, non-native vegetation outside the food safety fence, including Cape ivy, fennel, genista and seedlings of Monterey pine and blue gum eucalyptus.

8.3. Special Status Species and Birds:

If any special status amphibian or reptile is observed in the CCSC project area, a qualified biologist should be consulted to determine if there is potential for "take" and whether protective measures need to be implemented.

Consideration should be given to reestablishing the MPWMD avian monitoring program to record bird diversity, density and timing of use in the Valley Hills Restoration site. A baseline study and subsequent counts would help demonstrate trends in avian use of the restoration area as the CCSC operates over the years. If negative trends are thought to be related to canine use, revised visitation protocols could be initiated. A collaboratively-funded monitoring program could be considered and the Monterey Peninsula Audubon Society could be invited to incorporate the CCSC project area in their annual Christmas Bird Count.

8.4. Reservoir and Field Maintenance:

The operation of an irrigation reservoir could provide suitable habitat for special status amphibian or reptile species and potential "take" if they are impacted by canine activities. Consideration should be given to fencing the reservoir with low, impenetrable fencing to prevent the movement of amphibians and reptiles into the reservoir. Fencing would also prevent the establishment of predatory bullfrogs, which could disperse into the Carmel River riparian corridor. It is unclear whether adjacent water features on neighboring parcels are currently utilized by special status species, however California Red-legged Frog has been previously documented in ponds found on the adjoining Quail Lodge Golf Resort. Most of these ponds are being drained or removed as part of a course renovation program and it is possible that special status species could relocate to the CCSC water feature if it becomes available.

Rodent burrows can offer resting places for special status amphibians and the control of rodents and ground squirrels on the CCSC property will remove potential burrow and "take" issues for

California Tiger Salamander and California Red-legged Frog. Rodents can be trapped, or passively controlled by owls and other raptors. Consideration should be given to installing owl nesting boxes around the perimeter of the food safety fence to encourage avian predators.

Best Management Practices for field irrigation will reduce the potential of water waste and puddling, which could attract special status amphibians.

The use of hedgerows around training fields is encouraged to provide visual screening, define space and potentially trap sediment.

8.5. Carmel Valley Alluvial Aquifer;

Pumping from the Carmel Valley alluvial aquifer has severely degraded the Carmel River riparian corridor and affected the integrity of the riverine environment. The operation of large and small private wells throughout Carmel Valley contributes to the general degradation of the Carmel River and all of the associated special status plants, animals and natural communities found along the riparian corridor.

There is legal work being done to define the Water Right associated with the Wolter Properties LP ownership of the CCSC project area. This area was farmed in irrigated organic truck crops by the Wolter family and their prior leasee, Earthbound Farms, continuing the 100-year tradition of farming on this property. Continued use of the Wolter irrigation well to maintain the agricultural nature of the irrigated CCSC training fields and gardens will perpetuate an impact to the Carmel River alluvial aquifer, however an established water right will not preclude the on-going use of the irrigation well despite the knowledge of commensurate environmental impacts to the river. The definition of the water right will establish an allocation that should not exceed the permitted amount of water used for past agricultural practices.

9. CONCLUDING REMARKS

Implementation of the Carmel Canine Sports Center project will not significantly affect landscape features or biological resources in any portion of the project area if suggestions to avoid, minimize or eliminate potential environmental impacts outlined in this report are implemented.

There are known and potential occurrences of special status plants, animals and natural communities present in the CCSC project area, however the primary area of concern is situated along the Carmel River outside the 8-foot agricultural safety fence encircling the proposed training facility.

The proposed CCSC training fields, structures, hay field, livestock pens, reservoir, parking, RV parking and gardens are located on formerly cultivated farmland with a 100-year history of agricultural use. The farm fields are heavily disturbed and any potential occurrence of special status plants or wildlife will not be environmentally significant if the recommendations outlined in this report are followed. The open space and agricultural nature of the proposed project are

within the guidelines of the Carmel Valley Master Plan, which recommends the maintenance of the rural character of the Carmel Valley landscape. The proposed land uses associated with the CCSC project are consistent with adjoining, developed parcels, which include residential properties, shopping centers, golf courses and the occasional events these commercial enterprises support.

The primary area of biological resource concern is situated outside the food safety fence in the adjunct ruderal farming zone and the lower terrace floodplain of the Carmel River riparian corridor. The known presence of special status wildlife in the river and riparian corridor will not be affected in an environmentally significant way if suggestions to avoid, minimize or eliminate potential impacts noted in this report are followed. A minimalist picnic area with 4-5 tables and no services is proposed for the ruderal upper terrace area. Recreational use of existing trails for up to 30 dogs during the first year of CCSC operation is proposed for the lower terrace riparian area within the MPWMD Valley Hills Restoration project footprint.

Much of the potential environmental concern is associated with possible canine activities in and around the Carmel River. CCSC member education, reservation system and a one-year cap on dog numbers in the area outside the food safety fence, as well as the implementation of other recommendations outlined in the Biological Resources Assessment will result in a less than significant environmental impact to the Carmel River riparian corridor and the sensitive species supported in the riverine natural community.

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Personal Communication, Thomas Christensen, MPWMD Riparian Projects Coordinator. January 15, 2014, February 11, 2014.

Personal Communication, Ken Ekelund, CCSC Partner

Personal Communication, Martha Diehl, CCSC Partner

APPENDIX A

List of Birds Documented by the Ventana Wilderness Society During 2010 Avian Monitoring for MPWMD at the Quail Lodge Valley Greens Bridge over the Carmel River (VWS 2010).

FO = Fly Over

Canada goose
Mallard
CA Quail
Green Heron
Red-shouldered Hawk
Red-tailed Hawk
Band-tailed Pigeon
Mourning Dove
White-throated Swift – FO
Anna's Hummingbird
Acorn Woodpecker
Hairy Woodpecker
Nuttall's Woodpecker
Downy Woodpecker
Northern Flicker
Pacific-slope Flycatcher – FO
Black Phoebe
Warbling Vireo
Steller's Jay
Western Scrub Jay
American Crow
Tree-Swallow – FO
Violet-green Swallow – FO
Northern Rough-winged Swallow – FO
Chestnut-backed Chickadee
Oak Titmouse
Bushtit
Pygmy Nuthatch
Bewick's Wren
Swainson's Thrush
Wrentit
European Starling – FO
Orange-crowned Warbler
Wilson's Warbler
Spotted Towhee
California Towhee
Song Sparrow
Dark-eyed Junco
Brewer's Blackbird
Bullock's Oriole
Purple Finch
House Finch – FO
Lesser Goldfinch

APPENDIX B

List of plants observed during January and February 2014 Field Survey of CCSC Project Area OUTSIDE THE FOOD SAFETY FENCE (plants inside the food safety fence were all non-native, invasive species)

TREES:

Acer negundo, boxelder
Eucalyptus globulus, blue gum *
Hesperocyparis macrocarpa, Monterey cypress
Pinus radiata, Monterey pine
Platanus racemosa, sycamore
Populus trichocarpa, black cottonwood
Quercus agrifolia, coast live oak
Salix lasiolepis, arroyo willow
Umbellularia californica, CA bay

SHRUBS:

Acmispon glaber, deerweed
Artemisia tridentata, California sagebrush
Baccharis pilularis, coyote brush
Cornus sericea, creek dogwood
Frangula californica, coffeeberry
Genista monspessulana, French broom *
Lupinus arboreus, bush lupine
Rubus usrsinus, CA blackberry
Solanum xantii, purple nightshade
Toxicodendron diversilobum, poison oak

FORBS, GRASSES and GRASS-LIKE PLANTS

Artemisia douglasiana, mugwort
Brassica nigra, black mustard *
Brassica rapa, field mustard *
Carex barbarae, Santa barbara sedge
Cirsium vulgare, bull thistle *
Conium maculatum, poison hemlock *
Delairea odorata, Cape ivy *
Equisetum arvense, common horsetail
Festuca arundinacea, reed fescue *
Juncus patens, spreading rush
Marah fabacea, manroot
Oxalis pes-caprae, Bermuda buttercup *
Phacelia malvifolia, stinging phacelia
Vinca major, periwinkle *

* weedy, non-native species

APPENDIX C

Mammals, Reptiles and Amphibians Observed, or Potentially Occurring Along the Carmel River Riparian Corridor

MAMMALS

Opossom, *Didelphis marsupialis*
Ornate Shrew, *Sorex ornatus*
Vagrant Shrew, *S. vagrans*
Trowbridge's Shrew, *S. trowbridgii*
Broad-footed Mole, *Scapanus latamanus*
California Myotis, *Myotis californicus*
Yuma Myotis, *M. yumanensis saturates*
Long-eared Myotis, *M. evotis*
Fringed Myotis, *M. thysanodes*
Long-eared Myotis, *M. volans longicura*
Small-footed Myotis, *M.leibii*
Western Pipistrelle, *Pipistrellus hesperus*
Big Brown Bat, *Eptesicus fuscus*
Red Bat, *Lasiurus borealis*
Hoary Bat, *L. cinereus*
Townsend's Big-eared Bat, *Plectotus townsendii*
Pallid Bat, *Antrozoas pallidus*
Brazillian Free-tailed Bat, *Tadarida braziliensis*
Western Mastif Bat, *Eumops perotis*
Raccoon, *Procyon lotor*
Ringtail, *Bassariscus astutus*
Bobcat, *Lynx rufus*
Mountain Lion, *Puma concolor*
Gray Fox, *Urocyon cinereoargenteus*
Red Fox, *Vulpes vulpes*
Coyote, *Canis latrans*
Long-Tailed Weasel, *Mustela frenata*
American Badger, *Taxidea taxus*
Striped Skunk, *Mephitis mephitis*
Spotted Skunk, *Spilogale gracilis*
CA Ground Squirrel, *Spermophilus beecheyi*
Western Gray Squirrel, *Sciurus griseus*
Fox Squirrel, *S. niger*
Merriam's Chipmunk, *Tamias merriami*
Botta's Pocket Gopher, *Thomomys bottae*
Pocket Mouse, *Chaetodipus calilfornicus*
Western Harvest Mouse, *Reithrodontomys megalotis*
Deer Mouse, *Peromyscus maniculatus*
CA Mouse, *P. californicus*

Brush Mouse, *P. boyii*
Monterey Dusky-footed Woodrat, *Neotoma fuscipes luciana*
CA Vole, *Microtus californicus*
Norway Rat, *Rattus norvegicus*
House Mouse, *Mus musculus*
Black-tailed Jackrabbit, *Lepus californicus*
Brush Rabbit, *Sylvillagus bachmani*
Cottontail, *S. audubonii*
Mule Deer, *Odocoileus hemionus*
Wild Pig, *Sus scrofa*
Black Bear, *Ursus americanus*

REPTILES AND AMPHIBIANS

California Tiger Salamander, *Ambystoma californiense*
Coast Range Newt, *Taricha torosa*
Monterey Salamander, *Ensatina e. eschscholtzii*
Santa Lucia Slender Salamander, *Batrachoseps luciae*
Arboreal Salamander, *Aneides lugubris*
CA Toad, *Bufo boreas halophilus*
Pacific Chorus Frog, *Pseudacris (Hyla) regills*
CA Red-legged Frog, *Rana draytonii*
Bullfrog, *Rana catesbeiana*
Western Pond Turtle, *Emys marmorata*
Legless Lizard, *Anniella pulchra p./nigra*
Southern Alligator Lizard, *Elgaria multicarninata multicarinata*
Coast Horned Lizard, *Phrynosoma coronatum frontale*
Western Fence Lizard, *Sceloporus occidentalis bocourti*
Western Skink, *Eumeces skilktonianus*
CA Whiptail, *Cnemidophorus tigris mundus*
Rubber Boa, *Charina bottae*
Sharp-tailed Snake, *Contia tenuis*
Ringneck Snake, *Diadophis punctatis vandenburghi*
Garter Snake, *Thamnophis elegans terrestris*
CA Red-sided Garter Snake, *T. sirtalis infernalis*
Gopher Snake, *Pituophis catenifer*
CA Kingsnake, *Lampropeltis getulus californiae*
CA Mountain Kingsnake, *L. zonata multifasciata*
Western Yellow-bellied Racer, *Coluber constrictor mormon*
Coachwhip, *Masticophis flagellum*
Striper Racer, *M. lateralis*
Western Rattlesnake, *Crotalus viridis*

APPENDIX E
HAZARDS

COUNTY OF MONTEREY
HEALTH DEPARTMENT

MEMORANDUM ENVIRONMENTAL HEALTH BUREAU

OCTOBER 10, 2013

****DRAFT FOR REVIEW****

To: **Steve Mason, Project Planner**
Monterey County Planning Department

From: **Bronwyn Nielson, REHS**
and Nicki Fowler, REHS
Environmental Health Review

Subject: **PLN130352, WOLTER PROPERTIES LP (CARMEL CANINE SPORTS CENTER)**

The Environmental Health Bureau now considers the above referenced project as complete with seven (7) non-standard conditions, attached below in matrix format.

Note to EHRS:
Combined Development Permit: 1) Use Permit for the development of a canine training/sports facility and event center. Project to include fenced pastures and fields, permeable parking area and walking paths, irrigation system and reservoir. Modular structures to include an 800 square foot office and a 600 square foot member's building, and; 2) Use Permit for development within the Carmel River floodplain; and 3) Design Approval. Additional structures to include restrooms (1,554 square feet) and three storage rooms (200 square feet each/600 square feet total).

Land Use: The project has been evaluated based on the August 7, 2013 (rev.) project description, and in accordance with the Carmel Valley Wastewater Study (Montgomery Study). The project is located in sub basin 32 in the Montgomery Study which limits wastewater generation to 300 gallons per lot per day. CCSC will operate on 8 lots, one of which is already developed with an SFD, resulting in a maximum onsite wastewater disposal capacity of 2,100 gallons per day (300 gallons x 7 undeveloped lots). A condition has been added to prohibit any development beyond the scope of this project that would generate wastewater on the subject properties while CCSC retains its use permit to operate.

OWTS: The preliminary OWTS design is intended to accommodate a maximum load of 2,100 gallons per day at 0.15 g/sf/d application rate pursuant to Montgomery Study requirements (sub basin 32). Plans for the OWTS design were submitted May 24, 2013 by Ken Mabie of Environmental Conceptsand. CCSC has applied for 24 event days per year (up to 250 people on site), with the remaining days of the year expected to accommodate about 100 people daily. The OWTS has been designed so that weekend wastewater flows (events with up to 242 guests/vendors and 8 employees, or the equivalent of 2,100 gallons) will be collected and dosed throughout the week. The proposed disposal fields exceed minimum design requirements based on a 5-day dosing plan; primary and secondary systems will be installed at initial construction. However, an OWTS design condition has been added to require that the pump chamber/tank be redesigned so that there is enough storage above the 'on' float in the tank to accommodate at least one full day

of storage at maximum flow (2,100 gallons), as well as to address how this system will have the capacity for a three day event without overtaxing the disposal field area as the pump chamber is sized for one day and not a three day surge. This plan change will need to be submitted prior to building permit.

DWPS: There are two wells located on the property labeled as the small well (installed in 2001) and the large well (installed in 1992). Both wells were originally intended for irrigation use. The applicant has indicated that they will be using the small well for potable water and the large well for irrigation. A transient non-community small water system permit will be required to serve the project, utilizing the small well as the source (serves at least 25 individuals daily at least 60 days out of the year, but does not meet the requirements of a community or nontransient noncommunity water system). A condition has been added to obtain a water system permit needs and to submit engineered plans for water system improvements. A condition has been added to require that the small well be protected with fencing so that no potentially contaminating activities occur within the 50' well protection zone required for public water systems. Water quality analysis for the small well, collected 7/31/2013 and analyzed by MBAS, do include primary inorganic or secondary aesthetic MCL exceedances. The sample for E.coli/coliform collected on 9/13/2013 and analyzed by MBAS, is absent/absent. Note, the analytical results for the large well are lacking any bacteria results and Arsenic was over regulated quantities. If the large well is proposed for potable water use in the future, additional action will be required to address Arsenic and potentially bacteria. Source capacity testing has not been required based on the well construction (irrigation well) and estimated well yields on the well completion reports.

CHPS: The project description has proposed to have up to 24 special events at the facility. These events may include food vendors. A condition has been added to apply for a temporary food vendor permit or special event with Consumer Protection Service if necessary.

SWMS: The project description indicates that there will be livestock on the property for herding training and grass grazing maintenance. The site map shows a stocking holding area and several herding areas. A manure management plan will be required for the property.

HMMS: This service did not pertain to the application; therefore, they were not given an opportunity to review the project or assign conditions.

Fees: EHB fees were invoiced for the project on May 22, 2013.

ENVIRONMENTAL HEALTH BUREAU CONDITION COMPLIANCE & MITIGATION MONITORING AND/OR REPORTING PLAN	**Project Name:** ***PLN130352*- WOLTER PROPERTIES LP (CARMEL CANINE SPORTS COMPLEX)** ***File No:*** _PLN130352 ***APNs:*** __169-431-011M_____ ***Approval by:*** *Bronwyn Nielson* ***Date:*** *9/30/2013*

Monitoring or Reporting refers to projects with an EIR or adopted Mitigated Negative Declaration per Section 21081.6 of the Public Resources Code.

Condition Name	Condition Text	Action(s) Needed for Resolution
EHSP01 – ONSITE WASTEWATER TREATMENT SYSTEM DESIGN (Non-Standard)	The Environmental Health Bureau (EHB) has determined that adequate area exists for onsite wastewater disposal for the proposed development. Submit onsite wastewater treatment system (OWTS) plans for review and approval indicating the wastewater handling/dosing plan, location, design layout and size specifications that meets standards found in Monterey County Code Chapter 15.20, Sewage Disposal Ordinance, and the Central Coast Basin Plan, Regional Water Quality Control Board.	Prior to issuance of construction permit, submit an OWTS application and design plans for review and approval by the EHB. Applicant shall obtain a permit to install the OWTS from EHB.
EHSP02 – PORTABLE TOILETS (Non-Standard)	In the event portable toilets are used to supplement permanent restroom facilities, their use shall be limited to no more than ten (10) days per calendar year pursuant to Monterey County Code, Chapter 15.20.050. Portable oilets shall be maintained so as not to create a public nuisance, shall be serviced and cleaned by a permitted liquid waste hauler and shall include hand washing facilities.	Limit the use of portable toilets on the property to no more than ten (10) days per calendar year.

EHSP03 – ONSITE WASTEWATER DISPOSAL LIMITATION (Non-Standard)	The subject properties are located within sub basin 32 of the Carmel Valley Wastewater Study by Montgomery Consulting Engineers, Inc. (1981), which limits onsite wastewater disposal to 300 gallons per lot per day. The project comprises eight (8) lots, one of which is currently developed with a single family dwelling. Therefore, onsite wastewater disposal generated by the project is limited to 2,100 gallons per day. Wastewater generation shall be calculated based on 8 gallons wastewater/person/day for attendees or vendors and 20 gallons wastewater/person/day for employees. No wastewater producing development beyond the scope of this project shall be allowed on the subject properties for as long as this use permit is maintained.	Onsite wastewater disposal generated by the project shall be limited to 2,100 gallons per day. No wastewater producing development beyond the scope of this project shall be allowed on the subject properties for as long as this use permit is maintained.
EHSP04 – NEW WATER SYSTEM PERMIT (Non-Standard)	Pursuant to Monterey County Code Chapter 15.04, Domestic Water Systems, obtain a new water system permit from the Environmental Health Bureau.	Prior to issuance of construction permits, submit necessary water system application, reports and testing results to Environmental Health Bureau for review and approval.
EHSP05 - WATER SYSTEM IMPROVEMENTS (COUNTY PERMITTED SYSTEM) (Non-Standard)	Design the water system improvements to meet the standards as found in Chapter 15.04 of the Monterey County Code, Titles 17 and 22 of the California Code of Regulations and as found in the Residential Subdivision Water Supply Standards. Submit engineered plans for the water system improvements, and any associated fees to the Director of Environmental Health for review and approval prior to installing the improvements.	Prior to issuance of grading/ construction permit, submit engineered plans for the water system improvements and any associated fees to Environmental Health Bureau for review and approval prior to installing the improvements.

EHSP06 – INSTALL WATER SYSTEM IMPROVEMENTS (Non-Standard)	All water system improvements and appurtenances shall be installed prior to issuance of a water system permit. A valid water system permit from the Environmental Health Bureau must be secured prior to commencement of water system operation. Therefore, all water system improvements and appurtenances shall be installed pursuant to Monterey County Code, Chapter 15.04. **(Environmental Health)**	Prior to commencement of water system operation, install the water system improvements and any appurtenances needed. Obtain a final inspection of the installation from Drinking Water Protection Services of the Environmental Health Bureau.
EHSP07 - WELL SITE CONTROL ZONE (Non-Standard)	Pursuant to the California Waterworks Standards, (California Code of Regulations, Title 22, Division 4, Chapter 16) the well proposed to serve as the source for the public water system shall be guaranteed a 50' radius to protect the well from potential sources of contamination.	Prior to issuance of construction permit, submit a plan to EHB that demonstrates a 50' well site control zone to protect the well that will serve as the source for the public water system from livestock or other potentially contaminating activities. Prior to final inspection of construction pemit, construct the well site control zone improvements and contact EHB for approval.

EHSP08 – MANURE MANAGEMENT PLAN (Non-Standard)	Provide a Manure Management Plan to the Environmental Health Bureau (EHB) for review and approval. The Manure Management Plan shall include the following aspects: • The volume of waste generated, method and time frame of continual handling and/or disposal, and necessary controls for vector, odor and waste run-off • Appropriate mechanism to allow for public comment to assess compliance with the plan. • Provision that non-compliance with the approved manure management plan will result in a violation of this use permit • The property owner will be responsible for monitoring the facility for compliance with the approved manure management plan and shall occur at a specified interval. Monitoring shall be recorded in a log that will be maintained on site and is subject to inspection by the County of Monterey upon request. The approved Manure Management Plan will be on file at the Environmental Health Bureau, File Number PLN130352 and available to the public upon request.	Prior to issuance of construction permit, submit two copies of the proposed plan and self-monitoring schedule to the Environmental Health Bureau for review and approval. As an ongoing condition, the applicant shall comply with the approved Manure Management Plan and operate the facility in a manner consistent with public health and safety requirements.
EHSP09 - FOOD PERMITS FOR SPECIAL EVENTS (Non-Standard)	In the event that food and/or beverages are intended to be served at a special event that is not catered by a business with a current health permit from the Environmental Health Bureau (EHB), the vendor shall first obtain a temporary food facility permit from EHB and comply with all conditions of that permit, pursuant to California Health and Safety Code, Division 104, Part 7, Chapter 1 (California Retail Food Code).	The property owner shall ensure that any caterer serving food and/or beverages at a special event has a current health permit from the Environmental Health Bureau (EHB) or obtains a temporary food facility permit from EHB.

C3 Engineering
Civil Engineering Land Development Drafting

08-01-2013

CCSC Preliminary Potable Water Quality

The following is a summary of water quality for the Carmel Canine Sports Center. There are two existing wells on site that were primarily used for agricultural purposes. The owner wishes to convert one of the wells to potable to serve the proposed Carmel Canine Sports Center. The two wells will be referred to as the Large Well and the Small Well. The large well was installed in 1992 and has an estimated capacity of over 600gpm (see well completion report by Melville and Sons attached). The small well was installed in 2001 and has an estimated capacity of 200gpm (see well completion report by ALSOP attached). Both wells have recently been analyzed and the results are also attached. It is anticipated that the large well will be utilized for the potable water system, but the result for the small well have been included to verify similar characteristics between the two.

This discussion is based on the results of the Title 22 sampling of the large well at the park done on June 11, 2013 (MBAS AB0298) and correspondence with the Environmental Health Department.

A brief summary of the lab results are as follows:
The constituent that does exceed the primary MCL is Arsenic (result = 38 ug/L, MCL = 10 ug/L).
The constituents that exceed the secondary MCLs are:
Aluminum (result = 901 ug/L, 200 ug/L)
Color (result = 300 color units, MCL = 15 color units)
Iron (result = 11,119 ug/L, MCL = 300 ug/L)
Manganese (result = 1015 ug/L, MCL = 50 ug/L)
Odor (result = 20 TON, MCL 3 TON)
Specific Conductance (E.C) (result = 1404 umhos/cm, MCL 900 umhos/cm
Total Dissolved Solids (result = 950 mg/L, MCL = 500 mg/L)
Turbidity (result = 155 NTU, MCL 5 NTU)
(Title 22 results, Lab Number AB02098 from MBAS Laboratory attached)

The new water system is planned to be designated as a Transient Non-Community water system. As such, it is not required by Monterey County to treat for Arsenic as the exposure is not acute.

Discussion
Since it is not required to treat the well water for Arsenic, treatment will not be proposed at this time. In the future, the owner may wish to treat for aesthetic purposes (color, odor, taste, hardness, etc.). The main secondary constituents that would be treated would be iron and manganese. The type of treatment system would most likely be an adsorption/physical filtration method such as a green sand filtration system. After the removal of iron and manganese, the color and turbidity values will drop as a result. In addition it is very likely that some of the primary constituents would be reduced as well.

Given this level of treatment, there will be a waste sludge. The sludge will be settled in a tank and allowed to concentrate before removal by vacuum truck. The sludge will contain mostly

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iron and manganese with lower levels of arsenic. The disposal will be determined based on Monterey County guidelines. It is anticipated that CCSC will have low enough levels to either dispose of the sludge as liquid waste at the regional waste plant or discharge the sludge back to the ground on site. This last option would require approval from the Regional Water Quality Control Board.

Odor is believed to come from the presence of hydrogen sulfide. It is believed that with use this level will reduce, the odor levels.

It is likely that the owner will desire to soften the water. This is not required and there is no MCL for hardness. If this treatment is used, waste streams will be sent to the septic system for disposal. The low water use from the park should not cause excessive salt loading to the septic drain fields as allowed by Monterey County standards and will not harm the biological activity in the septic tank.

Because the treatment design is may not be completed, the level of complexity that determines the required treatment operator's license level has not yet been determined. An operator with T3 and D2 licenses is available until in case treatment is desired. If treatment is not implemented, employees and patrons will be notified that arsenic exceeds the MCL.

REGISTERED PROFESSIONAL ENGINEER
FRANK J. CAMPO
No. 61390
EXP. 06/30/15
CIVIL
STATE OF CALIFORNIA

Frank Campo, P.E.

126 Bonifacio Place, Suite C Monterey, CA 93940 Phone: (831) 647-1192 Fax: (831) 647-1194

Source Water Services
Leif Utegaard
659 Redwood Ave
Sand City CA 93955

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION ● ACCURACY ● DEPENDABILITY
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
montereybayanalytical@usa.net

ELAP Certification Number: 2385

 Tuesday, June 25, 2013

Lab Number: AB02098

Collection Date/Time: 6/11/2013 8:15 Sample Collector: UTEGAARD L
Submittal Date/Time: 6/11/2013 15:00 Sample ID Coliform Designation:

Sample Description: Canine Sports Large Well

Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed	Analyst:
Aggressivity Index			10				6/18/2013	DH
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	127		2		6/14/2013	MW
Aluminum, Total	EPA200.8	ug/L	901		10	1000	6/13/2013	SM
Antimony, Total	EPA200.8	ug/L	Not Detected		1	6	6/13/2013	SM
Arsenic, Total	EPA200.8	ug/L	38		1	10	6/13/2013	SM
Barium, Total	EPA200.8	ug/L	56		10	1000	6/13/2013	SM
Beryllium, Total	EPA200.8	ug/L	Not Detected		1	4	6/13/2013	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	155		10		6/18/2013	DH
Bromide	EPA300.0	mg/L	Not Detected		0.1		6/11/2013	DC
Cadmium, Total	EPA200.8	ug/L	Not Detected		0.5	5	6/13/2013	SM
Calcium	EPA200.7	mg/L	145		0.5		6/12/2013	HC
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10		6/18/2013	DH
Chloride	EPA300.0	mg/L	85		1	250	6/11/2013	DC
Chromium, Total	EPA200.8	ug/L	1		2	50	6/13/2013	SM
Color, Apparent (Unfiltered)	SM2120B	Color Units	300		150	15	6/11/2013	HC
Copper, Total	EPA200.8	ug/L	4		4	1300	6/13/2013	SM
Cyanide	QuikChem 10-20	ug/L	Not Detected		5	200	6/19/2013	HC
Fluoride	EPA300.0	mg/L	0.3		0.1	2.0	6/11/2013	DC
Hardness (as CaCO3)	SM2340B	mg/L	576		10		6/25/2013	DH
Hydroxide	SM2320B	mg/L	Not Detected		5		6/18/2013	DH
Iron	EPA200.7	ug/L	11119		10	300	6/12/2013	HC
Langlier Index (15 deg. C)	SM2330B		-0.44				6/25/2013	DH
Langlier Index (60 deg. C)	SM2330B		0.15				6/25/2013	DH
Lead, Total	EPA200.8	ug/L	Not Detected		5	15	6/13/2013	SM
Magnesium	EPA200.7	mg/L	52		0.5		6/12/2013	HC
Manganese, Total	EPA200.7	ug/L	1015		10	50	6/12/2013	HC
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	0.50	6/12/2013	DH
Mercury, Total	EPA200.8	ug/L	Not Detected		0.5	2	6/13/2013	SM
Nickel, Total	EPA200.8	ug/L	Not Detected		10	100	6/13/2013	SM
Nitrate as NO3	EPA300.0	mg/L	Not Detected		1	45	6/11/2013	DC
Nitrate as NO3-N	EPA300.0	mg/L	Not Detected		0.1	10	6/11/2013	DC
Nitrate+Nitrite as N	EPA300.0	mg/L	Not Detected		0.1		6/11/2013	DC
Nitrite as NO2-N	EPA300.0	mg/L	Not Detected		0.1	1.0	6/11/2013	DC
Odor Threshold at 60 C	SM2150B	TON	20		1	3	6/11/2013	HC
o-Phosphate-P	EPA300.0	mg/L	Not Detected		0.1		6/11/2013	DC

mg/L: Milligrams per liter ug/L : Micrograms per liter PQL : Practical Quantitation Limit MCL: Maximum Contamination Level
H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See External Laboratory Report attachments

Lab Number: AB02098

Collection Date/Time: 6/11/2013 8:15 Sample Collector: UTEGAARD L
Submittal Date/Time: 6/11/2013 15:00 Sample ID Coliform Designation:

Sample Description: Canine Sports Large Well

Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed	Analyst:
Perchlorate	EPA314	ug/L	**Not Detected**	E	2.0	6	6/19/2013	MWH
pH (Laboratory)	SM4500-H+B	pH (H)	**6.9**				6/11/2013	SM
Potassium	EPA200.7	mg/L	**5.6**		0.1		6/12/2013	HC
QC Anion Sum x 100	Calculation	%	**102%**				6/25/2013	DH
QC Anion-Cation Balance	Calculation	%	**3**				6/25/2013	DH
QC Cation Sum x 100	Calculation	%	**109%**				6/25/2013	DH
QC Ratio TDS/SEC	Calculation		**0.68**				6/25/2013	DH
Selenium, Total	EPA200.8	ug/L	**Not Detected**		2	50	6/13/2013	SM
Silver, Total	EPA200.8	ug/L	**Not Detected**		10	100	6/13/2013	SM
Sodium	EPA200.7	mg/L	**85**		0.5		6/12/2013	HC
Specific Conductance (E.C)	SM2510B	umhos/cm	**1404**		1	900	6/14/2013	MW
Sulfate	EPA300.0	mg/L	**451**		1	250	6/11/2013	DC
Thallium, Total	EPA200.8	ug/L	**Not Detected**		1	2	6/13/2013	SM
Total Diss. Solids	SM2540C	mg/L	**950**		10	500	6/17/2013	HC
Turbidity	EPA180.1	NTU	**155**		0.05	5.0	6/12/2013	HC
Zinc, Total	EPA200.8	ug/L	**25**		10	5000	6/13/2013	SM

Sample Comments:

Report Approved by:

David Holland, Laboratory Director

mg/L: Milligrams per liter ug/L : Micrograms per liter PQL : Practical Quantitation Limit MCL: Maximum Contamination Level
H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See External Laboratory Report attachments.

BSK Associates
Engineers & Laboratories

A3F1301

06/24/2013

Invoice
A314750

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

Dear David Holland,

Thank you for selecting BSK Associates for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 06/14/2013 11:00.

If additional clarification of any information is required, please contact your Client Services Representative, John Montierth at (800) 877-8310 or (559) 497-2888.

BSK ASSOCIATES

John Montierth
Project Manager

1414 Stanislaus Street Fresno, CA 93706 (559) 497-2888 FAX (559) 485-6935 www.bsklabs.com

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Environmental Engineering | Geotechnical Engineering | Materials Testing

BSK Associates
Engineers & Laboratories

06/24/2013

Case Narrative

Work Order Information

Client Name:	Monterey Bay Analytical	**Submitted by:**	David Holland
Client Code:	Monte6227	**Shipped by:**	ONTRAC
Work Order:	A3F1301	**COC Number:**	
Project:	General		

TAT: 10
PO #:

Sample Receipt Conditions

Cooler: **Default Cooler** **Temp. °C:** 2.1

Containers Intact
COC/Labels Agree
Received On Wet Ice
Packing Material - Bubble Wrap
Sample(s) were received in temperature range.
Initial receipt at BSK-FAL

Report Manager	Report Format
David Holland	Final.rpt

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Certificate of Analysis

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

Report Issue Date: 06/24/2013 9:21
Received Date: 06/14/2013
Received Time: 11:00

Lab Sample ID: A3F1301-01
Sample Date: 06/11/2013 08:15
Sample Type: Grab

Sampled by: Leif Utegaard
Matrix: Water

Sample Description: Canine Sports Large Well // 02098

General Chemistry

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Conductivity @ 25C	SM 2510 B	1400	1.0	umhos/cm	1	A306474	06/15/13	06/15/13	
Perchlorate	EPA 314.0	ND	2.0	ug/L	1	A306618	06/19/13	06/19/13	

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BSK Associates Engineers & Laboratories

General Chemistry Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
Batch: A306474				Analyst: CEG		Prepared: 06/15/2013					
Blank (A306474-BLK1) SM 2510 B - Quality Control											
Conductivity @ 25C	ND	1.0	umhos/cm							06/15/13	
Duplicate (A306474-DUP1) SM 2510 B - Quality Control						Source: A3F1272-01					
Conductivity @ 25C	690	1.0	umhos/cm		690			1	20	06/15/13	
Duplicate (A306474-DUP2) SM 2510 B - Quality Control						Source: A3F1279-03					
Conductivity @ 25C	1300	1.0	umhos/cm		1300			0	20	06/15/13	
Batch: A306618				Analyst: RCN		Prepared: 06/19/2013					
Blank (A306618-BLK1) EPA 314.0 - Quality Control											
Perchlorate	ND	2.0	ug/L							06/19/13	
Blank Spike (A306618-BS1) EPA 314.0 - Quality Control											
Perchlorate	26	2.0	ug/L	25		105	85-115			06/19/13	
Blank Spike Dup (A306618-BSD1) EPA 314.0 - Quality Control											
Perchlorate	28	2.0	ug/L	25		110	85-115	5	15	06/19/13	
Matrix Spike (A306618-MS1) EPA 314.0 - Quality Control						Source: A3F1275-01					
Perchlorate	15	2.0	ug/L	15	ND	100	80-120			06/19/13	
Matrix Spike (A306618-MS2) EPA 314.0 - Quality Control						Source: A3F1450-01					
Perchlorate	10	2.0	ug/L	7.5	2.7	99	80-120			06/19/13	
Matrix Spike Dup (A306618-MSD1) EPA 314.0 - Quality Control						Source: A3F1275-01					
Perchlorate	15	2.0	ug/L	15	ND	99	80-120	1	15	06/19/13	
Matrix Spike Dup (A306618-MSD2) EPA 314.0 - Quality Control						Source: A3F1450-01					
Perchlorate	10	2.0	ug/L	7.5	2.7	97	80-120	2	15	06/19/13	

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Certificate of Analysis

06/24/2013

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
- Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Results contained in this analytical report must be reproduced in its entirety.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- * - This is not a NELAP accredited analyte.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing for each certificattion.

State of California - ELAP	1180	State of Nevada	CA000792009A
State of California - ELAP (Rancho Cordova)	2435	State of Hawaii	04227CA
State of California - NELAP	04227CA	State of Oregon	4017
State of Washington	C997	State of Oregon - NWTPH	4021

Definitions and Flags for Data Qualifiers

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable				

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A3F1301

Monterey Bay Analytical

Monte6227

06142013

Turnaround: Standard

Due Date: 6/28/2013

Printed: 6/14/2013 5:40:55PM

BSK ANALYTICAL LABORATORIES

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(559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com

A3F1301 06/14/20
Monte6227 10

* Required Fields

TEMP. 2.1

Client/Company Name *:	Report Attention *:	Phone * #: (831)-357-6227 FAX * # (831)-641-0734
Monterey Bay Analytical	David Holland	E-mail. 4MBAS@Sbcglobal.net

ANALYSIS REQUESTED

Address *	City *	State *	Zip *
4 Justin Ct.	Monterey	CA	93940

Carbon Copies: CDHS ☐ Fresno Co ☐ EPA ☐ Merced Co ☐ Tulare Co ☐ Other.

Project Information: [illegible]

PO #
Quote # 464

How would you like your completed results sent? ☑ E-Mail ☐ Fax ☐ EDD ☐ Mail Only

Regulatory Compliance
Electronic Data Transfer: Y ☐ N ☐
System No. *

Sampler Name Printed / Signature: Utegaard, Leif

QC Request: ☑ STD ☐ Level II

Result Request ** Surcharge: ☑ STD ☐ 5 Day** ☐ 2 Day** ☐ 1 Day**

Matrix Types: RSW = Raw Surface Water, CFW = Chlorinated Finished Water, CWW = Chlorinated Waste Water, BW = Bottled Water, RGW = Raw Ground Water, FW = Finished Water, WW = Waste Water, SW = Storm Water, DW = Drinking Water, SO = Solid

Sample #	# Bottles	Sampled Date	Sampled Time	Sample Description / Location *	Matrix *	Comments / Station Code	Perchlorate
1		6-11-13	0815	Canine Sports Large Well		02098	✓

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
David Holland [signature]	MBAS	6/13	1600		
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company

Received for Lab by: (Signature and Printed Name)	Date	Time	Payment Received at Delivery:
[signature] Mark Saucedo	6/14/13	11:00	Date: Amount: Check/Cash/Card PIA # Init.

Shipping Method: (CAO) UPS GSO WALK-IN SJVC FED EX OTHER

Cooling Method: (WET) BLUE NONE

Packing Material: Box

Notice: Payment for services rendered as noted herein are due in full within 30 days from when rendered. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service/re-billing charges and interest calculated at 1 1/2 % per month, 18% per annum. BSK & Associates shall be entitled to recover on delinquent accounts costs of collections, including attorneys' fees incurred prior to or in litigation whether concluded by judgement, settlement, compromise or otherwise. The person signing for the client/Company expressly acknowledges that they are either the Client or authorized agent to the Client, and the Client agrees to be responsible for payment for analytical services on this Chain of Custody. Any modification of the analysis requested, either types or quantities, will be noted and agreed upon this Chain of Custody. The turn around time for any samples received after 3:00 pm will begin the next business day.

Sample Integrity

BSK Bottles: Yes / No Page 1 of 1

COC Info				
Was temperature within range? Chemistry ≤ 6°C Micro < 10°C	Yes No NA	Were correct containers and preservatives received for the tests requested?	Yes No NA
If samples were taken today, is there evidence that chilling has begun?	Yes No NA	Were there bubbles in the VOA vials? (Volatiles Only)	Yes No NA
Did all bottles arrive unbroken and intact?	Yes No	Was a sufficient amount of sample received?	Yes No
Did all bottle labels agree with COC?	Yes No	Do samples have a hold time <72 hours?	Yes No
Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes No NA	Was PM notified of discrepancies? PM: By/Time:	Yes No NA

Bottles Received — "—" means preservation/chlorine checks are either N/A or are performed in the lab

250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?						
Bacti $Na_2S_2O_3$	—	—						
None (P) White Cap	—	—	1A					
Cr6 Buffer (P) Blue Cap	pH 9-9.5	Y N						
HNO_3 (P) Red Cap	—	—						
H_2SO_4 (P) Yellow Cap	pH ≤2	Y N						
NaOH (P) Green Cap	Cl, pH ≥12	Y N						
NaOH + ZnAc (P)	pH ≥9	Y N						
Dissolved Oxygen 300ml (g)	—	—						
None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270								
H_2SO_4 (AG) Yellow Label O&G, Diesel	—	—						
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—						
$Na_2S_2O_3$ (AG) Blue Label 547, 515, 525, 548	—	—						
$Na_2S_2O_3$ (AG) Blue Label THMs 524.2 or 524.3	—	—						
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—						
$Na_2S_2O_3$ + MCAA (CG) Orange Label 531	pH = 3	Y N						
NH_4Cl (AG) Purple Label 552	—	—						
EDA (AG) Brown Label DBPs	—	—						
Ascorbic + Maleic (AG) Lt Green Label 524.3	—	—						
HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624	—	—						
Buffer pH 4 (CG)	—	—						
None (CG)	—	—				MSA		
H_3PO_4 (CG) Salmon Label	—	—						
Other:						6/14/13		
Asbestos 1Liter Plastic w/ Foil	—	—						
Low Level Hg / Metals Double Baggie	—	—						
Bottled Water	—	—						
Clear Glass Jar: 250 / 500 / 1 Liter	—	—						
Soil Tube Brass / Steel / Plastic	—	—						
Tedlar Bag / Plastic Bag	—	—						

Split	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials
S P				S P			
S P				S P			

Comments

Labeled by: MSA @ 1553 Labels checked by: SC @ 1611 RUSH Paged by: ____ @

Source Water Services
Leif Utegaard
659 Redwood Ave
Sand City CA 93955

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
montereybayanalytical@usa.net

ELAP Certification Number: 2385

 Friday, August 09, 2013

Lab Number: AB03929

Collection Date/Time: 7/31/2013 17:30 Sample Collector: UTEGAARD L
Submittal Date/Time: 8/1/2013 9:00 Sample ID Coliform Designation:

Sample Description: CCSC Sm. Well

Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed	Analyst:
Aggressivity Index			10				8/9/2013	DH
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	150		2		8/2/2013	DC
Aluminum, Total	EPA200.8	ug/L	57		10	1000	8/2/2013	SM
Antimony, Total	EPA200.8	ug/L	Not Detected		1	6	8/2/2013	SM
Arsenic, Total	EPA200.8	ug/L	1		1	10	8/2/2013	SM
Barium, Total	EPA200.8	ug/L	50		10	1000	8/2/2013	SM
Beryllium, Total	EPA200.8	ug/L	Not Detected		1	4	8/2/2013	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	183		10		8/2/2013	DH
Bromide	EPA300.0	mg/L	0.2		0.1		8/1/2013	DC
Cadmium, Total	EPA200.8	ug/L	Not Detected		0.5	5	8/2/2013	SM
Calcium	EPA200.7	mg/L	182		0.5		8/8/2013	HC
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10		8/2/2013	DH
Chloride	EPA300.0	mg/L	97		1	250	8/1/2013	DC
Chromium, Total	EPA200.8	ug/L	4		2	50	8/2/2013	SM
Color, Apparent (Unfiltered)	SM2120B	Color Units	400		3	15	8/1/2013	SM
Copper, Total	EPA200.8	ug/L	Not Detected		4	1300	8/2/2013	SM
Cyanide	QuikChem 10-20	ug/L	Not Detected		5	200	8/7/2013	HC
Fluoride	EPA300.0	mg/L	0.4		0.1	2.0	8/1/2013	DC
Hardness (as CaCO3)	SM2340B	mg/L	718		10		8/9/2013	DH
Hydroxide	SM2320B	mg/L	Not Detected		5		8/2/2013	DH
Iron	EPA200.7	ug/L	9962		10	300	8/8/2013	HC
Langlier Index (15 deg. C)	SM2330B		PENDING				1/1/1981	
Langlier Index (60 deg. C)	SM2330B		PENDING		10		1/1/1981	
Lead, Total	EPA200.8	ug/L	Not Detected		5	15	8/2/2013	SM
Magnesium	EPA200.7	mg/L	64		0.5		8/8/2013	HC
Manganese, Total	EPA200.7	ug/L	1477		10	50	8/8/2013	HC
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	0.50	8/1/2013	DC
Mercury, Total	EPA200.8	ug/L	Not Detected		0.5	2	8/2/2013	SM
Nickel, Total	EPA200.8	ug/L	Not Detected		10	100	8/2/2013	SM

mg/L: Milligrams per liter ug/L : Micrograms per liter PQL : Practical Quantitation Limit MCL: Maximum Contamination Level
H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See Report attachments. T = Temperature Exceedance

Lab Number: AB03929

Collection Date/Time: 7/31/2013 17:30 Sample Collector: UTEGAARD L
Submittal Date/Time: 8/1/2013 9:00 Sample ID Coliform Designation:

Sample Description: CCSC Sm. Well

Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed	Analyst:
Nitrate as NO3	EPA300.0	mg/L	Not Detected		1	45	8/1/2013	DC
Nitrate as NO3-N	EPA300.0	mg/L	Not Detected		0.1	10	8/1/2013	DC
Nitrate+Nitrite as N	EPA300.0	mg/L	Not Detected		0.1		8/1/2013	DC
Nitrite as NO2-N	EPA300.0	mg/L	Not Detected		0.1	1.0	8/1/2013	DC
Odor Threshold at 60 C	SM2150B	TON	2		1	3	8/1/2013	SM
o-Phosphate-P	EPA300.0	mg/L	Not Detected		0.1		8/1/2013	DC
Perchlorate	EPA314	ug/L	PENDING		5	6	1/1/1981	
pH (Laboratory)	SM4500-H+B	pH (H)	6.8				8/1/2013	SM
Potassium	EPA200.7	mg/L	5.3		0.1		8/8/2013	HC
QC Anion Sum x 100	Calculation	%	110%				8/5/2013	DH
QC Anion-Cation Balance	Calculation	%	3				8/9/2013	DH
QC Cation Sum x 100	Calculation	%	116%				8/9/2013	DH
QC Ratio TDS/SEC	Calculation		1054				8/9/2013	MWH
Selenium, Total	EPA200.8	ug/L	Not Detected		2	50	8/2/2013	SM
Silver, Total	EPA200.8	ug/L	Not Detected		10	100	8/2/2013	SM
Sodium	EPA200.7	mg/L	107		0.5		8/8/2013	HC
Specific Conductance (E.C)	SM2510B	umhos/cm	1647		1	900	8/2/2013	HC
Sulfate	EPA300.0	mg/L	594		1	250	8/1/2013	DC
Thallium, Total	EPA200.8	ug/L	Not Detected		1	2	8/2/2013	SM
Total Diss. Solids	SM2540C	mg/L	PENDING		1	500	1/1/1981	
Total Diss. Solids	Calculation	mg/L	1071		10	500	8/9/2013	MWH
Turbidity	EPA180.1	NTU	50		0.05	5.0	8/1/2013	SM
Zinc, Total	EPA200.8	ug/L	400		10	5000	8/2/2013	SM

Sample Comments:

Report Approved by:

David Holland, Laboratory Director

mg/L: Milligrams per liter ug/L : Micrograms per liter PQL : Practical Quantitation Limit MCL: Maximum Contamination Level
H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See Report attachments. T = Temperature Exceedance

4C3 Engineering
Civil Engineering Land Development Drafting

08-07-2013

CCSC Preliminary Potable Water Demands

The following is a summary of probable water usages for the Carmel Canine Sports Center:

Peak Demand				
	Fixture	# of Fixtures	Fixture Units per	Total Fixture Units
Restroom	Water Closet (1.6gpf)	6	2.5	15
	Urinal	2	2.0	4
	Sink (lav)	4	1.0	4
	Shower	2	2.0	4
Office	Water Closet (1.6gpf)	1	2.5	2.5
	Sink (lav)	1	1.0	1
	Sink (bar)	1	2.0	2
Clubhouse	Water Closet (1.6gpf)	1	2.5	2.5
	Sink (lav)	1	1.0	1
	Sink (bar)	1	2.0	2
	Drinking Fountain	4	0.5	2
			Total Fixture Units	40
		Demand (gpm)	47	gpm
	Peaking Factor	1.22	57.3	gpm

Average Daily Demand			
	People	Water Usage (GPD)	Avg. Daily Usage (GPD)
Staff	3	8	24
Non-Event	100	13	1300
Event	250	13	3250

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Average Annual Demand				
	Days	Water Usage (GPD)	Avg. Yearly Usage (gal)	Avg. Yearly Usage (AC-FT)
Staff	365	24	8760	0.03
Non-Event	341	1300	443300	1.4
Event	24	3250	78000	0.2
			Total Potable	1.63

Based on the previous tables, the average daily demand for non-event days will be 1,324 gallons per day. The average daily demand for event days will be 3,274 gallons per day. The total average annual demand will be 1.63 AC-FT.

The estimated potable water demands for the Carmel Canine Sports Center are based on the following assumptions:

- Facilities will be used 365 days a year, 24 days of which will be event days.
- 3 full time staff members (365 days per year)
- 100 guests per day on non-event days (341 days per year)
- 250 guests per day on event days (24 days per year)
- There will be one canine per guest in attendance
- 8gpd per person and 5gpd per dog for a total of 13gpd per attendee per day
- The large well has a capacity of roughly 650gpm and the small well has a capacity of roughly 250gpm

Attachments:

- Well completion report – Mellville, 1992
- Well completion Report – ALSOP, 2001
- MPWMD correspondence on availability

REGISTERED PROFESSIONAL ENGINEER
FRANK J. CAMPO
No. 61390
EXP. 06/30/15
CIVIL
STATE OF CALIFORNIA

Frank Campo, P.E.

126 Bonifacio Place, Suite C Monterey, CA 93940 Phone: (831) 647-1192 Fax: (831) 647-1194

Driller's Copy

Page 1 of 1

Owner's Well No. _____

Date Work Began _____ Ended _____

Local Permit Agency Monterey County Health Dept.

Permit No. 6680 Permit Date 3/30/93

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 410963

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) — X VERTICAL — HORIZONTAL — ANGLE — (SPECIFY)

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION (Describe material, grain size, color, etc.)
0	4	top soil
4	17	sandy brown clay
17	40	gravel
40	48	black clay
48	62	sand
62	90	brown clay streaked gravel
90	94	black clay
94	112	cemented gravel
112	125	gray gravely clay
125	150	gray clay streaked decomposed gravel
150	160	gray clay
160	165	hard decomposed gravel

TOTAL DEPTH OF BORING 165 (Feet)

TOTAL DEPTH OF COMPLETED WELL 150 (Feet)

WELL OWNER

Name Walter Partnership (Russel Walters)

Mailing Address Rt. 2 Box 706

City Carmel State Cal. ZIP 93923

WELL LOCATION

Address Carmel Valley Rd.

City Carmel

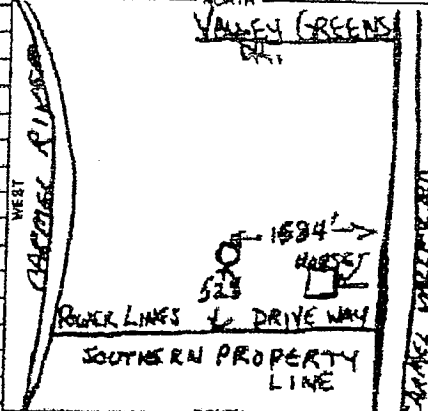
County Monterey

APN Book 015 Page 172 Parcel 007

Township _____ Range _____ Section _____

Latitude _____ DEG MIN SEC NORTH Longitude _____ DEG MIN SEC WEST

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

X NEW WELL

MODIFICATION/REPAIR

— Deepen

— Other (Specify)

— DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S) (✓)

— MONITORING

WATER SUPPLY

— Domestic

— Public

X Irrigation

— Industrial

— TEST WELL*

— CATHODIC PROTECTION

— OTHER (Specify)

DRILLING METHOD Reverse Rotary FLUID Mud

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL 37 (Ft.) & DATE MEASURED _____

ESTIMATED YIELD* 800 (GPM) & TEST TYPE Air Lift

TEST LENGTH 3 (Hrs.) TOTAL DRAWDOWN _____ (Ft.)

* May not be representative of a well's long-term yield

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA (Inches)	TYPE (✓) BLANK	SCREEN	SLOT	DESIGN	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	50	21	X					PVC200	12		
50	150			X				PVC 200	12		.0030

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE: CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	50	X			
50	150			X	6 sack sand slurry

ATTACHMENTS (✓)

— Geologic Log

— Well Construction Diagram

— Geophysical Log(s)

— Soil/Water Chemical Analyses

— Other _____

ATTACH ADDITIONAL INFORMATION IF IT EXISTS

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

NAME L. E. Melville & Son, Inc. (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 96 Plum Tree Dr. CITY Hollister STATE Cal. ZIP 95023

SIGNED James C. Melville WELL DRILLER/AUTHORIZED REPRESENTATIVE

DATE SIGNED 11/11/93 C-57 LICENSE NUMBER 488915

DWR 188 REV 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

DUPLICATE
Driller's Copy

Page 1 of 1

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet
No. 785368

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. New 2001
Date Work Began 10/8/01 Ended 10/11/01
Local Permit Agency Monterey Co Health Dept
Permit No. 00-428 Permit Date 12/19/00

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL — HORIZONTAL — ANGLE — (SPECIFY)
DRILLING METHOD ROTARY FLUID Mud

DEPTH FROM SURFACE FL	to FL	DESCRIPTION *Describe material, grain, size, color, etc.*
0	20	Top Soil, Sand, Rock
20	40	White Sand
40	60	Brown Sand, Rock
60	80	Sand & Rocks
80	100	Sand, D.G., Some Greenstone
100	120	Hard D.G., Sand, White Sand
120	140	Hard D.G.

TOTAL DEPTH OF BORING 140 (Feet)
TOTAL DEPTH OF COMPLETED WELL 130 (Feet)

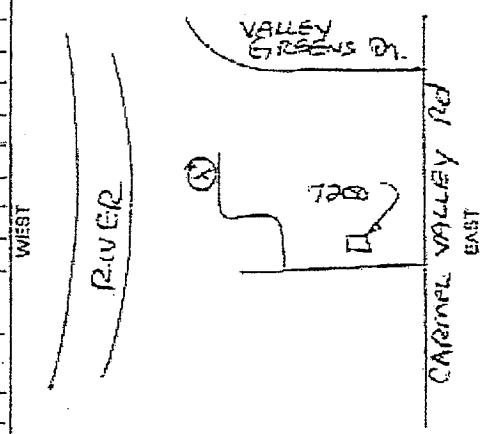
WELL OWNER

Name Wolter Properties
Mailing Address 7200 Carmel Valley Rd
Carmel CA 92923
CITY STATE ZIP

WELL LOCATION

Address 8193 Valley Greens Dr
City Carmel Valley CA
County Monterey
APN Book 015 Page 172 Parcel 007
Township Range Section
Latitude DEG. MIN. SEC. DEG. MIN. SEC.

LOCATION SKETCH



(Estimate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary) PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

✓ NEW WELL
MODIFICATION/REPAIR
— Deepen
— Other (Specify)
— DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)

WATER SUPPLY
— Domestic — Public
✓ Irrigation — Industrial
MONITORING —
TEST WELL —
CATHODIC PROTECTION
HEAT EXCHANGE —
DIRECT PUSH —
INJECTION —
VAPOR EXTRACTION
SPARGING —
REMEDIATION —
OTHER (SPECIFY) —

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 20 (Ft) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 20 (Ft) & DATE MEASURED 10/11/01
ESTIMATED YIELD 200+ (GPM) & TEST TYPE Air Lift
TEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN 80 (Ft.)
May not be representative of a well's long-term yield.

CASING (S)

DEPTH FROM SURFACE FL	to FL	BORE-HOLE DIA. (inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (inches)
0	70	14	✓				PLASTIC	8	SDR21	SDR21
70	130	14	✓				PLASTIC	8	.032	.032

ANNULAR MATERIAL

DEPTH FROM SURFACE FL	to FL	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	50	✓			
50	130			✓	8 x 16 sand

ATTACHMENTS (✓)

— Geologic Log
— Well Construction Diagram
— Geophysical Logs
— Soil/Water Chemical Analysis
Other
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Roy Alsop Pump and Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
1508 Abbott St. Salinas CA 93901
ADDRESS CITY STATE ZIP
Signed
WELL DRILLER/AUTHORIZED REPRESENTATIVE
10/12/01 C57-569645
DATE SIGNED C57 LICENSE NUMBER

DWR 188 REV 11-97 IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

July 17, 2013

FORWARDED TO COUNTY BY DISTRICT HANNRIED 7/18. cc: C3 ENG.

Steve Mason
Monterey County RMA Planning Department
168 West Alisal Street, 2nd Floor
Salinas, CA 93901

SUBJECT: CLARIFICATION OF AVAILABILITY OF WATER FOR CARMEL CANINE SPORTS CENTER [served by Wolter Properties WDS; APN 169-431-007 (well lot); 7200 Carmel Valley Road, Carmel Valley]

Dear Mr. Mason:

This letter from the Monterey Peninsula Water Management District (MPWMD or District) is written at the request of Ernie Mill, representing the Carmel Canine Sports Center (CCSC). For reference, his July 11, 2013 letter to MPWMD is provided as **Enclosure 1**. Evidently, the District's July 3, 2013 letter regarding the availability of water for the project, of which you have a copy, was not sufficient for County Planning staff to move forward on a Use Permit.

As stated previously, MPWMD believes that there is the ability to use water from the subject wells for the proposed CCSC, but the specific amount of water available will not be formally determined until completion of the MPWMD Water Distribution System (WDS) Permit process, including a public hearing before the MPWMD Board of Directors. Based on the evidence available to date, and the District's protocol for wells in the Carmel Valley Alluvial Aquifer (CVAA), it is reasonable to assume (barring unforeseen new information) that MPWMD staff will recommend approval of 62.91 acre-feet per year (AFY), which is the average of the most recent 10 years of metered well production. The applicant has indicated they could function with this amount. For reference, the CVAA protocol is available at: http://www.mpwmd.dst.ca.us/pae/wds/WDSPermits/WDSMemo3.pdf.

District and County staff should coordinate on advancing this project. Typically, for a WDS Permit of this type, the District as a CEQA Responsible Agency relies on the environmental document adopted by Monterey County. District staff may contribute to the County's CEQA process by providing copies of technical analyses prepared for the WDS Permit and/or comments on draft County CEQA documents.

In conclusion, I believe the County could begin its permit process and CEQA review in parallel with the MPWMD WDS Permit process. For other projects, the County has imposed a condition of approval that requires demonstration of a signed MPWMD WDS Permit before the project activities may commence -- in this case, facilities and activities associated with use of drinking water.

5 Harris Court, Building G, Monterey, CA 93940 • P.O. Box 85, Monterey, CA 93942-0085
831-658-5600 • Fax 831-644-9560 • http://www.mpwmd.dst.ca.us

My staff and I are available to meet if further coordination is needed. I can be reached at dstoldt@mpwmd.net or 831/658-5650 if you have questions. The staff contact is Henrietta Stern, Project Manager, at henri@mpwmd.net or 831/658-5621.

Sincerely,

David J. Stoldt
General Manager

Enclosure:
Exhibit 1— Ernie Mill letter of July 11, 2013

Cc: Ernie Mill, CCSC
Henrietta Stern, MPWMD Project Manager
David Laredo, MPWMD Counsel

U:\mpwmd\WDS_Permits\WDSApplications\169431007_CanineSports\Canine_CountyCoordinationLetter_DSfinal_20130717.docx
Prepared by H. Stern on 7/17/2013 per DS edits

Checklist for Drinking Water Source Assessment - Ground Water Source
Transient Noncommunity Water System

Public water system: Carmel Canine Sports Center Water System ID No.: _____

Name of source: Large Well ID No.: 001

Assessment date: 8/1/2013 Assessment conducted by C3 Engineering - Frank Campo

Water System Contact Name: Ernie Mill Phone #: 831-424-0781

Water System Contact Address: 8100 Valley Greens Drive, Carmel, CA 93923

The following information should be contained in the drinking water source assessment submittal.

X Checklist *(this form)*

X Delineation of groundwater protection zones

X Source Data Sheet (select appropriate form)

- X Well Data Sheet (included)
- ___ Spring Data Sheet (obtain from DHS or County office or DHS website)
- ___ Horizontal Well Data Sheet (obtain from DHS or County office or DHS website)

X Possible Contaminating Activities (PCA) inventory form

X Assessment map with source location and protection zone

X Means of Public Availability of Report (indicate those that will be used)

- X Copy in regulatory agency (DHS or LPA) office (minimum)
- X Posted at public water system (recommended)
- ___ Other (describe)

Submit the specified forms to the DHS district office or LPA county office. Office staff will complete the assessment.

Transient Noncommunity Water System
Delineation of Ground Water Protection Zone

Public water system: Carmel Canine Sports Center WS ID No.: _____

Name of source: Large Well ID No.: 001

Delineation date: 08-01-2013 Delineation conducted by Frank Campo, C3 Engineering

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Indicate the size of the protection zones by selecting the aquifer media type:

X Porous media aquifer = 600 feet

_____ Fractured rock aquifer = 900 feet

Porous media aquifers typically consist of a mixture of interbedded sands, silts and gravels. Open spaces within the aquifer are assumed to exist between individual particles that comprise the aquifer.

Fractured rock aquifers typically consist of rock of various types. Open spaces are located along faults and fractures that formed long after the rock was formed. Such aquifers can have highly localized and complex ground water flow properties that may be difficult to characterize quantitatively.

There are more complicated methods for determining the size, shape and location of zones. Water systems interested in these methods should consult with a hydrogeologist or other knowledgeable professional.

TRANSIENT NONCOMMUNITY SYSTEM WELL DATA SHEET

Complete as much information as possible. Leave blank if information is not available, use N.A. if not applicable.

** Indicates items required for Source Water Assessment*

*** Indicates additional items required for assessments and Ground Water Rule*

	(separate multiple entries in field with semi-colon)	Actual, Estimated or Default?
DATA SHEET GENERAL INFORMATION		
System Name	CCSC WS	*from DHS database*
System Number		*from DHS database*
Source of Information *(well log, DHS/County files, system, etc)*	Well Log	
Organization Collecting Information *(DHS, County, System, other)*	C3 Engineering	
Date Information Collected/Updated	08-01-2013	
WELL IDENTIFICATION		
* Well Number or Name	Large Well - 001	*from DHS database*
* DHS Source Identification Number (**FRDS ID No.**)		
DWR Well Log on File? ("YES" or "NO")	No	
State Well Number (from DWR)		
Well Status (Active, Standby, Inactive)	Active	*from DHS database*
WELL LOCATION		
Street Address	8100 Valley Greens Drive	
Nearest Cross Street	Carmel Valley Road	
City	Carmel	
County	Monterey	
* Neighborhood/Surrounding Area *(see Note 1)*	A, Ru, Re, P	
Site plan on file? ("YES" or "NO")		
SANITARY CONDITIONS		
** Distance to closest Sewer Line, Sewage Disposal, Septic Tank (ft)	550	
** Size of controlled area around well (square feet)	400	
* Type of access control to well site *(fencing, building, etc)*	Fencing	
* Surface Seal? (Concrete slab)("YES", "NO" or "UNKNOWN")	Unknown	
* Dimensions of concrete slab: Length(ft)/ Width(ft)/ Thick(in)		
* Within 100 year flood plain? ("YES", "NO" or "UNKNOWN")	Yes	
* Drainage away from well? ("YES" or "NO")	Yes	
ENCLOSURE/HOUSING		
Enclosure Type *(building, vault, none, etc.)*	None	
Floor material	n/a	
WELL CONSTRUCTION		
Date drilled	03-19952	
Drilling Method	Rotary	
Depth of Bore Hole (feet below ground surface)	130	
* Depth to highest perforations/screens (ft below surface) (or "UNKNOWN")	Unknown	
* Total length of screened interval (ft) *(default = 10% pump capacity in gpm)* (or "UNKNOWN")	Unknown	
* Annular Seal?("YES", "NO" or "UNKNOWN") *(See Note 3)*	Yes	
* Depth of Annular Seal (ft)	50	
Material of Annular Seal *(cement grout, bentonite, etc.)*	Cement	

AQUIFER	*(separate multiple entries in field with semi-colon)*	Actual, Estimated or Default?
* Aquifer Materials *(list all that apply: sand, silt, clay, gravel, rock, fractured rock)*	Sand, rock, decomposed granite; greenstone	
* Effective porosity (decimal percent) *(default = 0.2)* (or "UNKNOWN")	Unknown	
* Confining layer (Impervious Strata) above aquifer? ("YES", "NO" or "UNKNOWN")	Unknown	
* Static water level (ft below ground surface)	20	
WELL PRODUCTION		
Is the well metered? ("YES" or "NO")	No	
Production (gallons per year)		
Frequency of Use (hours/year)		
Typical pumping duration (hours/day)		
PUMP		
Make		
Type		
Size (hp)		
* Capacity (gpm)		
Lubrication Type		

REMARKS AND DEFECTS (use additional sheets as necessary)

NOTES

1. Neighborhood/Surrounding Area (list all that apply): A= Agricultural, Ru = Rural, Re = Residential, Co = Commercial, I = Industrial, Mu = Municipal, P = Pristine, O = Other

2. Conductor Casing - Oversized casing used to stabilize bore hole during well construction. Should be removed during installation of annular seal.

3. Annular Seal - Seal of grout in the space between the well casing and the wall of the drilled hole. Sometimes called "sanitary seal".

Please Note:

The information on this Well Data Sheet is considered confidential. To allow the information to be included in the permit report, or made available subject to a public information act request, the waiver clause below has to to be signed and dated by the owner (public water system). In lieu of this signature, the WDS has to be retained in a confidential file, or the information shown in the shaded rows has to be "blacked out."

I/We, (Name) Ernie Mill,
certify that I/Weam/are the present owners of the well described on this well data sheet. I/We have reviewed the information presented on this well data sheet and I/We take no exception to having the information inlcuded in the Department of Health Services' Engineering Report. I/We understand that by including the well data sheet in the Engineering Report, it will be part of a public document that can be reviewed and copied subject to the public information act request.

(Signature) (Date)

Transient Noncommunity System Ground Water Source Possible Contaminating Activity (PCA) Inventory Form

Water system name: Carmel Canine Sports Center WS ID No. _____

Source Name: Large Well ID No. 001

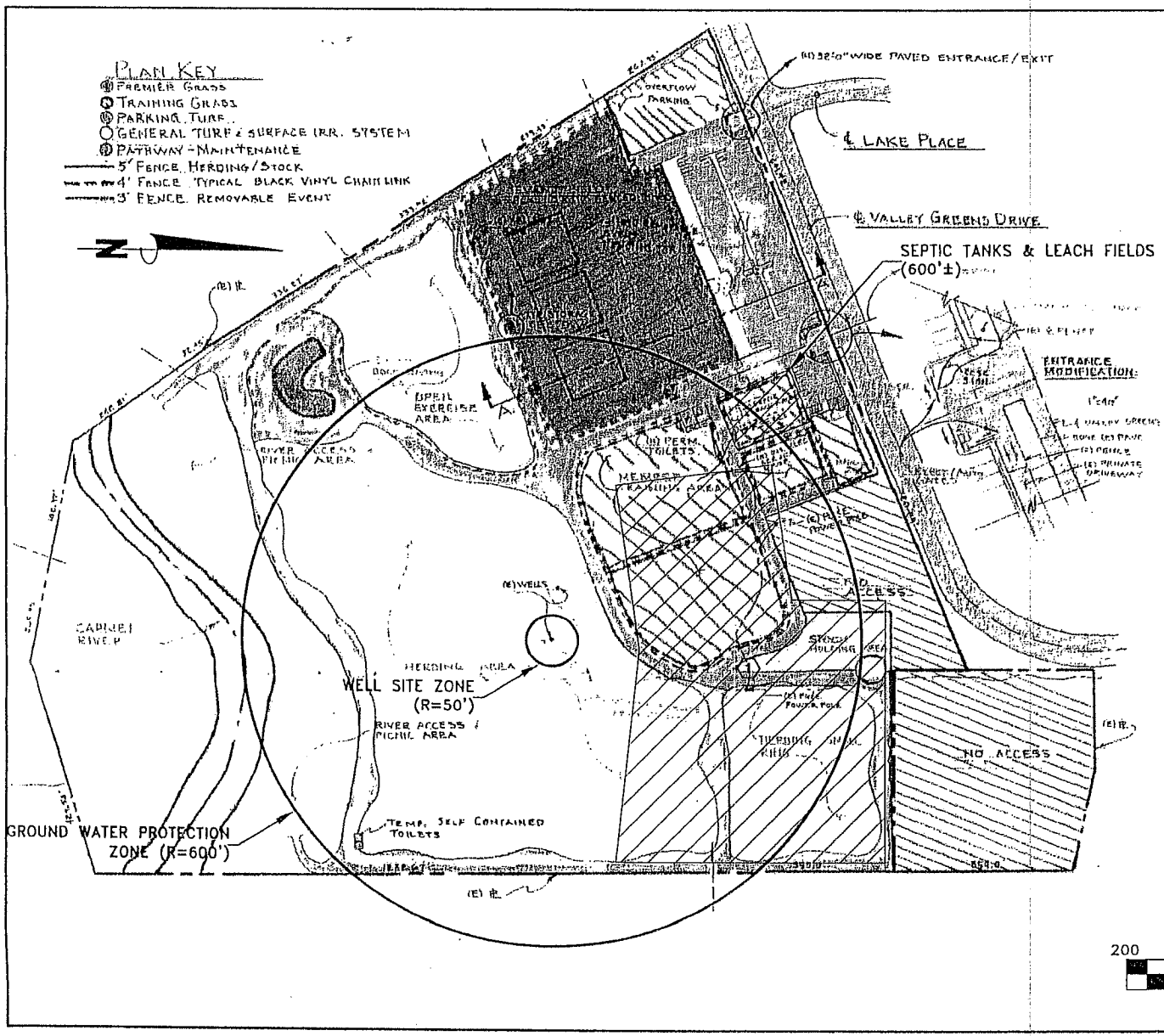
Inventory date: 08-01-2013 Inventory conducted by: Frank Campo, C3 Engineering

Transient Noncommunity Water System PCA Inventory – Ground Water Source

PCA (Risk Ranking)	PCA in Zone? (Y, N or U)	*	Comments
Automobile - Gas stations (VH)	N		
Chemical/petroleum processing/storage (VH)	N		
Dry cleaners (VH)	N		
Metal plating/ finishing/fabricating (VH)	N		
Plastics/synthetics producers (VH)	N		
Sewer collection systems (H)	N		
Airports - Maintenance/ fueling areas (VH)	N		
Landfills/dumps (VH)	N		
Septic systems - high density (>1/acre) (VH)	N		
Wastewater treatment plants (VH)	N		
Septic systems – low density (<1/acre) (H)	Y		Proposed system 550' from well
Lagoons / liquid wastes (H)	Y		Canada Woods Water System reclaimed water pond
Agricultural Drainage (H)	N		
Fertilizer, Pesticide/ Herbicide Application (M)	Y		As required to maintain training grass. Mostly outside of protection zone.
Sewage sludge/biosolids application (M)	N		
Underground Injection of Commercial/Industrial Discharges (VH)	N		
Historic gas stations (VH)	N		
Historic waste dumps/ landfills (VH)	N		
Injection wells/ dry wells/ sumps (VH)	N		
Known Contaminant Plumes (VH)	N		
Military installations (VH)	N		
Mining operations - Historic (VH)	N		
Mining operations – Active (VH)	N		
Confirmed leaking Underground storage tanks (VH)	N		
Grazing (> 5 large animals or equivalent per acre) (H)	N		
Concentrated Animal Feeding Operations (CAFOs) (see Note 1) (VH)	N		
Animal Feeding Operations (See Note 2) (VH)	N		
Other Animal operations (H)	Y		Canine training activities. Not considered animal feeding operation. Unattached and or unconfined.

Risk Ranking of PCAs: VH = Very High Risk, H = High Risk, M = Moderate Risk, L = Low Risk

* A contaminant potentially associated with this PCA has been detected in the water supply

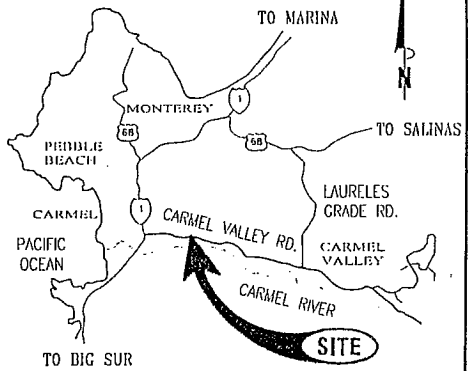


NOTE

ENTIRE SITE INTENDED FOR ANIMAL OPERATIONS

KEY

(1) FERTILIZER, PESTICIDE



VICINITY MAP

200 0 200 400 600

Scale 1" =200'

SCALE:	1"=200'
DATE:	8/1/2013
DRAWN BY:	CADD
CHECKED BY:	FJC
PROJECT NO:	113118

4C3 Engineering
Civil Engineering, Land Development, Drafting
128 Bishop Pl, Suite C, Monterey, CA 93940
Phone: (831) 647-1182 Fax: (831) 647-1194
mail@4C3Engineering.net

CCSC EXHIBIT A

GROUNDWATER ASSESSMENT MAP

Scale 1" =300'

300 0 300 600 900

KEY

1. FERTILIZER, PESTICIDE
2. CANADA WOODS WATER SYSTEM RECLAIMED WATER POND (WITH LINER)

CCSC - EXHIBIT B	
GROUNDWATER ASSESSMENT MAP	

C3 Engineering
Civil Engineering · Land Development · Surveying
185 Sonoma Place, Suite C, Monterey, CA 93940
Phone: (831) 647-1192 Fax: (831) 647-1194
mail@C3Engineering.net

SCALE:	1"=300'
DATE:	8/1/2013
DRAWN BY:	CADD
CHECKED BY:	FJC
PROJECT NO:	113118

APPENDIX F
WATER RESOURCES

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WRO 2003 – 0014

In the Matter of Petitions for Reconsideration,
Of Order Making Determinations Pursuant to
Condition 10 of Decision 1632

WOLTER PROPERTIES LIMITED PARTNERSHIP; MICHAEL P. GROOM, TRUSTEE FOR FREDERICK AND PATRICIA HOLT; A. C. AND LINDA MARKKULA; KOREAN SAMBOSA BUDDHIST TEMPLE; HOMESTEAD HOMEOWNERS ASSOCIATION; CHUGACH & CO.; RICHARD EVANS; DONALD R. KOONTZ; NOVELLA NICHOLSON; AND BRUCE AND BETH STERTEN

Petitioners.

SOURCE: Carmel River

COUNTY: Monterey

ORDER AMENDING TABLE 13 WATER ALLOTMENTS

BY THE BOARD:

1.0 BACKGROUND

On July 6, 1995, the State Water Resources Control Board (SWRCB) adopted Decision 1632 (D-1632) which approved Application 27614 of the Monterey Peninsula Water Management District (District) for the proposed New Los Padres Project (now called the Carmel River Dam). Also on July 6, 1995, the SWRCB adopted Order WR 95-10. Order WR 95-10 includes a finding that downstream of river mile 15, the aquifer underlying and closely paralleling the surface watercourse of the Carmel River is a subterranean stream subject to the SWRCB's permitting authority. Order WR 98-04 amends this finding to

extend upstream to river mile 17.2. These findings confirmed conclusions contained in an earlier Division of Water Rights (Division) staff report.

Following release of the staff report, some water users in the Carmel Valley filed water right applications for existing diversions from wells adjacent to the Carmel River. Although these applications had priority dates that were junior to Application 27614 of the District, they represented long-standing uses of water. These applications are listed in Table 13 of D-1632. D-1632 includes a finding that water is available for appropriation for those applications included in Table 13 and that the applications included in Table 13 would have priority senior to the District's Application 27614. Only applications for amounts equal to or less than the quantities listed in Table 13, based on documented past use, are considered to have a senior priority. The Notice of Hearing for Application 27614, which all potentially affected persons may not have received, did not include any issue related to making a finding of water availability for applications other than Application 27614 of the District, nor did it include any issue related to reversal of priority for existing uses.

In D-1632, the SWRCB directed staff to include the Carmel River on the list of fully appropriated streams for the period May 1 to December 31. Order WR 98-08 established this listing. The order finds "that after accounting for water needed for the projects specified in D-1632, the Carmel River is fully appropriated from May 1 through December 31 of each year." The projects specified in D-1632 include the District's Carmel River Dam project and those applications listed in Table 13. Again, all potentially affected persons may not have received notice of this action of the SWRCB.

Condition 10 of D-1632 provides a procedure for persons listed in Table 13 to seek an adjustment to the quantity specified in Table 13. The Chief of the Division of Water Rights (Chief) is authorized to make adjustments to the quantities specified in Table 13 pursuant to criteria set forth in Condition 10.

On March 21, 1997, the Chief issued an order approving revisions to Table 13 of Decision 1632 (Order). Thereafter, petitions for reconsideration of the Order were filed by:

1. Wolter Properties Limited Partnership;
2. Michael P. Groom, Trustee for Frederick and Patricia Holt;
3. A. C. and Linda Markkula;
4. Korean Sambosa Buddhist Temple;
5. Homestead Homeowners Association;
6. Chugach & Company;
7. Richard Evans;
8. Donald R. Koontz;
9. Novella Nicholson; and
10. Bruce and Beth Sterten.

On June 19, 1997, the SWRCB adopted Order WR 97-03, which accepted all of the petitions for reconsideration of the Chief's Order but did not resolve the issues raised in the petitions. This order resolves those issues. It should be noted that the reversal of priority for applicants listed in Table 13 of D-1632 only applies with respect to the permit issued pursuant to D-1632 (Permit 20808, Application 27614).

2.0 CONDITION 10 OF D-1632

The Chief was required to act in accordance with the delegation of authority set forth in Condition 10 when he issued the Order. Petitioners seeking more water than is provided by the Order must demonstrate that they are entitled to the increased allotment in accordance with the criteria set forth in Condition 10. Condition 10 states:

> The priority of this permit shall be junior to any permit issued on the applications set forth in Table 13 or for the persons named[77] in Table 13 for an amount of water not to exceed the quantity set forth in the column titled "*Quantity*

[77] Several persons named in Table 13 do not have an application on file with the SWRCB.

Reserved by SWRCB for Future Appropriation."[78] Applicants can request the State Water Resources Control Board (SWRCB) to modify the amounts in this column in accordance with the procedures in this condition.

Persons identified in Table 13 that have not filed an application to appropriate water must file an application by December 29, 1995 to benefit from this condition. To the extent such applicants and persons claim riparian, overlying, pre-1914 appropriative or other rights to use the water, they shall not be entitled to a post-1914 appropriative right for water in excess of established quantities of use as a result of this permit condition. Any priority obtained for a permit by virtue of this condition shall be void if the permittee and/or others divert more water under the permit and claimed underlying rights than is authorized on the face of the permit; however, the priority shall not be voided for the diversion of de minimis amounts which can reasonably be attributed to operational uncertainties.

Upon request by an applicant, a protestant, or the District, notification to the District and petitioner, and opportunity for comment, the SWRCB will review whether the amount set forth in the column entitled "*Quantity Reserved by SWRCB for Future Appropriations*" should be increased or decreased, at such time as an application is processed; however, no reconsideration will be provided for amounts based upon a stipulation between the District and an applicant except in those instances where the stipulation is subsequently revised or new stipulation is entered into by the District with respect to Table 13 quantities.

Request for review shall be submitted and accompanied by prima facie evidence of established quantities of use to the Chief, Division of Water Rights, on or before December 29, 1995. Requests for review submitted after this date shall not be considered. The criterion for review shall be whether the applicant had an established reasonable beneficial use of water and the amount of such use[79] on or before November 22, 1994. Only recorded water use for the period January 1, 1987[80] through November 22, 1994 shall be considered. The Chief, Division of Water Rights, is delegated authority to modify the quantities identified in Table 13. This condition is not a restriction on exercise of valid riparian, pre-1914 appropriative, or post-1914 appropriative rights which

---

[78] No quantity of water is set forth in Table 13 for Kirk, Lufkin, Lutes, Markkula, Pt. Sur Corporation, Tregea Trust, and Woltor [sic] because the hearing record does not contain adequate information; nevertheless, these persons may seek an application under the procedures established herein.

[79] Recorded water use shall be based either on records of meter readings or well production records.

[80] Limited meter readings are available for the Carmel River Valley beginning in 1987.

> are senior to the permit issued pursuant to Application 27614, or valid rights to diversion of percolating groundwater.

(D-1632 at pp. 97-98.)

3.0 WOLTER PROPERTIES LIMITED PARTNERSHIP (WOLTER)

Table 13 did not allot any water to Wolter. In accordance with Condition 10, Wolter requested that its allotment in Table 13 be increased to 96.0 acre-feet per annum (afa). The Order allotted Wolter 37.4 afa. Wolter filed a petition for reconsideration in which it requests an allotment of a minimum of 60 afa or approximately 96 to 100 afa for the "conduct of full intensive farming operations." (Petition for Reconsideration, p. 3.)

In its petition, Wolter contends that:

1. The measure of the water right is the amount of water put to reasonable beneficial use.
2. The allotment of 37.4 afa is not supported by substantial evidence.
3. There is relevant evidence to establish the amount of its established reasonable beneficial use of water that was not presented to the SWRCB because the evidence did not comply with the criteria set forth in Condition 10.

Wolter's circumstances are unique. Wolter has submitted evidence of the malfunction of its water meter. The malfunction of its meter caused underreporting of water use on its property. Wolter submitted both water meter readings and well production records to comply with the requirements of Condition 10. The Chief relied on the meter readings in allotting Wolter 37.4 afa in the Order. The Chief did not rely on the well production records because the pump efficiency tests were not submitted to validate the use of the records and the well production records were therefore considered unreliable. Wolter submitted other methods and data to estimate water use on its property with its Petition for Reconsideration. The data show that

Wolter used 96 afa of water on its property. Therefore, it is appropriate to rely on the data submitted under the unique facts and circumstances of Wolter's case. The SWRCB finds that Wolter's Table 13 allotment should be increased to 96 afa.

4.0 MICHAEL P. GROOM, TRUSTEE FOR FREDERICK AND PATRICIA HOLT (HOLT) AND A. C. AND LINDA MARKKULA (MARKKULA)

Markkula bought the Holt property; consequently, the two petitions have been consolidated. Table 13 did not allot any water to either Holt or Markkula. In accordance with Condition 10, Holt requested an allotment of 210 afa and Markkula requested an allotment of 454.02 afa. The Order allotted Holt 10.6 afa and Markkula 88.5 afa. Holt and Markkula then filed petitions for reconsideration in which they request an allotment of 210 afa and 454.02 afa, respectively.

In their petitions, Holt and Markkula contend that:

1. They extract groundwater from wells in the Tularcitos basin that is not subject to the permitting authority of the SWRCB.

2. The SWRCB has abused its discretion by ignoring the Protest Dismissal Agreement between them and the Monterey Peninsula Water Management District (MPWMD).

3. The Order is inconsistent with the Declaration of Fully Appropriated Streams.

4. The allotments of 10.6 afa and 88.5 afa are not supported by substantial evidence.

5. Limiting water use to 10.6 afa and 88.5 afa will cause the existing farming operations to cease, which is a significant impact under the California Environmental Quality Act (CEQA).

Holt and Markkula extract groundwater from wells in the Tularcitos basin of the Carmel River watershed. Decision 1632 did not address the legal classification of groundwater in the Tularcitos basin. The information submitted by Holt and Markkula shows the groundwater extracted from its wells is percolating groundwater that is not subject to the SWRCB's permitting authority. The SWRCB does not contend and has no information to show that the groundwater extracted by Holt's wells is part of a subterranean stream flowing through known and definite channels. An investigation to determine the legal classification of the groundwater extracted by Holt's wells and Markkula's wells in the Tularcitos basin was conducted by Division staff. The staff investigation concluded that neither Holt's wells nor Markkula's wells are located within a subterranean stream. Accordingly, the SWRCB finds that Holt's wells and Markkula's wells are not located within a subterranean stream and are not subject to the permitting authority of the SWRCB. The applications filed to authorize diversions from Holt's wells and Markkula's wells in the Tularcitos basin should be canceled and they should be removed from Table 13 of D-1632. It is not necessary to address the other issues raised in the petitions because of the lack of permitting authority of the SWRCB in these two cases.

5.0 KOREAN SAMBOSA BUDDHIST TEMPLE (TEMPLE) AND HOMESTEAD HOMEOWNERS ASSOCIATION (HOMESTEAD)

The Temple and Homestead are not listed in Table 13. The Temple requests an allotment of 8 afa. Homestead requests an allotment of 29.6 afa. Both petitioners complied with Condition 10. Both petitioners contend that the SWRCB failed to provide them with notice of the proceedings.

Only those persons who: (1) filed applications for diversion from the Carmel River watershed, (2) had statements of Water Diversion and Use on file with the SWRCB,[1] or (3) submitted

[1] The Water Code provides, in part: "If the board provides notice to persons who file statements [of Water Diversion and Use], the notice shall not be determined to be inadequate on the basis that the notice was not received by any person . . . who fails to file a statement required to be filed . . ." (Wat. Code, § 5106, subd. b(3).) This provision did not take effect until 1998, however. Before 1998, a person who diverted and used water could challenge a water right proceeding for lack of notice, even though the lack of notice was the

protests against the District's application were given notice of the hearing and were considered for inclusion in Table 13. Other potentially affected persons were not given notice of the hearing directly, nor were they notified of the determinations of Order WR 95-10 or D-1632 or the need for existing users to be included in Table 13 to obtain a valid basis of right for their diversions.

The SWRCB failed to give both the Temple and Homestead adequate notice of the proceedings. Further, the SWRCB failed to provide adequate notice to groundwater pumpers, including the Temple and Homestead, that the SWRCB would be considering findings of water availability of applications besides Application 27614.

We find that:

(1) The requests of the Temple and Homestead that they be included in Table 13 for the amount of their historical diversions should be approved, and

(2) The Division should notify all existing users of the Carmel River subterranean stream who diverted water from 1994 or earlier and who were not previously notified of the creation of Table 13, that the SWRCB will consider water right applications for authorization of historic uses to give them an opportunity to be included in Table 13 for their established water use amounts.

In effect, this action will give all existing well users in the Carmel River aquifer the ability to obtain a valid basis of right for water use which was occurring at the time the SWRCB first made its determination that the Carmel River aquifer is a subterranean stream flowing through known and definite channels and, therefore, subject to the permitting authority of the SWRCB. Further, this action will allow these applicants to acquire a water right for their historical uses despite the fully appropriated stream listing of the Carmel River.

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result of that person's failure to file a required statement of Water Diversion and Use. (See SWRCB Order WR 94-7.)

6.0 CHUGACH & CO. (CHUGACH), RICHARD EVANS (EVANS), DONALD R. KOONTZ (KOONTZ), NOVELLA NICHOLSON (NICHOLSON), BRUCE AND BETH STERTEN (STERTEN)

Petitioners Chugach, Evans, Koontz, Nicholson, and Sterten are known collectively as the Carmel Valley Water Users. They request that the SWRCB amend the allotments in Table 13 as follows:

NAME	AMOUNT REQUESTED (AFA)	AMOUNT ALLOTTED (AFA)
Chugach	25.2	7.6
Evans	17.5	15.0
Koontz	14.4	0.7
Nicholson	5.1	2.2
Sterten	11.2	5.1

The amount of water requested by each of the petitioners is the amount of water included in executed supplemental stipulations between the petitioners and the District. The Chief declined to amend the allotments to the petitioners because they were based on stipulated amounts not on well records. In transcripts of the July 6, 1995 Board Meeting at which D-1632 was considered for adoption, Division staff stated that new or revised stipulations with the District would be a basis for revising the allotment in Table 13. No mention was made of a requirement that the stipulation be based on well records. Condition 10 is silent regarding whether stipulations must be based on well records. In the absence of an express requirement that stipulations with the District be based on well records, the Table 13 allotments of the Carmel Valley Water Users should be amended to conform to the stipulations with the District.

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7.0 COMPLIANCE WITH CEQA

This order does not approve any permit or otherwise authorize the diversion of water by any of the petitioners. The SWRCB will determine on a case-by-case basis what is necessary to comply with CEQA as applied to each application that it reviews pursuant to this order.

ORDER

IT IS HEREBY ORDERED THAT:

1. Wolter's Table 13 allotment shall be 96 afa.

2. The wells of Holt and Markkula extract percolating groundwater and are not subject to the permitting authority of the SWRCB. The applications filed to authorize diversions from Holt's wells and Markkula's wells in the Tularcitos basin shall be canceled and they shall be removed from Table 13.

3. The Temple and Homestead shall be included in Table 13. Their allotments in Table 13 are 8 afa and 18 afa, respectively.

4. The Division shall notify all existing users of the Carmel River subterranean stream who diverted water from 1994 or earlier and who were not previously notified concerning creation of Table 13, that the SWRCB will consider water right applications for authorization of historic uses to give them an opportunity to be included in Table 13 for their established water use amounts. The well users shall be advised to file an application by a date specified by the Chief of the Division of Water Rights (Chief). To be added to Table 13 and allowed to obtain a right, the applicant will be required to provide substantiation that the quantity of water for which a permit is being sought was diverted and used during the years 1987 through 1994. Only application amounts equal to or less than documented historic use during this period will be accepted. Only prima facie evidence in the form of well meter records, power consumption records, and in certain instances when the other records are not available, historic land use calculations based on methodology acceptable to the Chief and accompanied by aerial photographs

documenting the extent of historic land use will be utilized to determine existing water use. The Chief is directed to rely solely on prima facie evidence, and shall not consider any new stipulations with the District in determining existing water use. Applications for a water right permit for diversions in excess of existing use will only be accepted for a diversion season between January 1 and April 30 (consistent with the Declaration of Fully Appropriated Streams). The Chief is delegated the authority to add applicants to Table 13 in accordance with the criteria set forth above.

5. The allotments in Table 13 for the Carmel Valley Water Users shall be: 25.2 afa for Chugach, 17.5 afa for Evans, 14.4 afa for Koontz, 5.1 afa for Nicholson, and 11.2 afa for Sterten.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on June 18, 2003.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz
Gary M. Carlton
Nancy H. Sutley

NO: None.

ABSENT: None.

ABSTAIN: None.

Debbie Irvin
Clerk to the Board

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February 21, 2014

TO: Henrietta Stern

CC: Dave Laredo

FROM: Fran Farina

RE: CARMEL CANINE SPORTS CENTER (WOLTER PROPERTIES) WATER RIGHTS

We have been asked to review documentation in support of water rights for The Carmel Canine Sports Center, LLC, a California Limited Liability Company, lessee/optionee of real property owned by Wolter Properties Limited Partnership, a California Limited Partnership (Wolter) at Carmel Valley Road and Valley Greens Drive in Carmel Valley[1]. Documents reviewed include a water rights opinion from attorney Aengus Jeffers, Schedule A to the CTLA title policy issued to Aengus L. Jeffers, Esq. dated June 26, 2013 entitled "Chain of Title Guarantee," each conveyance instrument referenced in Schedule A, and other documents and communications as specifically referenced herein.

Regarding questions of fact relevant to this memo, we have relied only upon our examination of the documents identified herein, and we have made no independent investigation or verification of such factual matters, except where explicitly noted herein. We have relied exclusively upon the title work and documentation provided by Aengus L. Jeffers from the title insurer he retained. We have assumed the genuineness of all signatures, the legal capacity and authority of all natural persons signing the documents, and the authenticity and completeness

[1] The title report references 7180 and 7200 Carmel Valley (Road) as street addresses. Other street references include 8400 Valley Greens Drive (MPWMD Staff) and 8100 Valley Greens Drive (County Planning).

of those documents submitted. We have further assumed the execution and delivery of the documents were free from fraud, misrepresentation, mistake, duress, or criminal activity.
We have not made an independent investigation or examination of any other records or conducted historical research except as noted nor have we made any attempt to locate any additional documents. The conclusions of this memo are as of the date hereof. Any changes of law or fact after this date may affect our legal analyses or conclusions herein.

The Setting

The property consists of nine (9) parcels totaling about 40 acres in unincorporated Monterey County. There are two (2) existing wells[2] located on APN 169-431-007. The parcels originated from two separate tracts. Parcels from **Rancho Canada de la Segunda** (**a/k/a Hatton Partition, Lot 9**) include APN 169-431-001, -002, -003, -006, -007, and -011. The remaining parcels are part of the **James Meadows Tract, Lot 6** and include APN 169-431-008, -012, and -013.

Preliminary review indicates clear title placing ownership in the Wolter Properties Limited Partnership with access to Carmel Valley Alluvial Aquifer (CVAA) for irrigation to all parcels. There are, however, two caveats:

> First, the proposed project references a reservoir on the property approximately 1.2 acre in size. As noted in the State Water Resources Control Board (SWRCB) comment letter on the Mitigated Negative Declaration (MND) for the Carmel Canine Sports Center Project,[3] "[s]easonal water storage for irrigation purpose of use *cannot be accomplished under riparian rights*." [Emphasis added.]
>
> Second, if a storage element remains as part of the project, an appropriative right permit would be required. This would trigger analysis of the proposed flow rate and its impact on public trust resources. The SWRCB letter notes that Wolter's prior Table 13 status is lost due to prolonged fallowing of the property. An appropriative permit would restrict water availability to a four month winter diversion period.

Property Description

Given the history of the property arising from two separate tracts, this review will follow each tract separately until they are all owned by Luis F. Wolter and Martha Winslow Wolter, predecessors in title to Wolter Properties Limited Partnership.

A. Rancho Canada de la Segunda

The original Rancho Canada de la Segunda tract of land began with an 1835 Mexican land grant to Lazaro (or Lozano) Soto. The tract consisted of almost 4400 acres in Carmel Valley from

[2] Attorney Aengus Jeffers represents that Russel and Karen Wolter have confirmed that existing wells on APNs 169-431-012 and -013 also contributed toward the irrigation of the common farm.
[3] Letter from Katherine Mrowka dated January 29, 2014 with comments on the Mitigated Negative Declaration for the Carmel Canine Sports Center Project in Carmel Valley, Monterey County, California.

Highway One east to Canada de la Segunda canyon and from the ridgeline south to the Carmel River.

A U. S. patent was secured for the property by Fletcher Haight on February 4, 1859 and signed by President James Buchanan. By February 1869, the entire tract was conveyed to Dominga G. de Atherton. After subsequent transfers in 1893, the property vested with the Hatton heirs in 1901. A partition and final distribution of the property occurred in 1926.

Effect of Partition

A partition judgment divides and apportions the preexisting rights and estates, transforming the right of common possession into a right to exclusive possession of an interest or share in severalty. Each party thereafter holds in severalty the interest he previously held in undivided form, under the same title and subject to the same obligations, covenants, and contracts as before.

Where a large tract of riparian land is divided into several parcels by judicial decree, each parcel retains an undivided interest in the riparian right of the original tract, whether the resulting tract abuts on the stream or not and regardless of the failure of the decree of partition to mention water rights.

The Hatton partition created 17 lots. **Lot 9** containing about 44.91 acres went to **Howard D. Hatton** in 1927. Hatton and his wife conveyed to Luis F. Wolter and Martha Winslow Wolter all of Lot 9 in a document recorded January 7, 1943. The entire property was riparian to the Carmel River.

Water Rights Conveyance

There is only one document in this portion of the chain of title addressing water rights. A deed from Mrs. Kate H. Hatton, Anna Hatton Martin, Harriet H. Hatton, William Hatton, Frank Douty Hatton, Howard Hatton, E. G. Hatton, and Sarah Hatton McAulay to Pacific Improvement Company conveyed "the water of the Carmel River" and "the *right to appropriate* for any purpose whatever" with the right to take it wherever and use it for whatever purpose. [Emphasis added.]

The document referenced existing pipes on the Hatton property owned by Pacific Improvement Company and authorized the transport of water through this pipe or a "different and larger pipe or pipe lines" including the right of ingress and egress for inspecting, repairing, and renewing the pipes. The consideration given was that grantors (i.e. the Hatton family), their heirs and assigns would "at all times have the right to draw from said pipe or pipe lines through taps or cocks" placed by Pacific Improvement Company, its successors and assigns, "water for dairy, stock and domestic purposes, at the upper and lower dairies, upon said lands without charge…." If the water in the pipe or pipe lines was insufficient because of drought or the river drying up to meet daily water needs, it was not considered to be a breach of the contract.

Status of Rancho Canada de la Segunda/Hatton Partition Lot 9 Riparian Rights

It is apparent from the 1906 grant that rights to appropriate water from the Carmel River were given to California-American Water Company's (Cal-Am) predecessor in title and that the riparian rights were not severed from the parcel. However, the language in the deed subordinated the riparian right to Cal-Am's appropriative right in return for free water from the utility's pipeline.[4] There was no impairment to overlying rights to the CVAA which is the current water source for the two wells on APN 169-431-007.

B. James Meadows Tract

The original James Meadows Tract consisted of 4581 acres in Carmel Valley from Canada de la Segunda canyon east to Berwick Canyon and from the ridgeline south to the Carmel River. Following the procedures resulting from the Treaty of Guadalupe Hidalgo and Act of Congress, a patent from the United States to James Meadows was granted and eventually recorded in 1904.

Partition Action

James Meadows died intestate with many heirs. Pursuant to court order based on a 1905 survey and map (referred to as the Partition Map of the James Meadows Tract), the property was partitioned. Of the multiple lots created, what is now the Wolter property is located on a portion of Lot 6.

Lot 6 originally contained 80.82 acres and was owned by **Frank Y. Meadows**. His widow, Pauline, owned the **west half** (40.41 acres) as homestead and conveyed it to her children and grandchildren. Ultimately, it vested in **Thomas C. Meadows**. Beginning in 1936, multiple conveyances were made to Luis F. Wolter and Martha Winslow Wolter. The property eventually vested in the four Wolter children who subsequently conveyed their interests to the Wolter Properties Limited Partnership.

Water Rights Conveyance

There is only one document in this portion of the chain of title addressing water rights. A deed in 1906 from Frank Y. Meadows and his wife, Pauline, to Pacific Improvement Company conveyed "the water of the Carmel River" and "the *right to appropriate* such portions of the waters of the Carmel River and its tributaries" with the right to take it wherever and use it for whatever purpose. [Emphasis added.]

In addition, the Meadows granted "*all our rights under the laws known as riparian laws* and otherwise, to the waters of said Carmel River" together with the right to convey the water in

[4] Subordination affects the relationship of the grantor and the grantee, not their relationship in regard to third parties. *Duckworth v. Watsonville Water and Light Co*., 150 Cal. 520, 526 (1907).

pipes already installed or in other pipes running through the Meadows' property as well as the right of ingress and egress for inspecting, repairing and renewing the pipes. [Emphasis added.]

The consideration given for these appropriative and riparian rights was the requirement that Pacific Improvement Company install a tap in the pipe "to furnish us with sufficient supply of water for domestic and stock uses" without charge. If the water in the pipe or pipe lines was insufficient because of drought to meet domestic and stock uses, it was not considered to be a breach of the contract.

Status of James Meadows Partition Lot 6 Riparian Rights

The 1906 deed granted both the right to appropriate water from the Carmel River to California-American Water Company's (Cal-Am) predecessor in title and the riparian rights attached to the parcel. This would have severed the riparian right for purposes of direct diversion from the surface water of the river; it would not, however, impair the overlying right to the CVAA[5] as the knowledge of the parties at that time was that everything outside of the river's surface water was percolating groundwater.[6]

Subdivision; Lot Line Adjustments

Newly created parcels without physical continuity to the stream can lose riparian status unless preserved in the conveyance document[7] or the history shows that at least a portion of each of the subdivided parcels always had been dependent for irrigation on the waters of the stream and was irrigated by it.[8]

The chain of title shows Wolter's family acquiring nine (9) parcels beginning in 1936. The largest conveyance of 44.91 acres was all of Lot 9 from the Hatton Partition. Acreage from Lot 6 of the Meadows Partition was acquired in multiple conveyances, the largest containing 16.90 acres. All together, the acreage exceeded 65 acres.

Even if all of the separate conveyances from the Meadows partition Lot 6 to Wolter lacked any reference preserving the riparian rights, each overlies the CVAA[9] and at the time of such conveyance the lots no longer contiguous to the river were thought to have percolating groundwater.

There have been three Lot Line Adjustments (LLA) to the Wolter property over a period of years[10]. Each LLA involved four existing lots of record that were subsequently reconfigured into four lots of record. Carmel Valley zoning requires each lot to be at least 2.5 acres and

[5] "[R]iparian land owners and the overlying land owners may be said to possess a right to the stream, surface and subsurface, analogous to the riparian right. *Peabody v. Vallejo*, 2 Cal.2d 351, 375 – 376 (1935).
[6] It was not until the SWRCB's Order No. WR 95-10 that the Carmel Valley Alluvial Aquifer was confirmed as underflow of the Carmel River.
[7] *Anaheim Union Water Co. v. Fuller*, 150 Cal. 327, 331 (1907).
[8] *Strong v. Baldwin*, 154 Cal. 150, 156 – 157 (1908).
[9] *Peabody v. Vallejo*, supra.
[10] Partial records were provided for the Lot Line Adjustments (LLA) in 2001, 2003 and 2005.

several of the existing lots were undersized[11]. In addition, the reconfigurations were apparently done for estate planning purposes.

Riparian Water Use on Multiple Contiguous Parcels

In this instance, each parcel is contiguous to the other and all are owned by the same legal entity. The current wells are located on a parcel that, for the most part, is "upstream" of the others. Were the downstream parcels under separate ownership, there could be an issue that the diversions on the well parcel were unreasonable and interfered with the flow of subsurface water. That is not an issue here.

Given the single ownership of contiguous parcels having a water use history where all parcels have received irrigation, there is no restriction on the use of water from the well parcel to the other parcels.

State Water Resources Control Board Activity

Wolter has an extensive history with the SWRCB including a protest against MPWMD's New Los Padres Dam. In Decision No. 1632[12], no water was reserved for Wolter and no application was pending at the time.

By 1996, Wolter filed Application 30511[13] (Application) and Decision No. 1632 was modified to show a Table 13 reserved quantity of 37.4 AF. The Application requested 96 acre-feet per year.

In early 2012, Katherine Mrowka, SWRCB Chief of Inland Streams Unit, provided a status report on the Application. A protest to the Wolter Application by the California Department of Fish and Game (DFG) conditioned its dismissal on compliance with the National Marine Fisheries Service (NMFS) flow regime for the Carmel River. This would require a storage component that was not part of the Application. Wolter objected because storage would occupy the land required for cropping.

Wolter's attorney, Alexander Hubbard of Hubbard & Hubbard LLP, responded to Ms. Mrowka on March 12, 2012, formally objecting to the condition requiring Wolter to "cease pumping water for an indeterminable period of time when minimum daily in-stream flows are below a certain limit…."[14] Hubbard cited the SWRCB Order on Application 30497 for Eastwood's Odello property that did not prohibit pumping subsurface water when the surface water course was dry. He argued that the Wolter Application should be treated the same as Eastwood's. The 2014 Mrowka response on the MND indicates that the Application has lost its Table 13 status due to prolonged fallowing and diversions would be limited to a four month winter diversion period.

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[11] For example, in the 2003 LLA, the four existing lots contained 0.25, 0.50, 0.88, and 40.88 acres, more or less.

[12] Decision No. 1632 was issued by the State Water Resources Control Board on July 6, 1995 for MPWMD's New Los Padres Project (Application 27614 and Permit 7130B).

[13] Wolter filed Application 30511 on February 29, 1996 for 96 acre-feet.

[14] Letter from Alexander F. Hubbard to Katherine Mrowka dated March 27, 2012.

Conclusion

Our preliminary assessment concludes that subordinated riparian water rights to Carmel River surface water for APN 169-431-007 and -008 are intact as they abut the Carmel River. In addition, all parcels overlie the CVAA and retain subsurface riparian rights.

Wolter has an Application pending with the SWRCB for an appropriative permit to irrigate multiple parcels totaling about 40 acres. At this time, it is unknown if a storage component will be added to the Application and whether year-round pumping will be allowed.

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

January 22, ~~2013~~ 2014

Steve Mason
Monterey County RMA Planning Department
168 West Alisal Street, 2nd Floor
Salinas, CA 93901

SUBJECT: MPWMD COMMENTS ON MITIGATED NEGATIVE DECLARATION FOR CARMEL CANINE SPORTS CENTER [served by Wolter Properties WDS; APN 169-431-007 (well lot); 7200 Carmel Valley Road, Carmel Valley] COUNTY ID# PLN130352

Dear Mr. Mason:

This letter from the Monterey Peninsula Water Management District (MPWMD or District) is written in response to the Initial Study/Mitigated Negative Declaration (IS/MND) circulated by Monterey County for the proposed Carmel Canine Sports Center (CCSC). The District serves as a Responsible Agency under CEQA for this project, which will require a MPWMD Water Distribution System (WDS) Permit for the amended water system. In addition, a project that would alter the riparian corridor of the Carmel River would require a valid River Work Permit from the District.

Water and Water Rights: As stated in a previous letter to you on this matter (July 17, 2013, Stoldt to Mason), it is reasonable to assume that MPWMD staff will recommend approval of up to 62.91 acre-feet per year (AFY) if riparian rights are claimed, which is the average of the most recent 10 years of metered well production. The applicant has indicated they could function with this amount, though the most recent water use estimate is a few acre-feet larger (63.35 vs. 62.91 AFY). For reference, the Carmel Valley Alluvial Aquifer protocol is available at: http://www.mpwmd.dst.ca.us/pae/wds/WDSPermits/WDSMemo3.pdf.

Importantly, there currently is a question of whether the proposed project would obtain water under a riparian right or with an appropriative permit yet to be issued by the State Water Resources Control Board. On January 6, 2014, the District determined the application was not complete due, in part, to this question remaining unresolved (letter attached for reference). District and applicant representatives are currently discussing and further evaluating the water rights situation.

The specific amount of water available and how it will be distributed will not be formally determined until completion of the WDS Permit process, including a public hearing before the MPWMD Board of Directors.

Aquatic and Riparian Corridor Issues: The IS/MND describes the applicant's proposal to access and use the riparian area adjacent to the Carmel River as a picnic area; however, details of

this use and any potential impacts were not described in the application. The IS/MND proposes to not allow access into the riparian area or removal of any vegetation (Mitigation Measure 1, p. 23). If access is not allowed for the project, then MPWMD would have no concerns about potential impacts to the riparian corridor. However, it is MPWMD's understanding, based on the January 6, 2014 site tour conducted for the Land Use Advisory Committee, that the applicant has not accepted this mitigation measure.

If Mitigation Measure 1 is changed to allow access, then MPWMD would have several concerns and would request that the County include a permit condition that requires the applicant to obtain a valid River Works Permit from MPWMD. The following paragraphs identify MPWMD concerns and recommendations in more detail.

The District carries out a comprehensive Mitigation Program to offset the impacts of community water use from diversions of the Carmel River, including the Riparian Corridor Management Program. This entails extensive work in the riparian corridor, including fish rescues, fish population surveys, habitat improvement, irrigation of riparian vegetation, and field monitoring. The District appreciates the cooperation of CCSC co-owner Ken Ekelund in providing MPWMD access to carry out program activities at the project site. The IS/MND (p. 21) incorrectly states that there are no visible trails or access points to the river from the project area. Presently, there are two narrow trails within the proposed "picnic area" that are maintained by MPWMD in order to maintain the streamside irrigation system installed by the District and to monitor the health of streamside vegetation.

As proposed, CCSC would greatly increase the number of dogs and people in the riparian "picnic area" as it would be open to the public and advertised as an amenity associated with the CCSC. The IS/MND estimates 100 persons per day patronizing the CCSC and an unspecified number of dogs per person. The District is concerned about potential direct and indirect physical effects to the river and associated riparian habitat with an influx of dogs and owners. The direct effect of dogs on threatened steelhead fish and California Red-Legged Frog habitat and health could include the following, especially at low flows (below 5 cubic feet per second) when the river is quite shallow, sluggish, of poor water quality, and deeper resting pools are limited:

- Direct predation or injury to fish or frogs from hunting behavior;
- Direct damage to riparian frog habitat by dogs or humans and a potential of an increased number of trails being created or dogs romping among protective vegetation;
- Increased sedimentation into the river if nearby riverbanks are disturbed by running or digging behavior;
- Aquatic habitat degradation due to playful behavior in the river, which could stir up anaerobic sediments and reduce oxygen or release noxious chemicals;
- Scaring fish away from the known deep sheltered pool in the area below the Valley Hills Grade Control Structure and into shallow unprotected river areas, where fish are more vulnerable to bird and mammalian predation;
- Water quality impacts of dog feces;
- Health impacts of dog feces to MPWMD river workers, who often must tread both on trails and in dense vegetation near trails;

- Possible harm from uncontrolled dogs to MPWMD staff working in the streamside corridor.

It should also be noted that at very low flows and especially in warm standing water, cyanobacteria, or blue-green algae, can develop in the river. This can be lethal to dogs that drink contaminated water and can cause skin and eye irritation in humans coming into contact with the contaminated water.

Suggested Mitigation Measures if Access to the Riparian Corridor Is Allowed

The District suggests the following mitigation measures to avoid or minimize the concerns about potential effects in the picnic area:

1. Require visitors to have dogs on leash or under immediate voice control, and to immediately clean up after dogs. Provide "mutt mitts" and trashcans in the riparian picnic area, and maintain them daily. It is noted people tend to clean up more rigorously when in a park with a lawn than in a "natural" area, so education and enforcement of the "clean up" rule is essential, including removal of feces from off-trail vegetated areas.
2. During normal hours, limit the number of dogs and owners in the picnic area to reduce habitat impacts and ensure successful feces cleanup. Anecdotal evidence indicates that the swim area at "Hampson's Hole" becomes crowded with 15 people and 10 dogs.
3. Fence off access to the picnic area during all special events (24 days).
4. Fence off access to the picnic area when river flow is between 0.1 and 5 cfs at the USGS Near Carmel Gage at Via Mallorca (real-time flow information is available over the internet). Access is acceptable when the riverbed is dry. Require explanatory signage of why closures are needed to protect threatened species. Low-flow closures would typically be limited to a few weeks – twice a year – during the spring recession and again shortly after the rainy season begins.
5. Fence off picnic area when MPWMD fish rescue crews are scheduled to work when flow is between 5 cfs and 10 cfs. Fish rescues would typically be carried out on approximately five days over a three week period. Advance notification of rescue days can be provided.

My staff and I are available to meet if further coordination is needed. I can be reached at dstoldt@mpwmd.net or 831/658-5650 if you have questions. The staff contact is Henrietta Stern, Project Manager, at henri@mpwmd.net or 831/658-5621.

Sincerely,

David J. Stoldt
General Manager

Enclosure: MPWMD letter of January 6, 2014

Cc: Ernie Mill, CCSC
Henrietta Stern, MPWMD Project Manager
Larry Hampson, District Engineer
David Laredo, MPWMD Counsel

Enclosure 1

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

January 6, 2014

Ernest D. Mill
Carmel Canine Sports Center LLC (lessee/operator)
PO Box 221974
Carmel, CA 93922

SUBJECT: APPLICATION FOR "WOLTER PROPERTIES LIMITED PARTNERSHIP" WATER DISTRIBUTION SYSTEM IS NOT COMPLETE; MPWMD APPLICATION #20131206WOL; APN 169-431-007 (well site) and -001, -002, -003, -006, -008, -011, -012, -013; 8100 Valley Greens Road, Carmel

Dear Mr. Mill:

The Monterey Peninsula Water Management District (MPWMD or District) Rule 20 requires that a written permit be obtained from the District to create or amend a Water Distribution System (WDS). An application for the "Wolter Properties Limited Partnership (Wolter Properties)" WDS was received on December 6, 2013 to provide continued water for agricultural irrigation and new potable (drinking water) supply for facilities associated with the proposed Carmel Canine Sports Center (CCSC) on the parcels referenced above. The State Permit Streamlining Act requires agency review within 30 days to determine whether the application is complete or not, and how to resolve an "incomplete" determination.

Determination of Incomplete Application

This letter is written to notify you that the application to create the Wolter Properties WDS is currently viewed as **incomplete** due to (1) inadequate water rights information, and (2) lack of an adopted environmental document from Monterey County, the lead agency for this project under the California Environmental Quality Act (CEQA).

Water Rights: Based on the water rights information submitted in November 2013 as part of the WDS application, District staff is satisfied that adequate riparian rights have been demonstrated for the wells for use on parcel APN 169-431-007. However, an appropriative water right has not been demonstrated for these wells to serve the adjacent parcels. District Rule 21-A, Required Information for Application, includes a component for water rights as follows:

> 6. Identify type of water right claimed to exist with each Water-Gathering Facility and each Source of Supply for the system (e.g., riparian, pre-1914, appropriative, overlying or other). Provide written verification of legal water rights applicable to type of right claimed. The verification shall include, but shall not be limited to the following forms of documentation: (a) Condition of Title Report, prepared by a title company at the Applicant's expense, and any and all supporting

> documentation to indicate whether legal water rights have been subordinated or severed; this documentation may include a judicial declaration of right or a full title opinion prepared by an attorney with expertise in water law; (b) information that describes the legal basis or authority for diversion and extraction of water; (c) if Groundwater is being pumped from a Groundwater basin that has not been adjudicated, a statement to that effect in addition to a copy of the current deed to the property is sufficient documentation to satisfy this requirement; or (d) if the source of the water is subject to permit requirements under the State Water Resources Control Board, a copy of the SWRCB water rights permit or domestic registration must be included.

The District is aware that Wolter Properties is in negotiations with the State Water Resources Control Board (SWRCB) regarding an appropriative permit, but issues regarding instream flow requirements and the potential need for storage facilities have not been resolved. MPWMD needs to receive a copy of an approved SWRCB appropriative permit, pursuant to Rule 21-A-6-d, in order to continue to process the WDS application.

CEQA Document: The District policy is to serve as a CEQA Responsible Agency for larger projects or those that entail multiple environmental issues. The County of Monterey as Lead Agency has initiated the CEQA process, and comments on an Initial Study are due in late January 2014. The District plans to rely on the CEQA document adopted by Monterey County, and we will continue processing the WDS application once the County's CEQA Notice of Determination on this project has been received.

Please note that the District believes there is adequate supply to meet the project needs from a hydrogeologic perspective based on the historical use on the property. District determinations on baseline water use and future limits are guided, in part, by the adopted protocol for wells in the Carmel Valley Alluvial Aquifer (CVAA), available on the District website at: http://www.mpwmd.dst.ca.us/pae/wds/WDSPermits/WDSMemo3.pdf

Next Steps

This application, as presently configured, will be "on hold" until MPWMD receives both the water rights and CEQA documentation enumerated above. Please advise District staff of the general time frame to complete the SWRCB water rights and Monterey County CEQA processes once you have more definitive information.

This determination of an incomplete application is considered to be a determination of the MPWMD General Manager, and as such, may be appealed to the District Board in writing within twenty-one (21) days of the date of this letter pursuant to MPWMD Rule 70. An appeal may be filed by the affected property owner or by any other person. If an appeal is initiated, the proper form must be completed, submitted and received by the MPWMD on or before 4:30 PM on the 21st day after the date of this letter.

Please contact me at 831/658-5650 or dstoldt@mpwmd.net if you have any policy questions. The staff person assigned to your project is Henrietta Stern, Project Manager, available at 831/658-5621 or henrietta@mpwmd.net.

Sincerely,

David J. Stoldt
General Manager

Cc: Russell Wolter, owner
Henrietta Stern, Project Manager
Larry Hampson, District Engineer
David C. Laredo, District Counsel

U:\mpwmd\WDS_Permits\WDSApplications\169431007_CanineSports\Canine_WDSAppNotComplete_20140103.docx
Prepared by H. Stern on 1/2/2014; reviewed by LH/DS on 1/3/2014

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

JAN 29 2014

In Reply Refer to:
KDM:A030511

Mr. John Ford
Monterey County Planning & Building
Inspection Department
168 West Alisal, 2nd Floor
Salinas, CA 93901

Dear Mr. Ford:

MITIGATED NEGATIVE DECLARATION (MND) – CARMEL CANINE SPORTS CENTER PROJECT – RELATED TO APPLICATION 30511 OF WOLTER PROPERTIES LIMITED PARTNERSHIP, CARMEL RIVER SUBTERRANEAN STREAM IN MONTEREY COUNTY

Division of Water Rights (Division) staff has reviewed the MND prepared by Monterey County for the Carmel Canine Sports Center Project (Project). The MND refers to a reservoir on the property. However, no descriptive material was provided regarding the size or location of the reservoir. The MND states that a 1.2 acre pond will be excavated. This is not the same as stating the proposed size of the pond. Please clarify the size. The MND states that the Project may rely on riparian or appropriative rights. Seasonal water storage for irrigation purpose of use cannot be accomplished under riparian rights. An appropriative right is required.

The Project is being developed on the lands covered by water right Application 30511 of Wolter Properties. The application does not include a storage element. Application 30511 seeks a right to directly divert 0.42 cubic foot per second. There is no evaluation in the MND whether this would be adequate for the proposed Project. The environmental document should include an evaluation of the adequacy of the proposed flow rate.

On January 27, 2012, the Division informed Wolter Properties that it intended to condition any permit on Application 30511. The following information was provided to Wolter Properties:

> The State Water Resources Control Board (State Water Board) has an independent obligation to consider the effect of the proposed project on public trust resources and to protect those resources where feasible. (*National Audobon Society v. Superior Court* (1983) 33 Cal.3d 419 [Cal.Rptr. 346].) Division staff has been working with the National Marine Fisheries Service (NMFS) and the Monterey Peninsula Water Management District (District) to determine appropriate Carmel River diversion conditions to address public trust resource needs. The following condition is being utilized in current permits issued, and is based on the NMFS 2002 Carmel River fishery report. It appears that the condition resolves the remaining public trust protests and the project could be permitted with inclusion of the condition. If you are not amenable to the condition, you will need to document a valid methodology for protecting public trust resources.
> (Wat. Code § 1275(b).)

Permit Condition:

For the protection of fisheries, wildlife, and other instream uses in the Carmel River, diversions under this permit shall be subject to maintenance of minimum mean daily instream flows as specified in Table A, Minimum Mean Daily Instream Flow Requirements. No water shall be diverted under this permit if the instream flows would be reduced by such diversion below the minimum mean daily flows specified in Table A. To ensure compliance with these conditions, by September 30 of each year, Permittees shall file a report with the Deputy Director for Water Rights, Department of Fish and Wildlife and NMFS containing the following information:

a. Dates during the previous diversion season when water was diverted under this permit; and
b. Mean daily flows recorded at the monitoring location specified in this condition during the same period.

TABLE A		
MINIMUM MEAN DAILY INSTREAM FLOW REQUIREMENTS		
December 1-April 15	**April 16-May 31**	**June 1- November 30**
Prior to Carmel River lagoon opening to the ocean [1]: May divert with minimum bypass of **40 cfs** at the Carmel River at Highway 1 Bridge gage[2]. **Following Carmel River lagoon opening to the ocean:** May divert with minimum bypass of **120 cfs** at the Carmel River at Highway 1 Bridge gage.	May divert with minimum bypass of **80 cfs** at the Carmel River at Highway 1 Bridge gage	May divert with minimum bypass of **5 cfs** at the Carmel River at Highway 1 Bridge gage.

[1] On December 1, if water in the lagoon is flowing to the ocean, the lagoon shall be deemed to be open to the ocean. If on December 1 water in the lagoon is not flowing to the ocean, the lagoon shall be deemed to be open to the ocean when the lagoon level drops rapidly from a stable elevation to a lower elevation as evidenced by the water surface elevation gage located at the Carmel Area Wastewater District effluent pipeline across the south arm of the lagoon. This elevation gage is operated by the District.

[2] The District operates a stream gage at Highway 1 and reports flows at this location on its website. Reported flows are not provided on a real-time basis and reported flows are subject to revision due to frequent changes in the riverbed at this location. In addition, updates of flow information at this location are carried out when the District has sufficient staff and resources and it should be noted that the District is under no obligation to provide this information on its website.

Although the Project developer has long been aware of the bypass flow condition, the MND does not include a discussion of the flows needed to protect salmonids. The bypass flows listed above have been included in all Table 13 water right permits issued since NMFS developed the flow regime. Division staff requests that the environmental document include the mitigation listed above. This will provide consistency between the two permitting agencies.

Regarding the issue of whether the Division would issue a permit in the quantity of 96 af, the following information should be taken into consideration. In Decision 1632, the State Water Board provided a method for inbasin water users with existing projects to receive a permit with a modified water right priority. Such persons were listed in Table 13 of the decision. After modification, the Wolter Properties quantity was set at 96 af. The MND states that the Wolter Properties lands have been fallow since 2008. Division staff was unaware of the non-use issue until the MND was issued. Decision 1632 does not provide for protection in cases where there is no ongoing use of water. Based on the decision, persons listed in Table 13 may seek a year-round diversion season. However, all others are limited to a four month winter diversion period. In the opinion of Division staff, the Project will likely be limited to a reduced diversion season since there is no longer a basis for protecting ongoing water use. The MND should identify this problem and determine what source of water the Project would use, should the diversion season be limited to four months.

Thank you for the opportunity to comment on the MND. The Division intends to use the final environmental document for permit issuance purposes.

If you require further assistance, I can be contacted at (916) 341-5363. Written correspondence should be addressed to: State Water Resources Control Board, Division of Water Rights, Attn: Katherine Mrowka, P.O. Box 2000, Sacramento, CA 95812.

Sincerely,

Katherine Mrowka

Katherine Mrowka, Senior
Inland Streams Unit

cc: Monterey Peninsula Water
Management District
Mr. Larry Hampson
5 Harris Court, Building G
Monterey, CA 93940
Larry@mpwmd.net

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Production History for Wolter Well, APN 169-431-007

Report Period	AF RECORDED
RY 1995	26.54
RY 1996	43.69
RY 1997	97.08
RY1998	63.21
RY1999	66.36
RY2000	53.59
WY2001	12.38
WY2002	99.16
WY2003	68.69
WY2004	87.76
WY2005	67.05
WY2006	72.98
WY2007	70.36
WY2008	30.77
WY2009	0.00
WY2010	0.00
WY2011	0.00
WY2012	0.00

Notes:
RY = Reporting Year, runs July 1 through June 30
WY = Water Year, runs October 1 through September 30
The meter was not working in June 1995.
Production between June 30, 2000 and October 30, 2001 is not available due to a malfunctioning meter, although the well was on during this period.
From January to February 2001 the well was not producing water.
The meter was changed in November 2001.
No water has been produced since June 2008.

APPENDIX G
NOISE STUDY

Environmental Consulting Services **18488 Prospect Road – Suite 1, Saratoga, CA 95070**
Phone: (408) 257-1045 FAX: (408) 257-7235

NOISE IMPACT AND MITIGATION STUDY

Carmel Canine Sports Center Project
8100 Valley Greens Drive
Carmel, CA

August 9, 2013

Prepared by

H. STANTON SHELLY

Principal Consultant

1. Project Description [1,2]

The proposed Canine Sports Center (CCSC) project across from the Quail Lodge Resort and Golf Club at 8100 Valley Greens Drive Carmel will provide space and equipment for daily canine training and exercise. CCSC facilities also will provide a location for local canine sports competitions. The CCSC will provide members with access to fenced private facilities on over 40 acres of farmland designed for owners and their dogs to exercise, train, and socialize. Using a model based on athletic and country clubs, CCSC will provide safe exercise and play areas for individual or group use, and will also offer competition-grade facilities, and equipment for many different dog-training disciplines, such as agility, herding, obedience, rally, nose work, socialization, tracking, field work, and lure coursing. The CCSC membership goal is 500, with an anticipated estimated average use of 20% of members per day, or approximately 100 visits, spread throughout the operating hours from 7 am to 8:30 pm. Staff members will be available on site during operating hours, with a projected total of 8 employees at full build-out.

Besides individual member use, trainers and other dog-related service providers will use space at CCSC for classes and workshops. Classes will be open to non-members, although non-member participants will have limited access to CCSC facilities outside of the specific class/training venue. No more than two classes will be offered simultaneously. Class times will be scheduled to avoid potential peak traffic hours identified in the traffic study.

CCSC facilities are designed and sized to accommodate organized dog-related competitive events for up to 24 event-days per year (8 weekends), with a maximum of 250 people per day. These events will generally occur Friday through Sunday. Overnight parking for up to 70 RVs on site is planned for these events. RVs using the facility would not be permitted in-and-out privileges. RVs will be self-contained, with no water or sewer hook-ups. Power may be provided, if available. RV generators used will be prohibited before 8 AM and after 8:30 PM. RVs will not be allowed on-site overnight except for the permitted events.

The site design includes 15 parking spaces for members and staff, space for parking 200 additional vehicles for events, a designated overflow area, as well as space for 70 RVs. Parking will be fully accommodated on site and no on-street parking would be required.

Events may from time to time use amplified sound to make operational and emergency announcements, limited to use during normal operating hours with volumes intended to be audible to onsite customers. CCSC is not requesting any exemption from existing County noise standards that presently govern the property. CCSC will not offer dog boarding, kenneling, or day care, and do not intend to provide facilities for dogs except when accompanied by their owners or handlers.

Landscaping will address visual and noise buffering, as well as produce saleable agricultural products where possible. Livestock will be present for herding training and maintaining grazing grasses. There is now active farming of row crops on the property. No tree removal is proposed.

Lighting will be turned off daily by 9 PM, with the exception of competitive events, including overnight stays, during which the minimum lighting required for safety will be maintained, or security lighting as required by permitting authorities, or for the safety of livestock.

CCSC will maintain a large portion of the 40 acres as an irrigated open field, planted in hay, grain and pasture crops. This planted area will also be used for dog training activities, including herding. Livestock used will be sheep, goats and ducks, with generally 20-30 but no more than 50 sheep and/or goats residing on the property.

CCSC proposes to make sensitive seasonal use of the riparian area of the property for picnics and walking along existing pathways and in existing disturbed areas. The property does not include any public easement except the riverbed itself.

This study evaluates the potential noise impacts produced by use of the CCSC facilities as described above on nearby residential receptors.

2. Existing Setting

Noise Sources in the Project Area

One significant source of noise near the project is traffic on Valley Greens Drive, a two-lane road bounding the project on the north side and providing access to the CCSC site. Typical vehicle passby noise levels are in the 55-65 dBA range at 50 feet. Trucks, motorcycles, and poorly-muffled vehicles produce peak levels 5 to 15 dBA higher on passby. Small aircraft overflights in the area create infrequent noise incidents of 50 to 60 dBA. Frequent maintenance activities several days a week at the Quail Lodge Golf Course adjacent to the site is also a significant source of noise in the project area. The Quail Lodge Golf Course maintenance equipment yard is along the west boundary of the site, with the associated equipment operation noise. Background noise levels in the 35-45 dBA range are set by arterial traffic on Carmel Valley Road about 1000 feet north of the site, which is raised about 100 feet above the site and is visible from it. There are no other significant noise sources in the project area.

Sensitive Receptor Locations and Descriptions

The closest sensitive receptor locations for noise generated by the project are in three key areas, as follows (see Exhibit 1):

1. Quail Lodge residential units near the project entrance on Valley Greens Drive
2. single family residences on the south side of the Lake Place neighborhood
3. single family residences in the Poplar Lane neighborhood

Other residential receptors in the area would have less project noise because of additional distance and/or structural obstruction.

Ambient Noise Levels [4]

Ambient noise measurements were made on July 26, 27 and 29, 2013, with a CEL 440 Precision Sound Level Meter, calibrated with a B & K Model 4230 Sound Level Calibrator, to identify existing typical background noise levels for the key nearby receptor areas at several different times of the day, as follows (see Exhibit 1):

- Location 1 – at the corner of the Quail Lodge residential units nearest the project, 40 feet from Valley Greens Drive.
- Location 2 – near the Lake Place residences closest to the project, about 300 feet north of Valley Greens Drive.
- Location 3 – near the Poplar Lane residences closest to the project, about 600 feet south of Valley Greens Drive.

Noise levels were measured and are reported using percentile noise descriptors as follows: L_{90} (the background noise level exceeded 90 % of the time), L_{50} (the median noise level exceeded 50% of the time), L_1 (the peak level exceeded 1% of the time), and L_{eq} (the average energy-equivalent noise level). Measured noise levels are presented in Exhibit 2. The estimated CNEL/Ldn noise levels were computed as the long-term average of the L_{eq} using daily traffic distribution in the area and typical golf course maintenance activities, with standard weighted penalties for nighttime hours, modeled with an enhanced and tested version of the National Cooperative Highway Research Board traffic noise model [8]. Typical noise levels for morning hours are shown in Exhibit 2 and afternoon noise levels in Exhibit 3.

Note that although nearby golf course maintenance is a significant noise contributor in the area and was included in the long term CNEL computation, to get typical background ambient noise levels, noise monitoring was *not* performed during any periods when motorized golf course maintenance equipment was operating in the area.

EXHIBIT 1

Project Site and Surrounding Area

Carmel Canine Sports Center, Carmel Valley

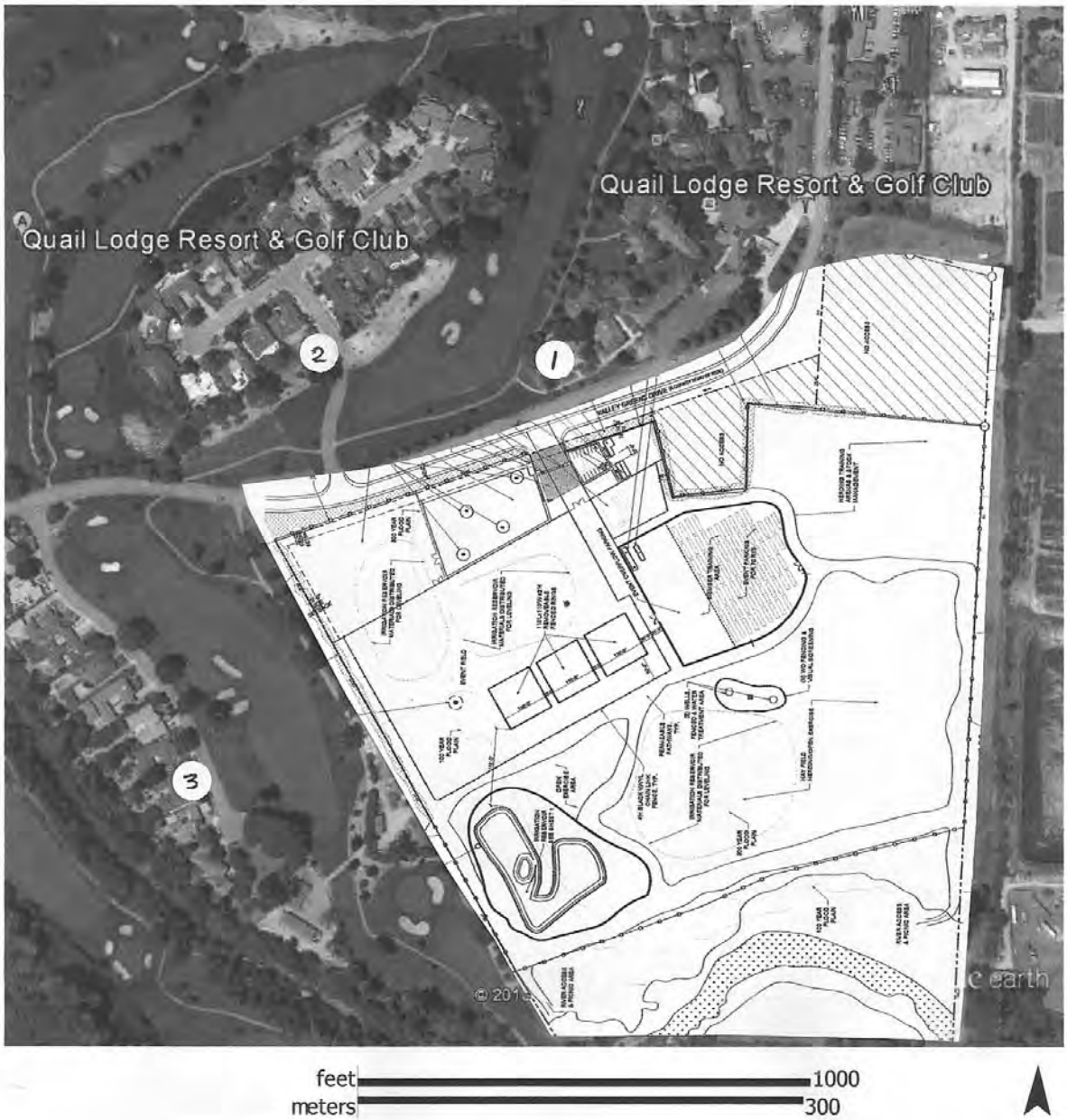

EXHIBIT 2

TYPICAL MORNING AMBIENT NOISE LEVELS (dBA) [4]

Carmel Canine Sports Center Area, Carmel Valley

Location	L_{90}	L_{50}	L_{eq}	L_1
1. Quail Lodge	34-37	38-41	50-51	62-64
2 Lake Place	37-38	41-42	44-45	55-59
3. Poplar Lane	36-39	38-41	40-43	47-50

EXHIBIT 3

TYPICAL AFTERNOON AMBIENT NOISE LEVELS (dBA) [4]

Carmel Canine Sports Center Area, Carmel Valley

Location	L_{90}	L_{50}	L_{eq}	L_1	CNEL
1. Quail Lodge	42-45	45-48	52-54	64-66	52
2 Lake Place	39-44	42-46	43-47	50-54	49
3. Poplar Lane	40-46	42-48	43-47	50-54	48

Traffic on Valley Greens Drive is a dominant noise contributor near the project site, even though volumes are low, so ambient noise levels at any location in this area depend upon the distance to it, and the monitored levels indicate that relationship. Locations 2 and 3 are a significant distance from this traffic, so noise levels there are very low. Background noise levels are provided by vehicles on the raised section of Carmel Valley Road north of the project. Other noise sources include many birds and dogs in the area.

In addition to the traffic noise in the project area, the other significant source of noise, but not included in the background monitoring, is the motorized golf course maintenance equipment that operates a number of days every week on the Quail Lodge Golf Course, which is on the north and west sides of the project site and is adjacent to the key residential receptor areas of concern. Maintenance equipment used includes riding gas-engine mowers, blowers, edgers and general worker transportation vehicles. Typical noise levels are in the range of 70 dBA at 50 feet for the blowers, 65 dBA at 50 feet for the mowers, and 50 dBA at 50 feet for edgers and utility vehicles. The contributions of these noise sources are discussed in more detail in the following section relative to potential project noise impacts.

3. Potential Project Noise Impacts

Introduction

There are several potential contributors to noise impacts associated with the proposed Carmel Canine Sports Center project. The noise-generating activities include dog training and competitive activities on site, as well as new vehicle trips on Valley Greens Drive by CCSC staff, club members, and event participants, which create additional traffic noise at receptors near the road at the east end. Other miscellaneous noise sources on site include RV generators and in some cases a low level amplified announcement system. These potential sources of noise are described in the following sections.

Site Activity Noise

There are two different types of activities associated with the new CCSC project-- special Canine Trials and Competitive Events occurring up to 24 days per year (8 weekends), and also daily canine training and exercise activities. The competitive events have more potential to cause noise disturbance because of the number of additional people, dogs and vehicles traveling to the site and the associated activities. These two activities and their potential noise impacts are discussed in the following sections.

Canine Competition Events

The primary noise associated with CCSC competitive events is intermittent dog barking in the central part of the site-- in the three fenced competition areas and in the areas immediately around them. The noise levels from barking at the closest receptors are in the 50 to 58 dBA range, depending on the distance involved, as detailed in Exhibit 4 (item 3). The barking noise would often be clearly audible in nearby areas, but would not violate Monterey County's long term CNEL noise criteria of 60 dBA (see Section 4 on relevant limits for more details). Because the barking noises are brief, they would increase the daytime Leq noise level at the receptors less than 0.5 dBA. To evaluate the potential impact of these project-generated noises, their characteristics are compared with existing noise generated by routine golf course maintenance activities adjacent to both the CCSC site and the key receptor locations. As shown in Exhibit 4 (items 3 & 6), on maintenance days, the operation of various types of motorized equipment now generate noise levels 5 to 20 dBA higher than noise from CCSC events. These activities raise noise levels for 45 minutes to 1.5 hours in any given location on maintenance days. Compared to a less than 0.5 dBA Leq change for CCSC activities, these activities increase the daytime Leq by 2-4 dBA. In addition, CCSC events occur no more than 24 days per year, as opposed to an estimated 160 to 190 days per year for routine golf course maintenance activities.

Exhibit 4 – CCSC Event Noise and Existing Noise Comparison at Receptors

Measures	Quail Lodge	Lake Place	Poplar Lane
1. Ambient daytime Leq, excluding golf course maintenance	50-54 dBA	44-47 dBA	40-47 dBA
2. Distance to CCSC noise sources	400 feet	600 feet	500 feet
3. CCSC event sporadic noise levels	52-58 dBA	50-55	51-56
4. CCSC daytime Leq increase	<0.5 dBA	<0.5 dBA	<0.5 dBA
5. Estimated minimum distance to maintenance sources	40	100 feet	100 feet
6. Maintenance equipment noise levels	50-70 dBA	50-65 dBA	50-65 dBA
7. Maintenance daytime Leq increase	3-4 dBA	2-3 dBA	2-3 dBA
8. Maintenance days per year	160-190 (estim)		
9. CCSC event days per year	up to 24		
10. Present long term CNEL	52	49	48

Because the CCSC Competition Events will not produce noise levels near the County CNEL noise standard, and would be quite a bit less intrusive than existing maintenance noise sources in the area, in both noise level and in frequency of occurrence, no significant project noise impacts are anticipated.

Amplified Sound System

Any on-site amplified sound systems would be designed with low mounted speakers focused on the specific site areas required and set at a volume that would minimize noise levels in nearby areas.

RV Generator Noise

The RV event parking area in the northeast corner of the project site will have spaces for up to 70 vehicles. Some RVs may have generators, which produce noise levels of 45-55 dBA at 50 feet. These generators cannot be used before 8 am or after 8:30 pm in any case. So for the closest receptors generator noise levels would be at most 40 dBA, which is at the daytime background ambient noise level. And in most cases there would be obstructions between any generator and the receptor locations, reducing potential noise levels even further.

Daily canine training and exercise activities

The daily activities on non-event days include a small number of dogs at a time, and owners or trainers working mostly independently at various locations on the site. Up to 100 owner/dog visits per day are anticipated, distributed over the daily operating hours of 7 am to 8:30 pm, so only a portion of the potential 100 users and their dogs would be on site at the same time. Along with the sporadic vehicle trips to the site (see Project Traffic Noise section), some intermittent barking by dogs on the site would occur, with noise levels as described in the previous event description, but much less frequently, since only a few dogs are on site and in the same area at one time, and there is much less opportunity for interaction between dogs. Hence barking would not noticeably increase the noise levels at nearby receptors during normal daily CCSC activities, and thus would not represent a significant noise impact.

Project Traffic Noise [6,7]

Project traffic volumes to the CCSC site for competitive events and for normal daily training and exercise activities will be very different. In either case the project traffic report [6] assumes that essentially all project trips will come to the site from the Carmel Valley Road and Valley Greens Drive intersection. Valley Greens Drive vehicle passby noise levels are in the 55-65 dBA range at the closest Quail Lodge. Very little project traffic is expected west of the CCSC entrance, near either the Lake Place or Poplar Lane locations.

For daily CCSC training activities a maximum of 264 trips per day is expected, including staff, members and class attendees. These trips on Valley Greens Drive to the entrance across from Quail Lodge would be spread throughout the day, with no more than about 20 trips per hour, or an average of only 1 every three minutes. Relative to the typical daytime traffic of 1-2 trips per minute, this traffic increase, and the associated noise, would not be noticeable.

For competitive CCSC events, the maximum number of trips to/from the site is expected to be about 400, with a peak hour of about 132 arrivals in the 6-7 am time period, and the peak hour for exit trips no more than 32 per hour. However, even for the morning event peak traffic-- about 2 vehicles per minute, this is about the normal daily traffic volume on Valley Greens Drive, so the noise level would be about the same as the normal peak daily traffic for the first day of the event (generally Friday), although at an earlier time. So in this case, the closest Quail Lodge units would have maximum event noise levels similar to average afternoon peak levels of 52-54 dBA Leq. Project traffic will not be close to the receptor areas at Lake Place and Poplar Lane, and hence it is not an issue in those locations. Hence the added traffic volumes associated with the project would not represent a significant increase in existing receptor noise levels or noise impact.

4. County Noise Guidelines

Land use planning guidelines assess the suitability of a particular type of usage based on the existing noise environment. The Health and Safety Element of the Monterey County General Plan includes a noise level planning criteria of 60 dBA CNEL for single family residential uses. The CNEL is the time-weighted energy average noise level for an average 24-hour day, with 5 dB added to the noise level between 7-10 pm and 10 dB added to the noise level between 10 pm to 7 am, to recognize the expected quiet night time periods. Hence for Monterey County single family residential land uses, a 60 dBA CNEL is considered an acceptable noise environment. As shown in Exhibit 4 (item 10), noise levels at the receptor areas of concern

are significantly below this criteria level, and they would be changed less than 0.5 dB by the any of the proposed CCSC project activities.

5. Conclusions and Mitigation Recommendations

No significant noise levels, either in terms of maximum levels or duration, are associated with the proposed CCSC project.

No additional noise mitigation is required, other than those limitations and measures already described in the report, as incorporated in the site layout and design, and in the active management of on-site activities to minimize noise transmission to adjacent residential areas.

REFERENCES

1. “CCSC Project Description”, Paul Davis Partnership, Project Architect, Monterey, CA; June 12, 2013 (Rev 3).
2. “CCSC Use Permit Package”, Paul Davis Partnership, Project Architect, Monterey, CA; June 17, 2013.
3. Noise Measurements, Canine Agility Trials (similar to those proposed for the project site), Manzanita Park, Prunedale, CA; Environmental Consulting Services, Saratoga; July 20, 2013.
4. Project area ambient noise measurements, Carmel Valley, Environmental Consulting Services, Saratoga; July 26, 27, 29, 2013.
5. Discussions with E. Mill, CCSC Partner, on project design and planned project activities.
6. “Carmel Canine Sports Center Traffic Constraints Analysis”, Robert Del Rio, T.E., Hexagon Transportation Consultants, Gilroy, CA; June 26, 2013.
7. Valley Greens Drive Daily Traffic Counts, Traffic Data Service, Campbell, CA; June 2013.
8. Highway Noise - A Design Guide for Highway Engineers, National Cooperative Highway Research Program Report 117, Highway Research Board, National Academy of Sciences, Washington, D.C., 1971 (model enhanced and field validated by ECS).
9. “Health and Safety Element”, Monterey County General Plan, October 2010. .

CCSC_Ns_Carmel

APPENDIX H
TRAFFIC IMPACT STUDY

Carmel Canine Sports Center

Transportation Impact Study

Prepared For: AMEC Earth & Environmental

Central Coast Transportation Consulting

895 Napa Avenue, Suite A-6

Morro Bay, CA 93442

(805) 316-0101

February 2015

Central Coast Transportation Consulting

Traffic Engineering & Transportation Planning

Executive Summary

This study evaluates the potential transportation impacts of the Carmel Canine Sports Center Development project located south of Carmel Valley Road at 8100 Valley Greens Drive in unincorporated Monterey County, California.

The proposed Project includes the construction and operation of a canine training, recreation, and event facility on 48.6 acres. The facility would regularly host classes and training over the week, with 24 days of special events throughout the year, mostly on weekends. During typical operations, the project trip generation estimate shows 496 new daily trips, 72 new weekday AM peak hour trips, and 72 new weekday PM peak hour trips. During special events, the trip estimate shows 500 new daily trips, 107 Friday PM peak hour trips, and 107 Sunday midday peak hour trips.

The following intersections are analyzed during the weekday morning (7-9 AM), weekday evening (4-6 PM) time periods as well as the Friday evening (4-6 PM) and Sunday midday (11-1 PM) peak periods:

1. Highway 1/Carmel Valley Road
2. Rancho San Carlos/Carmel Valley Road
3. Valley Greens Drive/Carmel Valley Road

Two roadway segments are evaluated:

- Carmel Valley Road from Schulte Road to Rancho San Carlos Road
- Highway 1 from Carmel Valley Road to Ocean Avenue

The study locations are evaluated under Existing, Existing Plus Project, Cumulative, and Cumulative Plus Project conditions. The following deficiencies were identified with the Project in place:

- The Carmel Valley Road/Valley Greens Road would operate unacceptably and meet the peak hour signal warrant under Existing Plus Project Friday PM and Sunday midday conditions under special event conditions. Acceptable operations could be maintained by constructing a single lane roundabout or installing a traffic signal. Prohibiting northbound left turns and through movements during special events would also maintain acceptable operations until a roundabout or signal is installed. This would require permission from the entities controlling the private segments of Valley Greens Drive and Rancho San Carlos Road. Absent these improvements, it would be necessary for law enforcement to provide traffic monitoring and control during special event. Cumulative Plus Project conditions would require a multilane roundabout or signal to eliminate impacts from typical operations and special events.
- Carmel Valley Road/Rancho San Carlos Road would operate unacceptably at LOS D under Cumulative Conditions during the Weekday AM period. Acceptable operations could be maintained by adding a second westbound through lane.
- Impacts are identified on Highway 1 and Carmel Valley Road. The addition of project traffic will exacerbate these deficient conditions. No feasible mitigation measures have been identified for these roadway segments.

The following recommendations would improve site access:

- Review parking for RVs using turning templates to ensure all sites are accessible without excessive maneuvering.
- Develop a traffic management plan for special events.
- Install no parking signs prohibiting parking on the south side of Valley Greens Drive for 100 feet east and west of the project driveway to maintain clear sight lines.
- Install a westbound left turn lane on Valley Greens Drive into the Project driveway or restrict classes to start outside of the AM and PM peak hours on weekdays.

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Appendix B: Intersection LOS/Queue Calculation Sheets

Appendix C: Roadway Segment LOS Calculation Sheets

Introduction

This study evaluates the potential transportation impacts of the Carmel Canine Sports Center project located in Carmel Valley, an unincorporated area of Monterey County. The proposed Project includes a 48.6 acre canine training, recreation, and special event facility with access provided via Valley Greens Drive from Carmel Valley Road.

The project's location and study intersections are shown on **Figure 1**, while **Figure 2** shows the Project site plan. The following intersections are analyzed in this study:

1. Highway 1/Carmel Valley Road
2. Rancho San Carlos/Carmel Valley Road
3. Valley Greens Drive/Carmel Valley Road

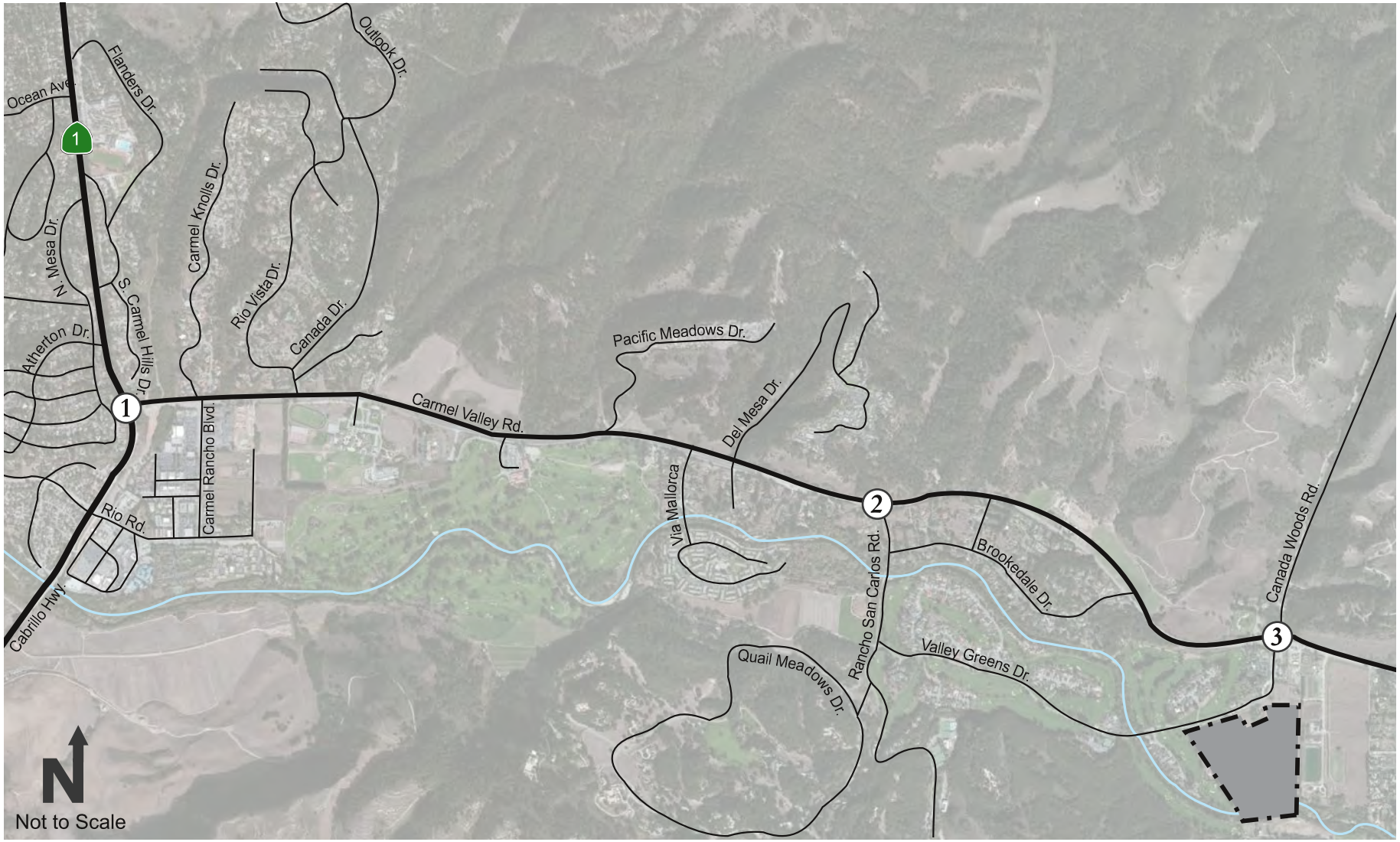
Two roadway segments are evaluated:

- Carmel Valley Road from Schulte Road to Rancho San Carlos Road
- Highway 1 from Carmel Valley Road to Ocean Avenue

Typical operations were evaluated during the weekday morning (7-9 AM) and weekday evening (4-6 PM) time periods consistent with the County's Transportation Impact Study Guidelines. The Friday evening (4-6 PM) and Sunday midday (11-1 PM) peak periods are also evaluated to show conditions during special events. The study locations are evaluated under these scenarios:

1. **Existing Conditions** reflect 2014 traffic counts and the existing transportation network.
2. **Existing Plus Project Conditions** add project generated traffic to Existing Conditions volumes. Project traffic reflects typical operations traffic during Weekday AM and PM conditions and special event traffic during Friday PM and Sunday midday conditions.
3. **Cumulative Conditions** represent future traffic conditions reflective of buildout of land uses in the area.
4. **Cumulative Plus Project Conditions** add project traffic to Cumulative Conditions volumes. Project traffic reflects typical operations traffic during Weekday AM and PM conditions and special event traffic during Friday PM and Sunday midday conditions.

Figure 1: Project and Study Locations



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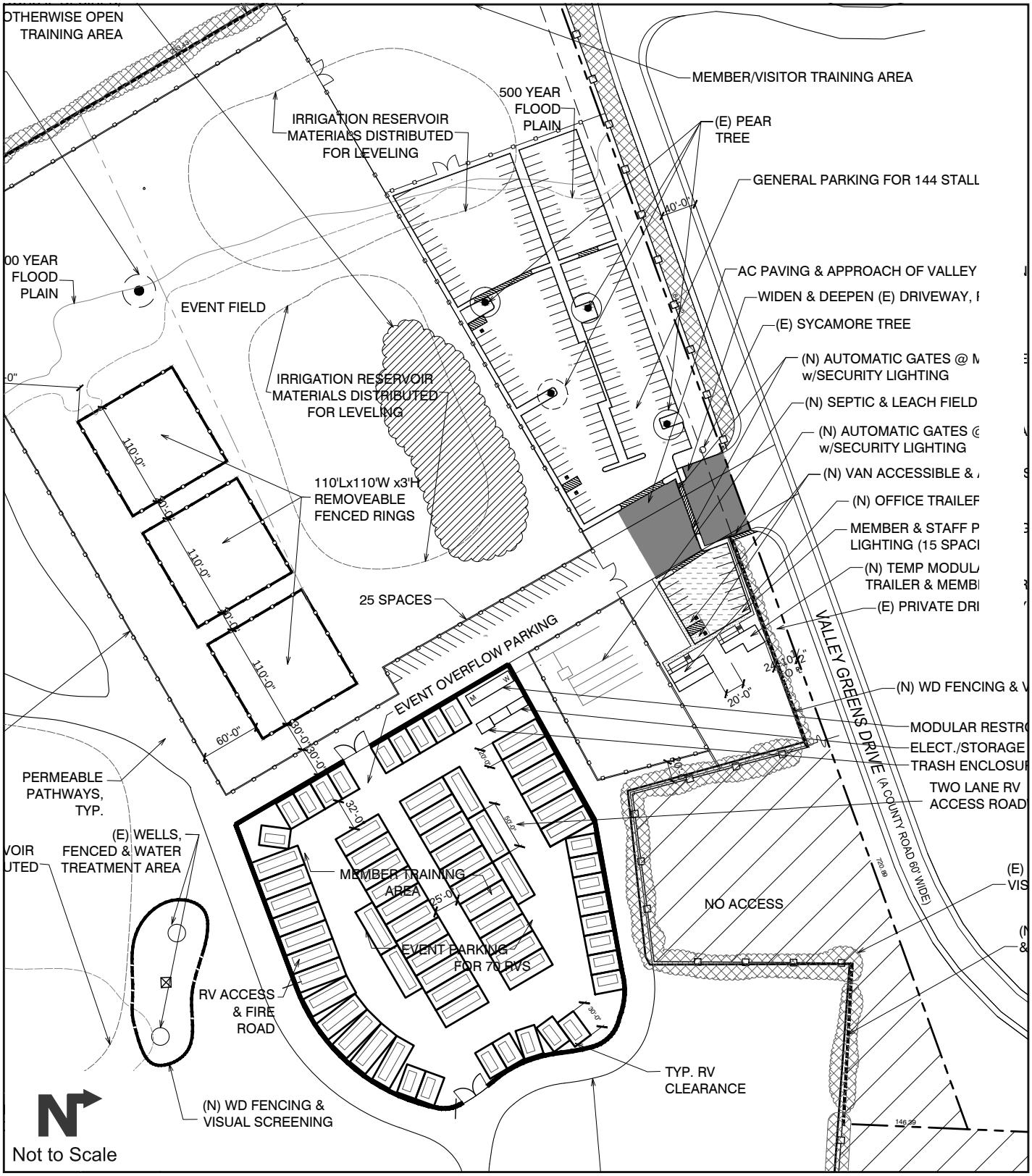
Legend:

- Project Site
- 7 - Study Intersection

January 2015

Carmel Canine

Figure 2: Project Site Plan



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Analysis Methods

The analysis approach was developed based on the County of Monterey and Caltrans standards.

County of Monterey Facilities

Policy C-1.1 of the 2010 Monterey County General Plan specifies that level of service (LOS) D or better operations shall be maintained unless otherwise specified in a Community Plan. The 2010 Carmel Valley Master Plan (CVMP) specifies that LOS C is the acceptable operating condition for signalized intersections, and LOS D is unacceptable. Unacceptable conditions for unsignalized intersections are defined as LOS F or meeting of any traffic signal warrants.

The 2010 CVMP provides additional thresholds for segments of Carmel Valley Road. These thresholds, shown in Table 1, are based on average daily traffic volumes (ADTs).

Table 1: Carmel Valley Road ADT Thresholds

Segment	CVMP ADT Threshold[1]
1. CVR-Valle Vista to Holman	8487
2. CVR-Holman to Esquiline	6835
3. CVR-Esquiline to Ford	9056
4. CVR-Ford to Laureles Grade	11600
5. CVR-Laureles Gd to Robinson Cyn	12752
6. CVR-Robinson Cyn to Schulte	15499
7. CVR-Schulte to Rancho San Carlos	16340
8. CVR-Rancho San Carlos to Rio	48487
9. CVR-Rio to Carmel Rancho Blvd	51401
10. CVR-Carmel Rancho to Highway 1	27839

Source: Monterey County Department of Public Works, CVMP 2010 General Plan Update.

The 2010 CVMP notes that ADTs below the thresholds in Table 1 are acceptable.

Caltrans Facilities

Caltrans operates Highway 1. Caltrans strives to maintain operations at the LOS C/D cusp on state-operated facilities, where LOS C is acceptable but LOS D is not. If an existing State Highway facility is operating at LOS D, E, or F the existing service level should be maintained.

Intersection Analysis

The level of service thresholds for intersections based on the 2010 Highway Capacity Manual (HCM) are presented in Table 2.

Table 2: Intersection Level of Service Thresholds

Signalized Intersections[1]		Stop Sign Controlled Intersections[2]	
Control Delay (seconds/vehicle)	Level of Service	Control Delay (seconds/vehicle)	Level of Service
≤ 10	A	≤ 10	A
> 10 - 20	B	> 10 - 15	B
> 20 - 35	C	> 15 - 25	C
> 35 - 55	D	> 25 - 35	D
> 55 - 80	E	> 35 - 50	E
> 80	F	> 50	F

1. Source: Exhibit 18-4 of the 2010 *Highway Capacity Manual*.
2. Source: Exhibits 19-1 and 20-2 of the 2010 *Highway Capacity Manual*.

The study intersections were analyzed with the Synchro software package applying the 2010 HCM methods. Where 2010 HCM methods do not allow analysis of a specific lane or phasing configuration the 2000 HCM methods are applied.

Roadway Segment Analysis

In addition to the thresholds identified in the CVMP and shown in Table 1, the study roadway segments were evaluated using 2010 HCM methods. The study segments consist of a mixture of two-lane segments and multilane segments, which are evaluated using different criteria.

Two-lane segment LOS is determined based on the calculation of percent-time-spent-following (PTSF). The LOS thresholds vary by the two-lane facility class. Three classes of two-lane facilities are defined in the 2010 HCM, each with different LOS thresholds. The two-lane freeway study segment is categorized as a Class II facility consistent with the CVMP traffic study. Multilane segment LOS is determined based on vehicle density in passenger cars per mile per lane. The roadway segment thresholds are presented in Table 3.

Table 3: Roadway Segment Level of Service Thresholds

Multilane Segments[1]		Two-lane Highway Segments[2]	
Density (passenger cars/mile/lane)	**Level of Service**	**Percent Time Spent Following (PTSF)**	**Level of Service**
≤ 11	A	≤ 40	A
> 11 - 18	B	> 40 - 55	B
> 18 - 26	C	> 55 - 70	C
> 26 - 35	D	> 70 - 85	D
> 35 - 45	E	> 85	E
> 45 (demand exceeds capacity)	F	See Note 2.	F

1. Source: Exhibit 14-4 of the 2010 *Highway Capacity Manual*. Thresholds for free flow speed of 45 mph; other speeds have different LOS E/F thresholds.
2. Source: Exhibit 15-3 of the 2010 *Highway Capacity Manual*. LOS F is reached when the segment volume exceeds capacity.

The segment of Highway 1 from Carmel Valley Road to Ocean Avenue is evaluated using the two-lane segment methodology for southbound traffic and multilane methodology for northbound traffic.

Thresholds of Significance

Caltrans Facilities: Operations degrade from LOS C or better to LOS D, E, or F; or project traffic is added to an intersection or segment operating at LOS D, E, or F.

Monterey County Signalized intersections:

- Cause an intersection operating at LOS A, B, or C to degrade to unacceptable traffic conditions of LOS D, E or F.
- Worsen the LOS grade at an intersection already operating at an unacceptable LOS D or E.
- Add one or more vehicles to the critical movement V/C ratio at intersections already operating at LOS F.

Monterey County Unsignalized intersections: Intersection operations degrade from LOS E or better to LOS F and a signal warrant is met; or project traffic is added to an intersection operating at LOS F and a signal warrant is met.

Carmel Valley Road roadway segment: Operations degrade from LOS D or better to LOS E or F; or project traffic worsens the LOS of a segment operating at LOS E; or project traffic is added to a segment operating at LOS F; or the CVMP ADT threshold is exceeded.

Existing Conditions

This section describes the existing transportation system and current operating conditions in the study area.

EXISTING ROADWAY NETWORK

Highway 1 is a north-south facility connecting Los Angeles to Mendocino. From Carmel Valley Road to Ocean Avenue, Highway 1 has two northbound lanes and one southbound lane. The study area's portion of Highway 1 has varying grades and residential driveway access.

Carmel Valley Road is an east-west major arterial extending from Highway 1 to Arroyo Seco Road. In the study area, Carmel Valley Road varies from two-lanes to four-lanes, with posted speed limits varying from 25 mph to 55 mph. Carmel Valley Road serves both residential and commercial areas.

Valley Greens Drive and *Rancho San Carlos Road* are two-lane local streets serving residential and light commercial areas along Carmel Valley Road. Their speed limits are 25 mph. Valley Greens Drive is stop controlled where it intersects with Carmel Valley Road. Rancho San Carlos Drive has a signalized intersection with Carmel Valley Road.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

Pedestrian facilities include sidewalks, crosswalks, multi-use paths, and pedestrian signals at signalized intersections. In the study area, there are no paved sidewalks along Carmel Valley Road, Highway 1, Rancho San Carlos Road, and Valley Greens Drive.

Bicycle facilities in the study area consist of separated bicycle facilities (Class I paths) and on-street striped bike lanes (Class II). There is a Class I bike path that roughly parallels Highway 1 from Canada Court to a point just south of Carmel Valley Road. Class II bike lanes are provided along portions of Carmel Valley Road. While there are no designated bicycle facilities along the other study streets, many have wide paved shoulders used by cyclists.

EXISTING TRANSIT SERVICE

The Monterey-Salinas Transit (MST) provides fixed route transit service to the study area. Routes 22 and 24 serve Carmel Valley Road, terminating in Monterey.

Route 22 serves Highway 1 from Monterey to Big Sur. The nearest stop to the project is located to the South of the Rio Road and Highway 1 intersection headed Southbound. Stops have 3.5 hour headways from Memorial Day Weekend through Labor Day, stopping three times a day every day, and 3.75 hour headways from Labor Day to Memorial Day, stopping twice a day on Saturdays and Sundays only.

Route 24 serves Highway 1 and Carmel Valley Road from Monterey through Carmel Valley. Stops within the study area are located along Carmel Valley Road from Rio Vista Drive to Rippling River. Route 24 provides hourly service.

EXISTING TRAFFIC CONDITIONS

Traffic counts for weekday AM, PM, Friday, and Sunday peak hour conditions were collected at the study intersections in 2014 while schools were in session. Traffic count sheets are provided in Appendix A.

Figure 3 shows the existing peak hour traffic volumes and lane configurations. Table 4 presents the LOS for the study intersections, with detailed calculation sheets included in Appendix B.

Table 4: Existing Intersection Levels of Service

Intersection	Peak Hour	Delay[1] (sec/veh)	LOS[2]
1. Carmel Valley Road/ Highway 1	Weekday AM	10.9	B
	Weekday PM	21.6	C
	Friday PM	26.6	C
	Sunday Midday	12.9	B
2. Carmel Valley Road/ Rancho San Carlos Road	Weekday AM	9.2	A
	Weekday PM	12.3	B
	Friday PM	10.6	B
	Sunday Midday	6.7	A
3. Carmel Valley Road/ Valley Greens Road	Weekday AM	1.1 (21.9)	A (C)
	Weekday PM	3.5 (51.8)	A (F)
	Friday PM	3.7 (85.6)	A (F)
	Sunday Midday	1.7 (38.9)	A (E)

1. Average control delay in seconds per vehicle.
2. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay.

The side street approaches to the Carmel Valley Road/Valley Greens Road intersection operates at LOS E/F during the Weekday PM, Friday PM, and Sunday midday peak hours, but the overall intersection operates at LOS A. This intersection does not meet the peak hour signal warrant. The remaining study intersection operates at an acceptable service level.

Table 5 shows the existing roadway segment levels of service.

Table 5: Existing Conditions Segment Analysis

Segment	ADT	Peak Hour	NB LOS	SB LOS
Highway 1 -Ocean to CVR	39,866	Weekday AM	C	**F**
		Weekday PM	C	**F**
		Friday PM	C	**F**
		Sunday Midday	B	**E**

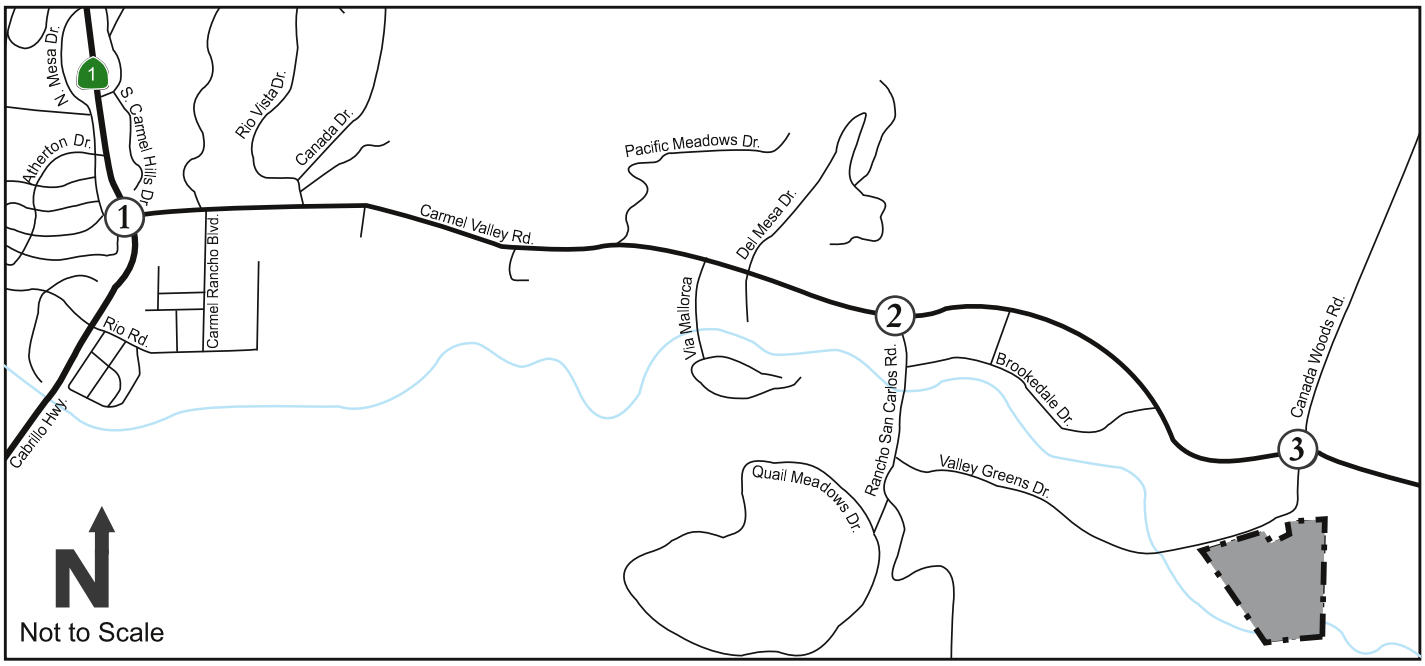
Segment	CVMP ADT Threshold[1]	ADT	Peak Hour	EB LOS	WB LOS
CVR-Schulte to Rancho San Carlos	16,340	15,600	Weekday AM	C	**E**
			Weekday PM	**E**	D
			Friday PM	**E**	D
			Sunday Midday	D	D

1. ADT= average daily traffic. From Carmel Valley Master Plan, 2010 update.
2. **Bold** highlighted cells indicate threshold has been exceeded.

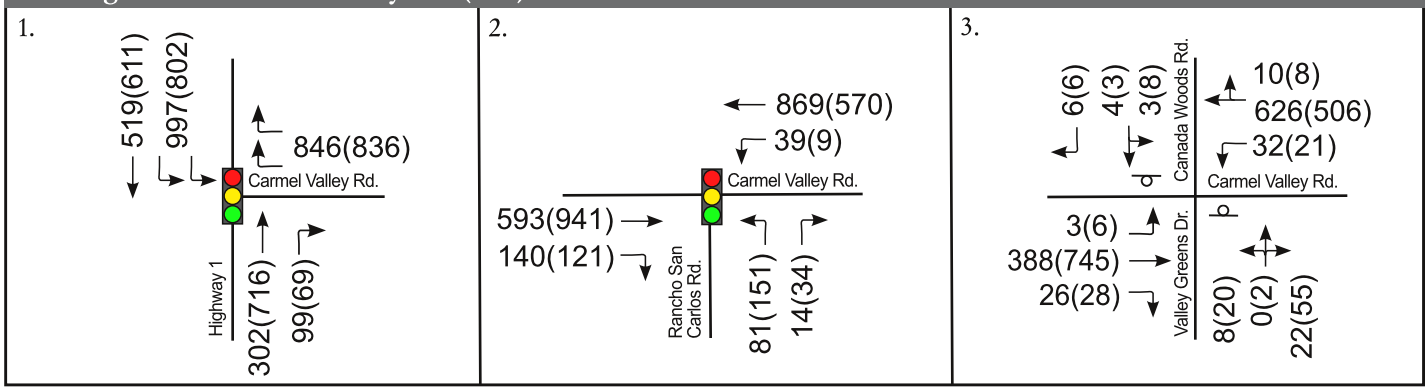
The segment of Carmel Valley Road from Schulte Road to Rancho San Carlos Road currently operates below the CVMP ADT threshold. The eastbound direction operates at LOS E during the Weekday PM and Friday PM peak hours, and the westbound direction operates at LOS E during the Weekday AM peak hours.

Southbound Highway 1 from Carmel Valley Road to Ocean Avenue operates at LOS F during all studied time periods except Sunday midday when it operates at LOS E.

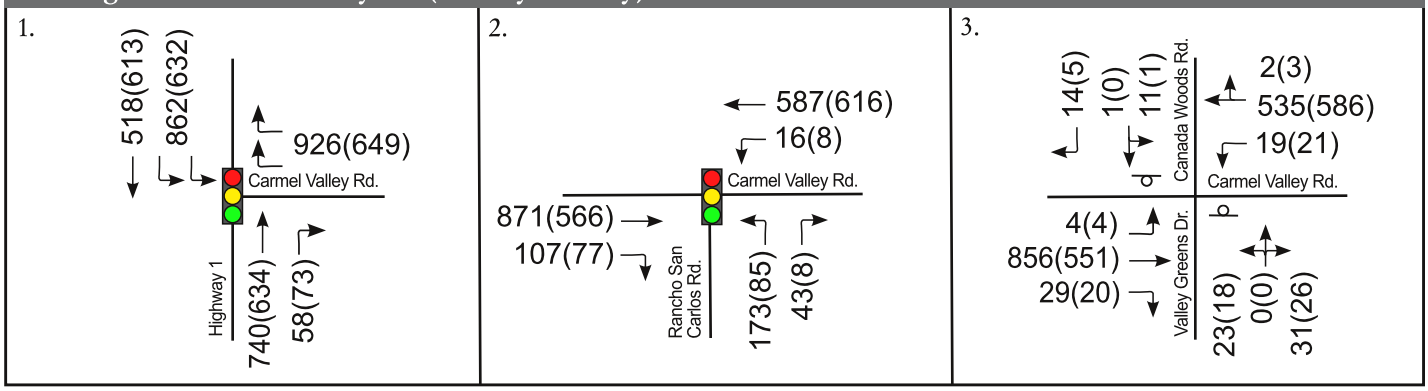
Figure 3: Existing Peak Hour Volumes and Lane Configurations



Existing Peak Hour - Weekday AM(PM) Volumes



Existing Peak Hour - Friday PM(Sunday Midday) Volumes



Legend:

- Traffic Signal
- xx(yy) - Traffic Volumes
- Stop Sign
- Project Site
- (7) - Study Intersection

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Existing Plus Project Conditions

This section evaluates the impacts of the proposed project on the surrounding transportation network. Existing Plus Project conditions reflect existing traffic levels plus the estimated traffic generated by the proposed project.

PROJECT TRAFFIC ESTIMATES

The amount of project traffic affecting the study intersections is estimated in three steps: trip generation, trip distribution, and trip assignment. Trip generation refers to the total number of trips generated by the site. Trip distribution identifies the general origins and destination of these trips, and trip assignment specifies the routes taken to reach these origins and destinations.

Trip Generation

The project's trip generation estimate was developed using data provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* and data provided in the project description. Trip generation for specific components of the Project were estimated individually using a combination of available resources as described below.

For typical weekday operations, the trip generation estimates were developed as follows:

- Office and administration uses were evaluated as a single tenant office building with 15 employees. Because the Project has longer operational hours than typical office buildings the Project's trips are likely to be spread throughout the day to a greater extent than offices, so the analysis is conservative by reflecting a higher level of peak hour trips.
- Member visits were evaluated under the assumption that 20 percent of the anticipated 500 total members would use the facility on a typical day, with ten percent of the daily trips occurring in each peak hour.
- Classes were assumed to include up to ten attendees plus two instructors. A maximum of two classes could be held simultaneously. A review of class schedules for similar facilities indicates that classes are spread throughout the day and typically range from one hour to 90 minutes. To present a reasonable worst-case scenario it was assumed that one class starts and one class ends during each peak hour. Ten classes were assumed per typical weekday.

Trip generation estimates for special events were developed as follows:

- A maximum of 250 people would be permitted on the site during special events. This includes attendees, members, staff, and contractors.
- The RV camping area was assumed to be fully occupied with 70 RVs. The project description notes that no in and out privileges will be granted to RVs. No mention is made of the accessory vehicles often towed by RVs (called 'dinghies') for day to day local trips so trip making characteristics were assumed to be similar to a typical Campground/RV park. The Sunday midday peak hour was assumed to be the reverse of Friday PM conditions.
- The remaining 180 people on site during special events would arrive and depart the site in a single day. The trip generation estimate assumes that ten percent would arrive and 1/3 would depart during the Friday PM and Sunday midday peak hours. These estimates were informed by the Federal Highway Administration's *Managing Travel for Planned Special Events Handbook*.

Special event conditions are evaluated during the Friday PM and Sunday midday time periods since this is when they will typically start/end. Typical, non-special event operations are evaluated during the

Weekday AM and PM time periods. The special event estimates are conservative as they assume single occupancy in all vehicles. It is likely that some portion of attendees would carpool, thereby reducing the number of new vehicle trips. Table 6 shows the trip generation estimates.

Table 6: Trip Generation Estimates

Project Component	Size	Daily Trips	Peak Hour Trips					
			Weekday AM			Weekday PM		
Typical Weekday Operations			**In**	**Out**	**Total**	**In**	**Out**	**Total**
Office/Administration[1]	15 Employees	56	7	1	8	1	7	8
Member Visits[2]	100 Members	200	10	10	20	10	10	20
Classes[3]	10 Classes	240	22	22	44	22	22	44
Typical Weekday Operations Total		***496***	***39***	***33***	***72***	***33***	***39***	***72***
			Friday PM			**Sunday Midday**		
Special Event Operations			**In**	**Out**	**Total**	**In**	**Out**	**Total**
Attendees, Employees, Vendors[4]	180 People	360	18	60	78	18	60	78
RV Campers[5]	70 Occupied Sites	140	18	11	29	11	18	29
Special Event Operations Total		***500***	***36***	***71***	***107***	***29***	***78***	***107***

1. Single tenant office , ITE Land Use Code 715.

2. Assumes 20% of 500 members use the facilty daily, each member driving alone, with 10% of the trips occuring in each peak hour.

3. Classes assumed to include up to ten attendees plus two instructors. A maximum of two classes to be held simulaneously. Table assumes ten classes per typical weekday and that one class ends and one begins during each peak hour, and attendees drive alone.

4. Assumes that 10 percent will arrive and 1/3 will depart during the Friday and Sunday peak hours.

5. Per project description no in and out privileges will be granted for RVs; however, towed accessory vehicles ('dinghies') are not specifically addressed, so trips were estimated consistent with Campground/RV Park Land Use (ITE Land Use Code 416) assuming 100% occupancy for the weekday peak hour of generator for Friday conditions. The Sunday Midday peak was assumed to be the reverse of Friday conditions.

Source: Trip Generation, 9th Edition, ITE (2012) and CCTC, 2014

During typical operations, the project trip generation estimate shows 496 new daily trips, 72 new Weekday AM peak hour trips, and 72 new Weekday PM peak hour trips. During special events, the trip estimate shows 500 new daily trips, 107 Friday PM peak hour trips, and 107 Sunday midday peak hour trips.

Trip Distribution and Assignment

The Association of Monterey Bay Area Governments (AMBAG) developed and maintains a regional travel demand model (RTDM) for use in forecasting travel demand. The 2014 RTDM was applied to estimate the directions of approach and departure for project trips using a select zone procedure. **Figure 4** shows the trip distribution percentages and project trip assignment. Existing Plus Project volumes are shown on **Figure 5.**

EXISTING PLUS PROJECT IMPACT ANALYSIS

Table 7 summarizes the operating conditions under Existing and Existing Plus Project conditions.

Table 7: Existing & Existing Plus Project Intersection Levels of Service

Intersection	Peak Hour	Existing Delay[1] (sec/veh)	Existing LOS[2]	Existing Plus Project Delay[1] (sec/veh)	Existing Plus Project LOS[2]
1. Carmel Valley Road/ Highway 1	Weekday AM	10.9	B	11.1	B
	Weekday PM	21.6	C	22.3	C
	Friday PM	26.6	C	28.6	C
	Sunday Midday	12.9	B	13.6	B
2. Carmel Valley Road/ Rancho San Carlos Road	Weekday AM	9.2	A	9.7	A
	Weekday PM	12.3	B	13.1	B
	Friday PM	10.6	B	10.8	B
	Sunday Midday	6.7	A	6.7	A
3. Carmel Valley Road/ Valley Greens Road	Weekday AM	1.1 (21.9)	A (C)	2.8 (43.1)	A (E)
	Weekday PM	3.5 (51.8)	A (F)	12.9 (157.5)	B (F)
	Friday PM	3.7 (85.6)	A (F)	37.6 (>200)	E (F)
	Sunday Midday	1.7 (38.9)	A (E)	18.3 (>200)	C (F)

1. HCM 2010 average control delay in seconds per vehide.
2. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay.

The intersections of Carmel Valley Road with Highway 1 and Rancho San Carlos Road operate acceptably at LOS C or better under Existing and Existing Plus Project conditions so no impacts are noted at these locations.

The Carmel Valley Road/Valley Greens Road intersection operates at LOS E under Existing Plus Project conditions during the Friday PM peak hour, and LOS C or better under the other time periods. The northbound approach operates at LOS E or F under Existing Plus Project conditions during all studied time periods. The peak hour signal warrant is met under Existing Plus Project Friday PM and Sunday midday conditions. This is a significant impact during these time periods, which reflect special event operations. No impacts are identified during typical operations.

Acceptable operations could be achieved at the Carmel Valley Road/Valley Greens road with any one of the following modifications:

- Install a single lane roundabout or a traffic signal. Either control type would provide acceptable operations under all analysis scenarios.
- Until a roundabout or traffic signal is installed, the operational deficiencies could be addressed by either prohibiting northbound left turns and through movements during special events or by having law enforcement monitor and direct traffic during special events. The turn restriction would shift traffic destined to the west to the signalized Carmel Valley Road/Rancho San Carlos Road intersection, which would continue to operate at LOS B with the shifted traffic. This detour would add less than ½ mile of travel distance for project traffic and other local traffic destined to the west, but would require that the applicant enter into an agreement permitting project traffic's use of the portions of Valley Greens Drive and Rancho San Carlos Road which are private roads.

- Eliminate special events on the site. This would eliminate the impacts during Friday PM and Sunday midday conditions. See the Alternative Analysis section at the end of this report for more details.

Table 8: Existing Plus Project Segment Analysis

Segment	ADT	Peak Hour	Existing Conditions NB LOS	Existing Conditions SB LOS	Existing Plus Project ADT	Existing Plus Project NB LOS	Existing Plus Project SB LOS
Highway 1 -Ocean to CVR	39,866	Weekday AM	C	**F**	40,166	C	**F**
		Weekday PM	C	**F**		C	**F**
		Friday PM	C	**F**		C	**F**
		Sunday Midday	B	**E**		B	**E**

Segment	CVMP ADT Threshold[1]	ADT	Peak Hour	Existing Conditions EB LOS	Existing Conditions WB LOS	Existing Plus Project ADT	Existing Plus Project EB LOS	Existing Plus Project WB LOS
CVR-Schulte to Rancho San Carlos	16,340	15,600	Weekday AM	C	**E**	15,950	D	**E**
			Weekday PM	**E**	D		**E**	D
			Friday PM	**E**	D		**E**	D
			Sunday Midday	D	D		D	D

1. Source: Carmel Valley Master Plan 2010 update.
2. **Bold** & highlighted cells indicate threshold has been exceeded.

The segment analysis results are shown in Table 8. The segment of Carmel Valley Road from Schulte Road to Rancho San Carlos Road would remain below the CVMP ADT threshold. The eastbound direction operates at LOS E during the Weekday PM and Friday PM peak hours, and the westbound direction operates at LOS E during the Weekday AM peak hour. The addition of Project traffic worsens eastbound Carmel Valley Road operations to LOS D during Weekday AM conditions. LOS D is considered acceptable on this segment, and no other LOS changes are reported, so no significant impacts are identified on Carmel Valley Road.

Southbound Highway 1 would operate at LOS E or F with and without the project. The project would add traffic to this deficient existing condition, which is a significant impact. Widening Highway 1 would achieve acceptable operations on this segment; however, this is not included as a programmed and planned regional transportation project and is not considered a feasible improvement. No feasible mitigation measures have been identified for this segment.

Site Access and On-Site Circulation

On-site circulation deficiencies would occur if project designs fail to meet appropriate standards, fail to provide adequate truck access, or would result in hazardous conditions. The proposed site plan is shown on **Figure 2**. The Project proposes 169 general parking spaces plus a 15-space lot for staff. An unpaved overflow area would serve up to 70 RVs or as general overflow parking when RVs are not present. With the overflow area occupied by RVs, up to 254 vehicles could be parked on site. The parking supply is adequate for the maximum event size of 250 people.

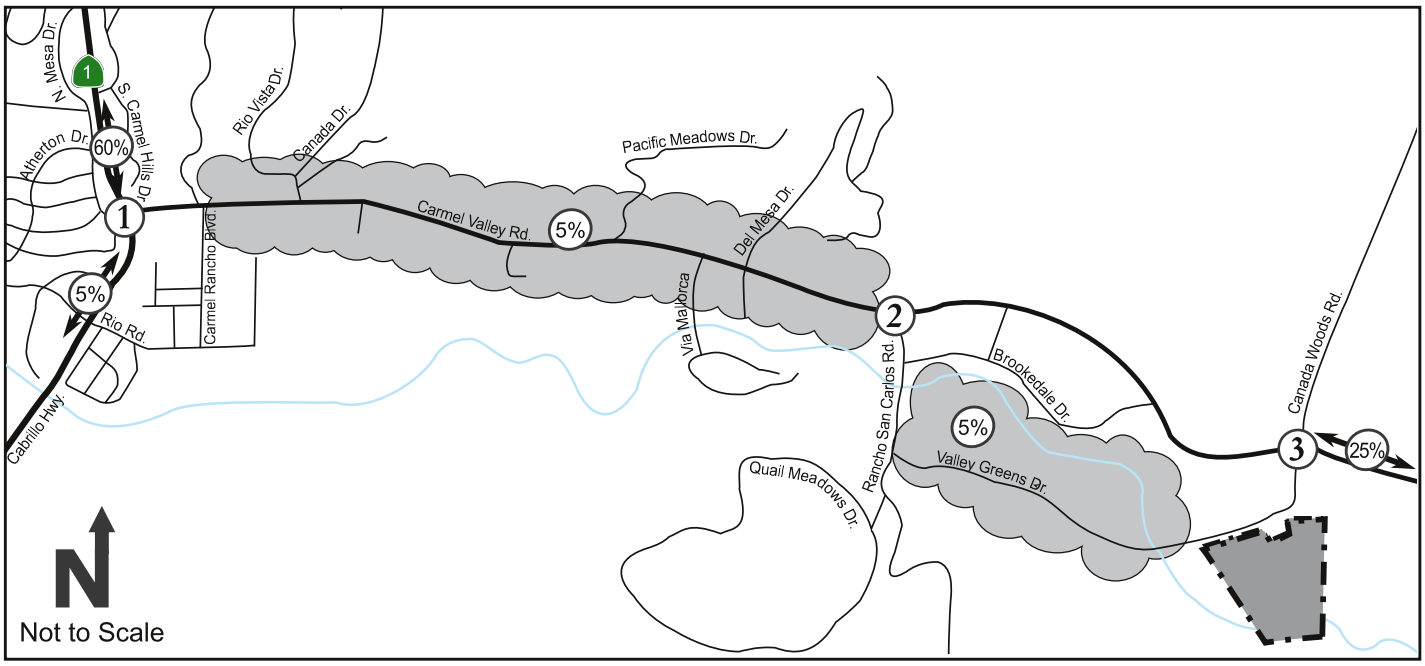
Appendix B of the County's *Guide for the Preparation of Traffic Impact Studies* includes guidelines for the installation of left turn lanes on two-lane roads like Valley Greens Drive. Support for a left turn lane is based on the forecast average annual daily traffic (AADT) volumes on the major street in combination with the peak hour turning volumes to the minor street. The left turn channelization policy notes that left turn channelization is based on a recommendation by Traffic Division staff based on consideration of the volumes, sight distance, geometrics, collision history, speeds, and any other special characteristics.

The 2012 AADT on Valley Greens Drive was 1,300 vehicles. The addition of typical weekday project traffic will increase the AADT to 1,796 vehicles. The inbound left turning traffic is highest during the

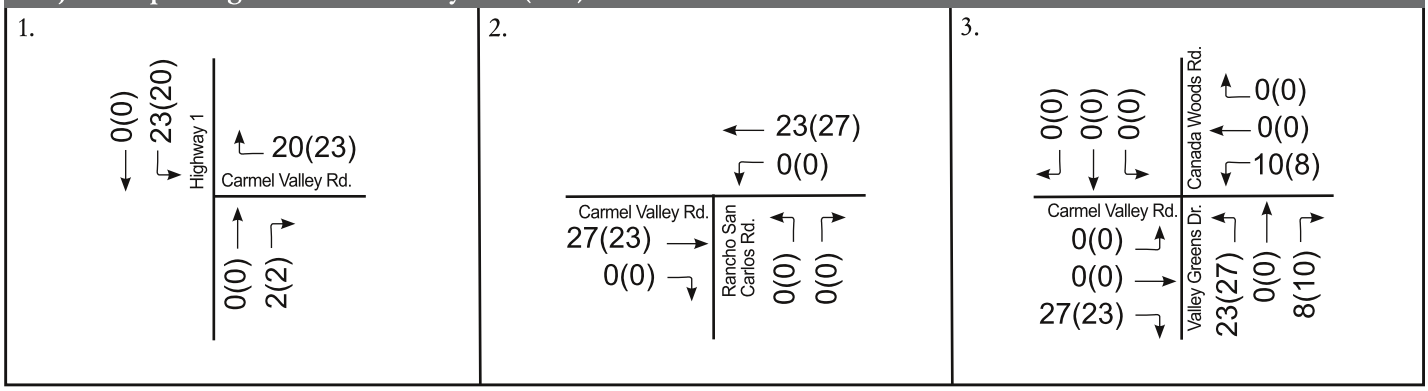
Weekday AM peak hour, with 37 inbound left turns. These volumes support left-turn channelization, but would require consideration of the other factors discussed above by the Traffic Division. The following recommendations would improve site access and on-site circulation:

- Install a westbound left turn lane on Valley Greens Drive into the Project driveway. Alternatively, restricting classes to start outside of the AM and PM peak hours would eliminate the need for a westbound left turn lane per the County's guidelines.
- Review parking for RVs using turning templates to ensure all sites are accessible without excessive maneuvering. The sites along the center 25 foot aisle may be difficult to navigate by larger RVs when the parking area is nearly full.
- Develop a traffic management plan for special events.
- Install no parking signs prohibiting parking on the south side of Valley Greens Drive for 100 feet east and west of the project driveway to maintain clear sight lines.

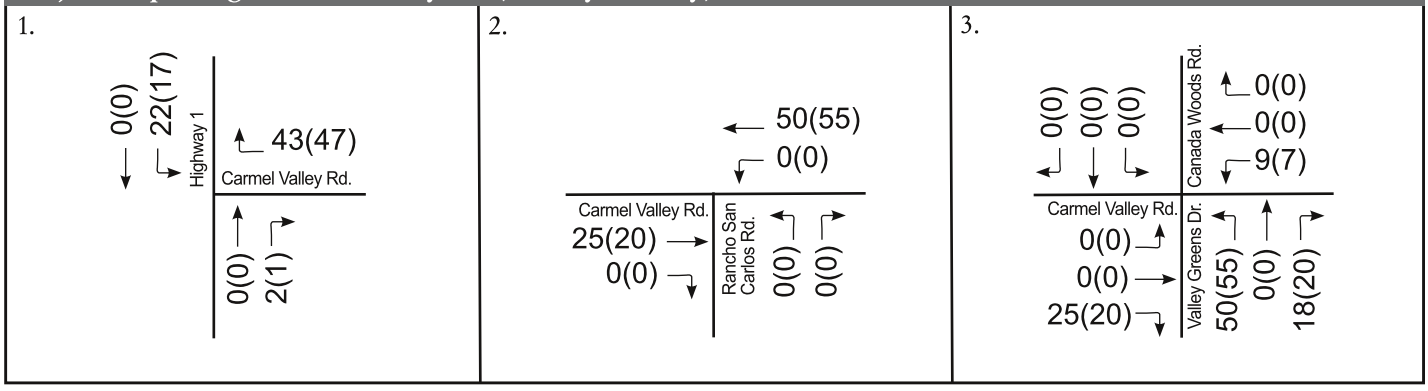
Figure 4: Project Trip Distribution and Assignment



Project Trip Assignment - Weekday AM(PM) Volumes



Project Trip Assignment - Friday PM(Sunday Midday) Volumes



Legend:

- (3%) - Project Trip Distribution Percentage
- Project Site
- xx(yy) - Traffic Volumes
- (7) - Study Intersection

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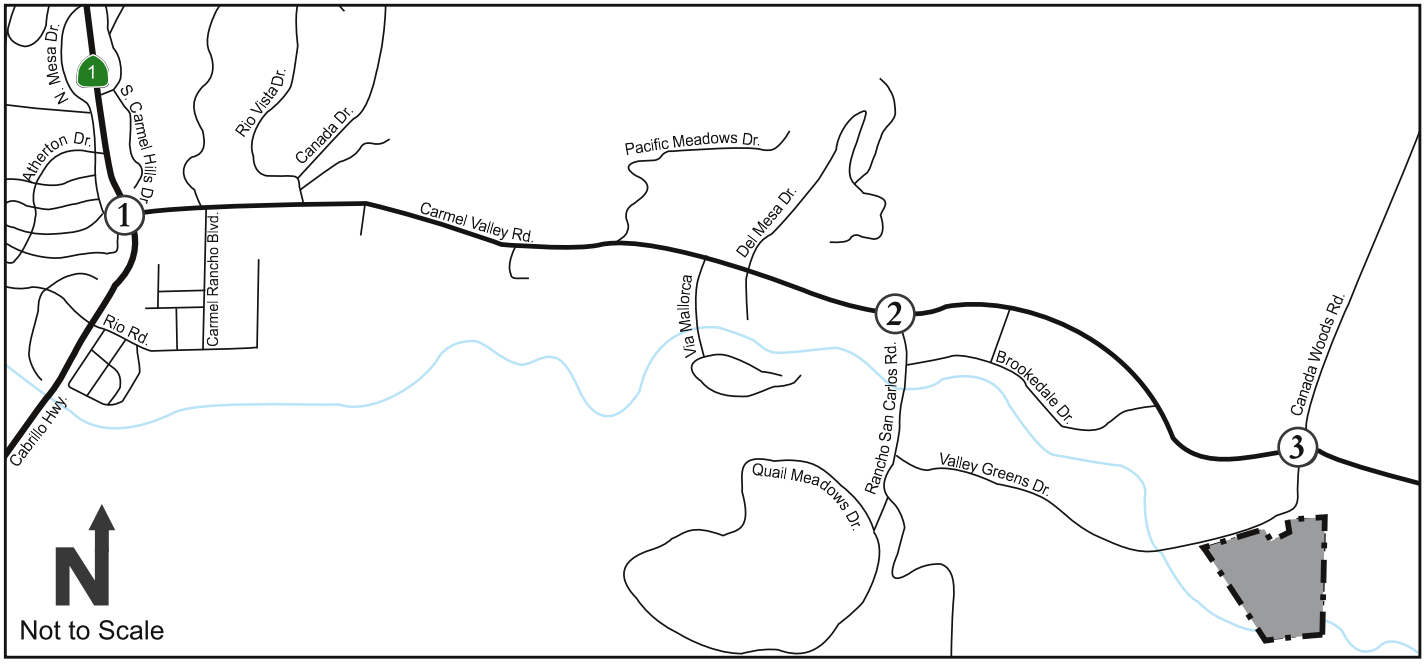
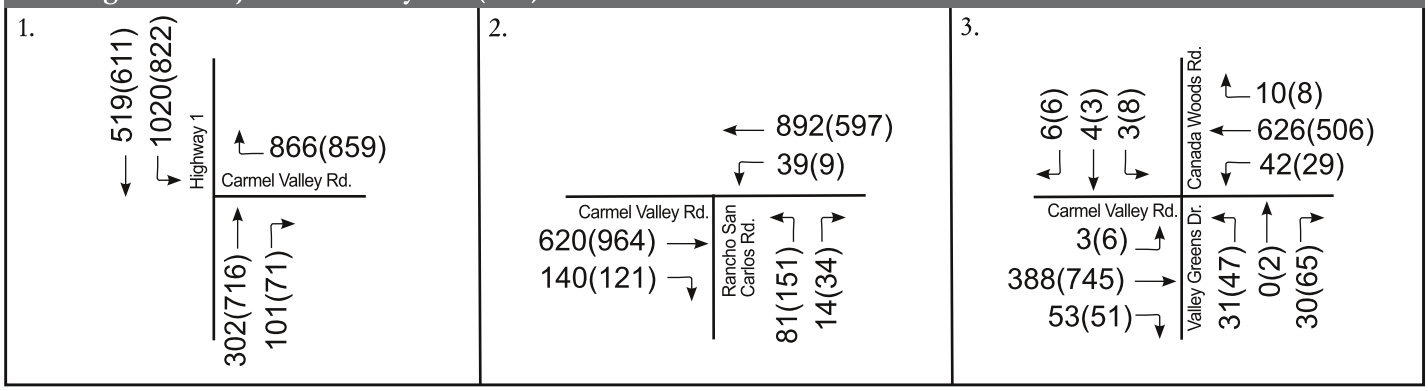
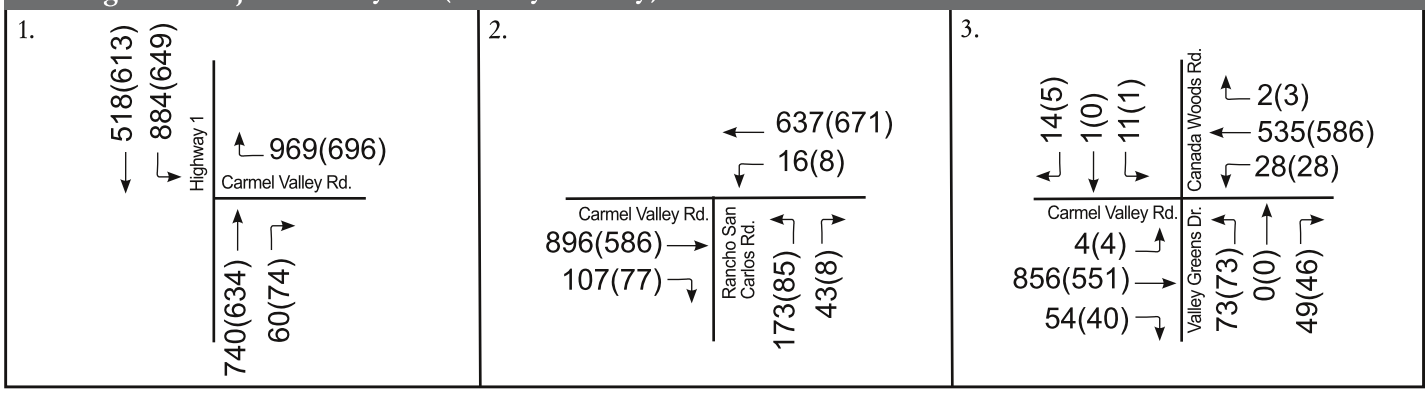
Figure 5: Existing Plus Project Volumes



Existing Plus Project - Weekday AM(PM) Volumes



Existing Plus Project - Friday PM(Sunday Midday) Volumes



Legend:

xx(yy) - Traffic Volumes

7 - Study Intersection

- Project Site

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Cumulative Conditions

Cumulative conditions represent build-out of the land uses in the region.

CUMULATIVE ROADWAY NETWORK

The Transportation Agency for Monterey County (TAMC) collects development impact fees to help fund transportation project of regional significance. TAMC's 2014 Regional Transportation Improvement Plan programs construction funding starting in 2015/16 for improvements to Highway 1 between Rio Road and Carmel Valley Road. The following improvements are included in this project:

- Add a second northbound through lane to Highway 1 between Rio Road and Carmel Valley Road.
- Add capacity to the Rio Road/Highway 1 intersection as follows:
    - Convert the northbound right turn lane to a shared through/right turn lane.
    - Add a second westbound right turn lane.
    - Widen the southbound approach to provide a right turn lane, through lane, and dual left turn lanes.
- Convert the Carmel Valley Road/Highway 1 intersection's northbound right turn lane to a shared through/right turn lane.

No other roadway network changes affecting study location operations were assumed to be in place under Cumulative conditions.

CUMULATIVE VOLUME FORECASTS

Cumulative traffic volume forecasts were developed using the 2014 AMBAG RTDM and the 2007 Carmel Valley Master Plan (CVMP) traffic study. The CVMP traffic study forecasts travel based on a detailed review of potential land use intensities within Carmel Valley, while the RTDM is by nature focused more on regional travel patterns. The CVMP traffic study forecasts substantially more growth along the Carmel Valley Road corridor than the RTDM, which shows future traffic levels within five percent of year 2010 levels. These increases flow to Highway 1, again resulting in significantly higher volumes than those projected in the RTDM.

The CVMP traffic study forecasts were given precedence over the RTDM forecasts due to the local nature of those forecasting efforts. The result of this approach is a more conservative analysis. Cumulative volumes are shown on **Figure 6**.

CUMULATIVE TRAFFIC CONDITIONS

Table 9 summarizes Cumulative traffic conditions with and without the project. Cumulative impacts are identified relative to the existing operating condition.

Table 9: Cumulative & Cumulative Plus Project Intersection Levels of Service

		Existing		Cumulative		Cumulative Plus Project	
Intersection	**Peak Hour**	**Delay[1] (sec/veh)**	**LOS[2]**	**Delay[1] (sec/veh)**	**LOS[2]**	**Delay[1] (sec/veh)**	**LOS[2]**
1. Carmel	Weekday AM	10.9	B	21.5	C	22.3	C
Valley	Weekday PM	21.6	C	18.9	B	19.5	B
Road/Highway	Friday PM	26.6	C	21.1	C	22.2	C
1	Sunday Midday	12.9	B	12.5	B	13.0	B
2. Carmel	Weekday AM	9.2	A	**49.8**	**D**	**53.9**	**D**
Valley	Weekday PM	12.3	B	26.7	C	29.1	C
Road/Rancho	Friday PM	10.6	B	22.8	C	25.3	C
San Carlos	Sunday Midday	6.7	A	8.2	A	8.8	A
3. Carmel	Weekday AM	1.1 (21.9)	A (C)	**6.3 (>200)**	**A (F)**	**47.5 (>200)**	**E (F)**
Valley	Weekday PM	3.5 (51.8)	A (F)	**30.1 (>200)**	**D (F)**	**76.0 (>200)**	**F (F)**
Road/Valley	Friday PM	3.7 (85.6)	A (F)	**23.1 (>200)**	**C (F)**	**163.3**	**F (F)**
Greens Road	Sunday Midday	1.7 (38.9)	A (E)	**6.9 (>200)**	**A (F)**	**100.1**	**F (F)**

1. HCM 2010 average control delay in seconds per vehicle.
2. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay.
3. Unacceptable operations are shown in **bold text.**

Carmel Valley Road/Highway 1 would operate acceptably at LOS C or better under Cumulative and Cumulative Plus Project conditions. No impacts are identified at this intersection.

Carmel Valley Road/Rancho San Carlos Road would operate at LOS D during the Weekday AM peak hour under Cumulative and Cumulative Plus Project conditions and LOS C or better during all other time periods. The addition of Cumulative traffic changes the LOS to an unacceptable level from the existing condition. This impact is considered significant. Adding a second westbound through lane would improve operations to LOS B. The transition from a two-lane section to a four-lane section occurs approximately 1/3 of a mile west of Rancho San Carlos Road. It would be necessary to extend the new westbound lane to the current merge point west of the intersection. This project is not included on the Carmel Valley Road Improvement List.

Carmel Valley Road/Valley Greens Road would operate at LOS D or better under Cumulative conditions, with the addition of Project traffic worsening operations to LOS E or worse under Cumulative Plus Project conditions. The signal warrant would be met with the project in place under all time periods. This is a significant impact. Installation of a multilane roundabout or traffic signal would be necessary to provide acceptable operations at this intersection under Cumulative Plus Project conditions. This project is not currently included on the Carmel Valley Road Improvement List, so payment of impact fees would not mitigate this impact unless the Improvement List and impact fees are amended.

Table 10 summarizes the roadway segment operations under Existing, Cumulative and Cumulative Plus Project conditions.

Table 10: Cumulative Segment Analysis

Segment	Peak Hour	Existing Conditions		Cumulative		Cumulative Plus Project	
		NB	SB	NB	SB	NB	SB
Highway 1 -Ocean to CVR	Weekday AM	C	**F**	**D**	**F**	**D**	**F**
	Weekday PM	C	**F**	C	**F**	C	**F**
	Friday PM	C	**F**	C	**F**	C	**F**
	Sunday Midday	B	**E**	C	**F**	C	**F**
Segment	**Peak Hour**	**Existing Conditions**		**Cumulative**		**Cumulative Plus Project**	
				EB	WB	EB	WB
CVR-Schulte to Rancho San Carlos	Weekday AM	C	**E**	**E**	**E**	**E**	**E**
	Weekday PM	**E**	D	**E**	**E**	**E**	**E**
	Friday PM	**E**	D	**E**	**E**	**E**	**E**
	Sunday Midday	D	D	D	**E**	D	**E**

1. Source: Carmel Valley Master Plan 2010 update.
2. **Bold** indicates threshold has been exceeded.

Table 11 summarizes average daily traffic volumes under Existing, Cumulative, and Cumulative Plus Project conditions.

Table 11: Cumulative Roadway Segment Average Daily Traffic (ADT)

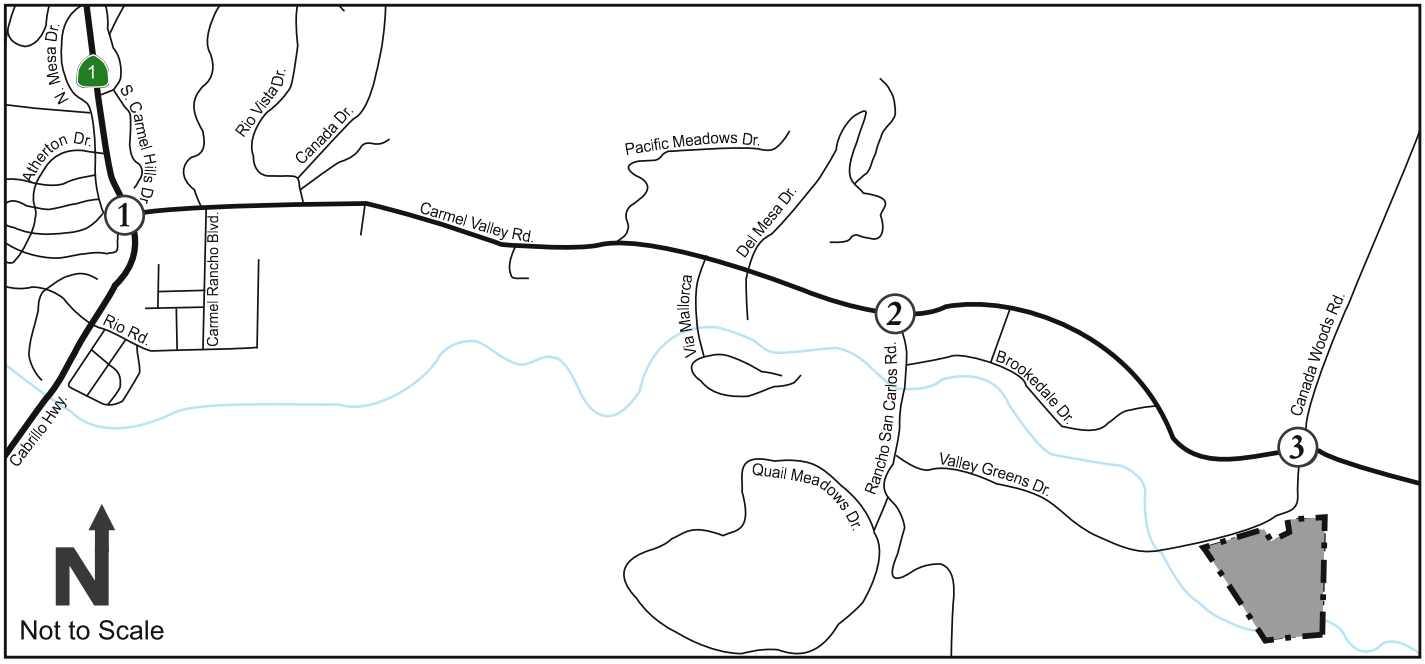
Segment	CVMP ADT Threshold[1]	Existing ADT	Cumulative ADT	Cumulative Plus Project ADT
Highway 1-Carpenter to Ocean	N/A	39,866	46,500	46,800
CVR-Schulte to Rancho San Carlos	16,340	15,600	**21,600**	**21,950**

1. Monterey County Department of Public Works, CVMP 2010 General Plan Update.
2. **Bold** numbers indicate threshold has been exceeded.

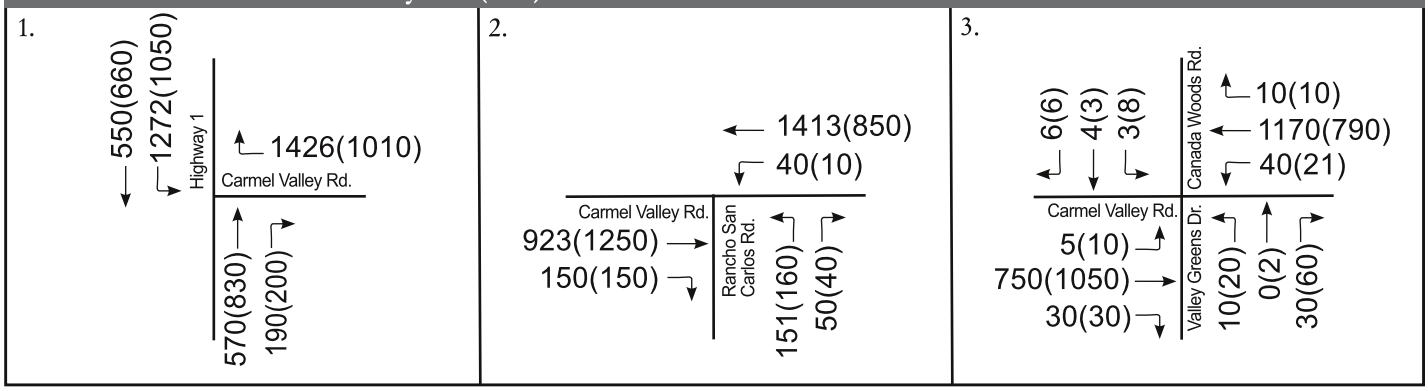
The northbound segment of Highway 1 between Ocean Avenue and Carmel Valley Road would operate at LOS D under both Cumulative and Cumulative Plus Project conditions for the Weekday AM peak hour. The southbound direction would operate at LOS F under all scenarios. The project adds traffic to a deficient condition, which is considered a significant impact. Widening these segments would provide acceptable operations but is not considered feasible.

The segment of Carmel Valley Road between Schulte Road and Rancho San Carlos Road is forecast to operate at LOS D for the eastbound Sunday midday peak hour, and LOS E for all other studied time periods for both Cumulative and Cumulative Plus Project conditions. Cumulative operations degrade to an unacceptable level when compared to existing conditions, and the CVMP ADT threshold is exceeded. This is considered a significant impact. Segment widening would be necessary to achieve acceptable operations, but is not included in the Carmel Valley Road Improvement List.

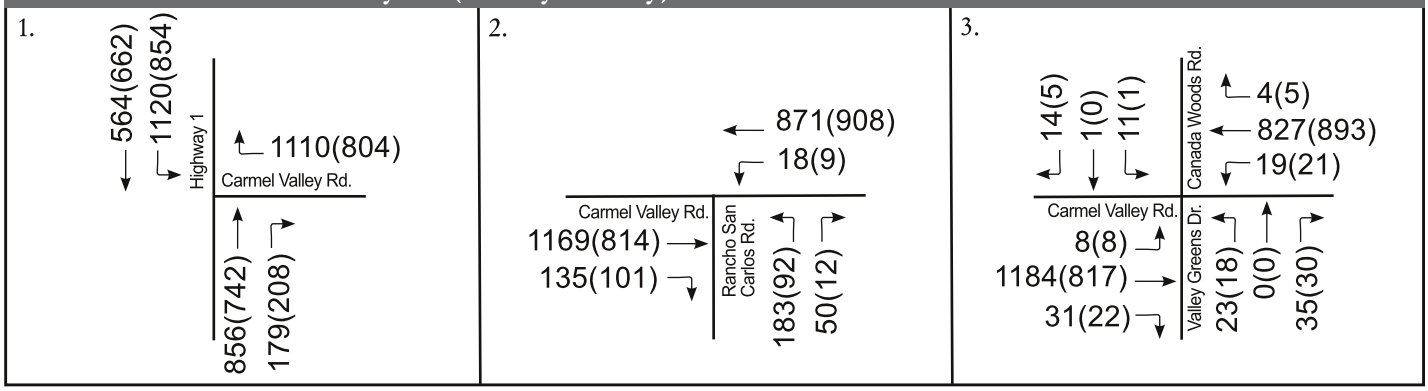
Figure 6: Cumulative Volumes



Cumulative Volumes - Weekday AM(PM) Volumes



Cumulative Volumes - Friday PM(Sunday Midday) Volumes



Legend:

xx(yy) - Traffic Volumes

7 - Study Intersection

- Project Site

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Alternative Analysis

One alternative under consideration would not include special events. This section evaluates traffic conditions during Friday PM and Sunday midday conditions during typical operations without special events. Operating conditions during the Sunday midday time period are better than the Weekday PM time period. Therefore impacts and mitigations developed for the Weekday time periods would also apply to the Sunday midday time period under typical operations, precluding the need for additional Sunday midday analysis. Similarly the roadway segment analysis findings would also apply to typical operations on weekends, so no further segment analysis is needed for these time periods.

Operating conditions during the Friday PM time period are slightly worse than those of the typical Weekday PM time period at the study locations. The Friday PM period was therefore analyzed under typical operations to determine if the impacts and mitigations identified under the Weekday PM time period would be adequate for Friday PM conditions. The project trip generation for Friday PM with typical operations was assumed to be the same as Weekday PM with typical operations.

Table 12 summarizes the intersection operations under Friday PM plus typical operations.

Table 12: Friday PM with Typical Operations Intersection Levels of Service

Intersection	Condition	Friday PM Delay[1]	Friday PM LOS[2]	Friday PM Plus Typical Operations Delay[1]	Friday PM Plus Typical Operations LOS[2]
1. Carmel Valley Road/Highway 1[3]	Existing	26.6	C	27.6	C
	Cumulative	21.1	C	21.7	C
2. Carmel Valley Road/Rancho San Carlos Road	Existing	10.6	B	10.8	B
	Cumulative	22.8	C	25.1	C
3. Carmel Valley Road/Valley Greens Road	Existing	3.7 (85.6)	A (F)	16.0 (>200)	B (F)
	Cumulative	23.1 (>200)	C (F)	80.3 (>200)	F (F)

1. HCM 2010 average control delay in seconds per vehicle.
2. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis
3. Cumulative operations are better than existing due to planned intersection improvements.

The intersections of Carmel Valley Road with Highway 1 and Rancho San Carlos Road operate acceptably at LOS C or better so no impacts are noted at these locations under Existing and Cumulative conditions.

The Carmel Valley Road/Valley Greens Road intersection operates at LOS B or better under Existing Plus typical operations conditions, with the northbound approach operating at LOS F. The peak hour signal warrant would not be met under Existing Plus typical operations conditions on a Friday. This is a less than significant impact.

Under Cumulative Conditions Carmel Valley Road/Valley Greens Road would require signalization or installation of a multi-lane roundabout to provide acceptably operations during Friday PM conditions, similar to Weekday PM conditions.

In summary, impacts and mitigations developed for Weekday PM conditions with the Project would also mitigate impacts for Friday PM conditions with typical operations.

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California Department of Transportation. 2002. Guide for the Preparation of Traffic Impact Studies.

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Appendix A: Traffic Count Sheets

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 3 - Esquiline Road to Ford Road
Count Location No. 236 - East of Pilot Road
Dates: 6/17/2014 to 6/20/2014
Sheet 1 of 2

Sunday, June 15, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
13:00					
14:00					
15:00					
16:00					
17:00					
18:00					
19:00					
20:00					
21:00					
22:00					
23:00					
				ADT =	

Monday, June 16, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
13:00					
14:00					
15:00					
16:00					
17:00					
18:00					
19:00					
20:00					
21:00					
22:00					
23:00					
				ADT =	

Tuesday, June 17, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	5	4	12	6	27
1:00	6	5	6	2	19
2:00	5	3	2	5	15
3:00	2	3	0	2	7
4:00	6	4	4	11	25
5:00	19	12	17	26	74
6:00	50	65	74	82	271
7:00	92	135	153	138	518
8:00	136	176	173	136	621
9:00	144	169	144	106	563
10:00	123	115	116	141	495
11:00	119	153	124	117	513
12:00	151	129	174	162	616
13:00	136	109	122	163	530
14:00	145	127	155	128	555
15:00	153	142	138	135	568
16:00	175	154	173	198	700
17:00	174	165	161	147	647
18:00	134	144	140	103	521
19:00	96	104	87	83	370
20:00	64	46	56	53	219
21:00	39	54	35	36	164
22:00	32	27	17	18	94
23:00	18	14	11	7	50
				ADT =	8182

Wednesday, June 18, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	7	6	3	6	22
1:00	3	0	1	2	6
2:00	2	6	4	3	15
3:00	1	2	3	4	10
4:00	6	10	9	5	30
5:00	13	18	16	30	77
6:00	52	60	73	73	258
7:00	107	130	147	124	508
8:00	156	171	144	121	592
9:00	137	139	127	131	534
10:00	142	114	148	131	535
11:00	144	139	132	141	556
12:00	167	144	144	137	592
13:00	145	138	126	143	552
14:00	146	146	148	159	599
15:00	166	117	145	170	598
16:00	161	141	159	197	658
17:00	147	168	176	155	646
18:00	154	130	143	92	519
19:00	80	102	90	75	347
20:00	77	63	57	54	251
21:00	67	61	49	36	213
22:00	45	22	24	15	106
23:00	11	15	15	8	49
				ADT =	8273

VPD Summary		CVMP
Date	VPD	Threshold
6/15/2014		9065
6/16/2014		9065
6/17/2014	8182	9065
6/18/2014	8273	9065
6/19/2014	8244	9065
6/20/2014	8964	9065
6/21/2014		9065

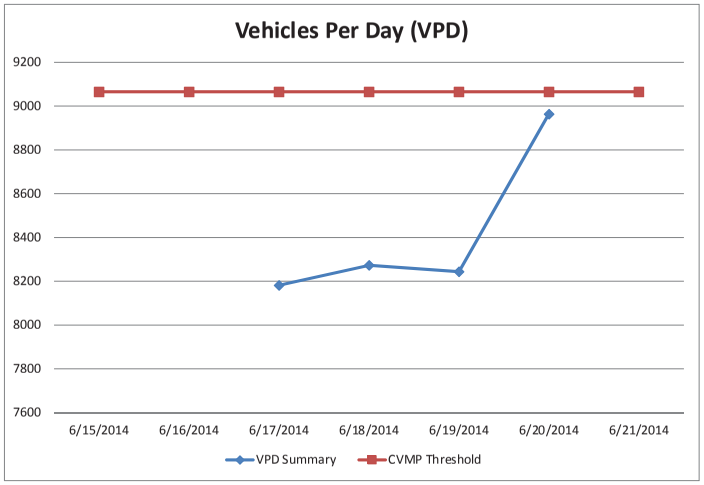
ADT (3 Day) = 8233
ADT (5 Day) = -
ADT (7 Day) = -

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
6/15/2014				
6/16/2014				
6/17/2014	629	0.89	700	0.88
6/18/2014	598	0.87	658	0.84
6/19/2014	577	0.96	**725**	**0.91**
6/20/2014	644	0.89	700	0.96
6/21/2014				

Thursday, June 19, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	4	5	5	7	21
1:00	2	3	0	3	8
2:00	0	1	3	1	5
3:00	3	2	2	3	10
4:00	2	4	4	13	23
5:00	5	20	17	23	65
6:00	64	54	68	68	254
7:00	106	133	154	133	526
8:00	147	144	150	136	577
9:00	137	105	127	108	477
10:00	136	105	153	116	510
11:00	137	141	135	168	581
12:00	173	122	173	160	628
13:00	161	146	133	166	606
14:00	158	139	158	141	596
15:00	145	138	146	160	589
16:00	149	159	170	182	660
17:00	200	173	158	168	699
18:00	157	124	99	104	484
19:00	110	76	86	71	343
20:00	76	66	68	60	270
21:00	44	41	45	40	170
22:00	39	17	17	21	94
23:00	14	16	11	7	48
				ADT =	8244

Friday, June 20, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	11	6	4	5	26
1:00	3	6	2	2	13
2:00	7	2	2	6	17
3:00	0	3	1	6	10
4:00	5	2	8	11	26
5:00	11	10	21	27	69
6:00	48	51	60	68	227
7:00	77	120	142	158	497
8:00	156	180	143	165	644
9:00	124	121	144	152	541
10:00	142	124	141	135	542
11:00	131	127	156	145	559
12:00	196	172	176	170	714
13:00	164	166	149	158	637
14:00	158	157	152	152	619
15:00	165	170	170	152	657
16:00	183	177	182	158	700
17:00	161	176	154	174	665
18:00	173	136	135	149	593
19:00	134	107	97	100	438
20:00	73	80	67	61	281
21:00	62	57	54	75	248
22:00	52	36	39	33	160
23:00	18	31	16	16	81
				ADT =	8964

Saturday, June 21, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
13:00					
14:00					
15:00					
16:00					
17:00					
18:00					
19:00					
20:00					
21:00					
22:00					
23:00					
				ADT =	



Carmel Valley Road
Segment 3 - Esquiline Road to Ford Road
Count Location No. 236 - East of Pilot Road
Dates: 6/17/2014 to 6/20/2014
Sheet 2 of 2

Sunday, June 15, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00										
1:00										
2:00										
3:00										
4:00										
5:00										
6:00										
7:00										
8:00										
9:00										
10:00										
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15:00										
16:00										
17:00										
18:00										
19:00										
20:00										
21:00										
22:00										
23:00										

Monday, June 16, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00										
1:00										
2:00										
3:00										
4:00										
5:00										
6:00										
7:00										
8:00										
9:00										
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15:00										
16:00										
17:00										
18:00										
19:00										
20:00										
21:00										
22:00										
23:00										

Tuesday, June 17, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	3	4	4	3	14	2	0	8	3	13
1:00	4	2	4	2	12	2	3	2	0	7
2:00	2	1	1	1	5	3	2	1	4	10
3:00	1	1	0	1	3	1	2	0	1	4
4:00	2	1	0	3	6	4	3	4	8	19
5:00	6	5	7	7	25	13	7	10	19	49
6:00	18	31	38	30	117	32	34	36	52	154
7:00	25	40	34	42	141	67	95	119	96	377
8:00	52	68	44	62	226	84	108	129	74	395
9:00	53	72	52	54	231	91	97	92	52	332
10:00	51	43	53	58	205	72	72	63	83	290
11:00	45	65	55	57	222	74	88	69	60	291
12:00	79	62	101	84	326	72	67	73	78	290
13:00	65	44	62	68	239	71	65	60	95	291
14:00	65	66	95	71	297	80	61	60	57	258
15:00	85	77	72	58	292	68	65	66	77	276
16:00	88	94	98	124	404	87	60	75	74	296
17:00	95	92	100	101	388	79	73	61	46	259
18:00	86	87	101	64	338	48	57	39	39	183
19:00	62	69	63	51	245	34	35	24	32	125
20:00	46	26	28	36	136	18	20	28	17	83
21:00	27	47	21	25	120	12	7	14	11	44
22:00	25	12	9	11	57	7	15	8	7	37
23:00	11	9	8	6	34	7	5	3	1	16

Wednesday, June 18, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	6	3	2	3	14	1	3	1	3	8
1:00	2	0	0	1	3	1	0	1	1	3
2:00	1	1	3	1	6	1	5	1	2	9
3:00	0	1	1	1	3	1	1	2	3	7
4:00	1	3	1	1	6	5	7	8	4	24
5:00	3	7	4	12	26	10	11	12	18	51
6:00	24	29	38	32	123	28	31	35	41	135
7:00	27	42	38	29	136	80	88	109	95	372
8:00	54	65	50	39	208	102	106	94	82	384
9:00	68	44	66	47	225	69	95	61	84	309
10:00	69	44	69	46	228	73	70	79	85	307
11:00	66	69	61	78	274	78	70	71	63	282
12:00	83	73	74	73	303	84	71	70	64	289
13:00	59	74	68	74	275	86	64	58	69	277
14:00	77	79	72	83	311	69	67	76	76	288
15:00	86	63	80	86	315	80	54	65	84	283
16:00	89	93	87	113	382	72	48	72	84	276
17:00	79	98	106	111	394	68	70	70	44	252
18:00	96	84	98	61	339	58	46	45	31	180
19:00	44	68	55	49	216	36	34	35	26	131
20:00	56	38	34	29	157	21	25	23	25	94
21:00	39	44	34	24	141	28	17	15	12	72
22:00	29	14	14	12	69	16	8	10	3	37
23:00	7	9	10	7	33	4	6	5	1	16

Thursday, June 19, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	3	3	3	4	13	1	2	2	3	8
1:00	1	2	0	1	4	1	1	0	2	4
2:00	0	0	0	0	0	0	1	3	1	5
3:00	2	1	1	2	6	1	1	1	1	4
4:00	0	1	0	7	8	2	3	4	6	15
5:00	1	6	6	6	19	4	14	11	17	46
6:00	26	23	31	24	104	38	31	37	44	150
7:00	38	36	40	49	163	68	97	114	84	363
8:00	56	47	44	53	200	91	97	106	83	377
9:00	36	41	59	48	184	101	64	68	60	293
10:00	60	37	67	47	211	76	68	86	69	299
11:00	69	65	59	81	274	68	76	76	87	307
12:00	93	49	115	87	344	80	73	58	73	284
13:00	66	67	77	75	285	95	79	56	91	321
14:00	84	87	83	63	317	74	52	75	78	279
15:00	76	76	74	80	306	69	62	72	80	283
16:00	85	91	91	129	396	64	68	79	53	264
17:00	111	97	91	107	406	89	76	67	61	293
18:00	99	86	57	69	311	58	38	42	35	173
19:00	71	46	54	46	217	39	30	32	25	126
20:00	53	44	36	38	171	23	22	32	22	99
21:00	21	24	33	31	109	23	17	12	9	61
22:00	32	10	10	16	68	7	7	7	5	26
23:00	8	12	7	5	32	6	4	4	2	16

Friday, June 20, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	8	3	1	3	15	3	3	3	2	11
1:00	1	3	1	1	6	2	3	1	1	7
2:00	3	1	1	2	7	4	1	1	4	10
3:00	0	2	0	3	5	0	1	1	3	5
4:00	0	0	1	4	5	5	2	7	7	21
5:00	2	3	6	7	18	9	7	15	20	51
6:00	25	23	27	27	102	23	28	33	41	125
7:00	23	34	40	61	158	54	86	102	97	339
8:00	46	82	44	52	224	110	98	99	113	420
9:00	41	51	51	75	218	83	70	93	77	323
10:00	59	64	61	70	254	83	60	80	65	288
11:00	62	62	78	79	281	69	65	78	66	278
12:00	107	82	88	87	364	89	90	88	83	350
13:00	80	88	75	89	332	84	78	74	69	305
14:00	87	91	79	73	330	71	66	73	79	289
15:00	81	85	92	86	344	84	85	78	66	313
16:00	92	99	102	100	393	91	78	80	58	307
17:00	98	103	93	112	406	63	73	61	62	259
18:00	100	87	84	90	361	73	49	51	59	232
19:00	86	65	61	57	269	48	42	36	43	169
20:00	43	49	45	41	178	30	31	22	20	103
21:00	42	33	32	32	139	20	24	22	43	109
22:00	26	27	26	20	99	26	9	13	13	61
23:00	8	22	5	11	46	10	9	11	5	35

Saturday, June 21, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00										
1:00										
2:00										
3:00										
4:00										
5:00										
6:00										
7:00										
8:00										
9:00										
10:00										
11:00										
12:00										
13:00										
14:00										
15:00										
16:00										
17:00										
18:00										
19:00										
20:00										
21:00										
22:00										
23:00										

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 4 - Ford Road to Laureles Grade
Count Location No. 238 - East of Boronda Road
Dates: 6/15/2014 to 6/21/2014
Sheet 1 of 2

Sunday, June 15, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	25	19	21	14	79
1:00	9	17	13	12	51
2:00	10	7	5	5	27
3:00	2	6	4	2	14
4:00	4	2	4	2	12
5:00	10	5	8	6	29
6:00	14	24	30	34	102
7:00	47	39	50	67	203
8:00	54	88	92	129	363
9:00	98	125	112	134	469
10:00	153	161	169	143	626
11:00	183	154	160	170	667
12:00	198	193	190	184	765
13:00	175	186	178	167	706
14:00	173	163	176	175	687
15:00	184	172	191	167	714
16:00	166	201	160	170	697
17:00	171	165	110	142	588
18:00	109	103	111	113	436
19:00	99	79	83	87	348
20:00	70	89	65	58	282
21:00	86	59	50	37	232
22:00	34	33	29	22	118
23:00	21	11	10	20	62
				ADT =	8277

Monday, June 16, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	7	10	6	4	27
1:00	8	3	3	10	24
2:00	0	3	3	4	10
3:00	2	3	3	2	10
4:00	2	7	9	8	26
5:00	12	16	27	33	88
6:00	57	67	79	102	305
7:00	128	161	186	202	677
8:00	170	198	200	173	741
9:00	166	197	149	169	681
10:00	172	159	155	169	655
11:00	155	172	178	176	681
12:00	172	195	159	192	718
13:00	152	164	183	199	698
14:00	186	171	198	159	714
15:00	194	171	189	195	749
16:00	201	209	220	225	855
17:00	214	236	207	195	852
18:00	183	161	135	126	605
19:00	116	97	96	77	386
20:00	69	67	66	64	266
21:00	58	67	41	49	215
22:00	33	45	24	17	119
23:00	13	15	8	15	51
				ADT =	10153

Tuesday, June 17, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	6	5	11	8	30
1:00	9	8	7	2	26
2:00	5	3	2	7	17
3:00	2	2	2	1	7
4:00	8	5	3	17	33
5:00	11	21	21	35	88
6:00	64	69	87	105	325
7:00	139	171	191	186	687
8:00	197	193	214	198	802
9:00	176	207	187	163	733
10:00	175	150	148	171	644
11:00	181	175	162	161	679
12:00	184	157	193	198	732
13:00	150	193	167	176	686
14:00	204	158	196	175	733
15:00	182	185	183	193	743
16:00	214	210	223	230	877
17:00	228	216	207	207	858
18:00	194	184	156	140	674
19:00	109	121	106	88	424
20:00	88	65	74	67	294
21:00	69	65	51	47	232
22:00	42	35	29	28	134
23:00	23	17	13	10	63
				ADT =	10521

Wednesday, June 18, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	11	8	4	5	28
1:00	4	0	1	2	7
2:00	2	5	6	1	14
3:00	3	3	4	3	13
4:00	8	10	9	12	39
5:00	10	16	19	30	75
6:00	64	68	91	89	312
7:00	127	176	204	175	682
8:00	210	192	194	166	762
9:00	179	167	174	175	695
10:00	156	157	187	199	699
11:00	175	190	176	186	727
12:00	186	180	188	174	728
13:00	171	202	168	194	735
14:00	185	199	182	213	779
15:00	203	166	202	238	809
16:00	238	183	198	242	861
17:00	181	219	220	214	834
18:00	206	149	162	113	630
19:00	120	110	97	85	412
20:00	117	78	94	79	368
21:00	71	70	75	55	271
22:00	52	39	25	21	137
23:00	11	14	25	10	60
				ADT =	10677

VPD Summary		CVMP
Date	VPD	Threshold
6/15/2014	8277	11600
6/16/2014	10153	11600
6/17/2014	10521	11600
6/18/2014	10677	11600
6/19/2014	10792	11600
6/20/2014	11432	11600
6/21/2014	10775	11600

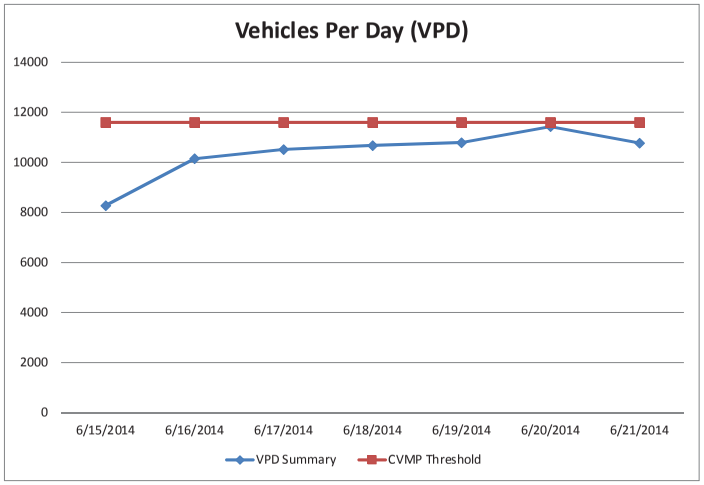
ADT (3 Day) = 10663
ADT (5 Day) = 10715
ADT (7 Day) = 10375

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
6/15/2014	667	0.91	765	0.97
6/16/2014	770	0.95	895	0.95
6/17/2014	802	0.94	897	0.98
6/18/2014	781	0.93	862	0.89
6/19/2014	772	0.91	887	0.99
6/20/2014	803	0.92	917	0.96
6/21/2014	845	0.95	**949**	**0.93**

Thursday, June 19, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	10	9	5	4	28
1:00	5	2	0	5	12
2:00	1	0	4	1	6
3:00	5	2	1	2	10
4:00	3	6	4	16	29
5:00	10	15	19	30	74
6:00	66	60	76	105	307
7:00	126	174	189	188	677
8:00	174	191	212	195	772
9:00	174	154	188	152	668
10:00	172	155	197	158	682
11:00	176	174	190	211	751
12:00	218	160	222	193	793
13:00	193	197	180	181	751
14:00	201	178	179	196	754
15:00	174	210	219	225	828
16:00	224	219	205	242	890
17:00	271	214	203	222	910
18:00	203	150	136	137	626
19:00	132	95	109	104	440
20:00	85	81	92	83	341
21:00	62	65	68	56	251
22:00	54	31	22	20	127
23:00	22	20	12	11	65
				ADT =	10792

Friday, June 20, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	15	9	4	4	32
1:00	2	4	3	2	11
2:00	6	3	3	6	18
3:00	0	3	2	4	9
4:00	6	8	7	15	36
5:00	13	16	20	35	84
6:00	58	59	76	95	288
7:00	109	164	181	188	642
8:00	175	218	214	192	799
9:00	179	150	175	182	686
10:00	177	160	169	162	668
11:00	153	163	184	186	686
12:00	235	199	209	215	858
13:00	196	225	197	186	804
14:00	199	197	203	203	802
15:00	214	228	225	240	907
16:00	225	223	240	220	908
17:00	227	230	213	228	898
18:00	213	180	155	175	723
19:00	154	140	115	115	524
20:00	107	105	87	83	382
21:00	74	88	72	101	335
22:00	62	50	51	55	218
23:00	30	47	18	19	114
				ADT =	11432

Saturday, June 21, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	20	14	10	10	54
1:00	6	5	8	3	22
2:00	3	2	2	8	15
3:00	8	5	4	5	22
4:00	5	4	6	4	19
5:00	5	13	9	21	48
6:00	35	32	54	52	173
7:00	53	71	87	108	319
8:00	108	113	138	133	492
9:00	143	164	171	167	645
10:00	162	169	175	194	700
11:00	211	222	194	218	845
12:00	231	245	229	217	922
13:00	243	240	230	236	949
14:00	214	228	231	242	915
15:00	224	223	224	256	927
16:00	237	232	217	197	883
17:00	204	235	191	165	795
18:00	185	180	158	123	646
19:00	100	113	85	79	377
20:00	91	81	91	88	351
21:00	90	76	63	71	300
22:00	64	56	65	40	225
23:00	35	37	31	28	131
				ADT =	10775



Carmel Valley Road
Segment 4 - Ford Road to Laureles Grade
Count Location No. 238 - East of Boronda Road
Dates: 6/15/2014 to 6/21/2014
Sheet 2 of 2

Sunday, June 15, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	16	8	11	7	42	9	11	10	7	37
1:00	4	4	5	5	18	5	13	8	7	33
2:00	6	4	3	0	13	4	3	2	5	14
3:00	1	5	1	1	8	1	1	3	1	6
4:00	3	1	2	2	8	1	1	2	0	4
5:00	2	1	1	3	7	8	4	7	3	22
6:00	6	8	4	10	28	8	16	26	24	74
7:00	17	17	13	25	72	30	22	37	42	131
8:00	25	32	39	58	154	29	56	53	71	209
9:00	45	33	49	43	170	53	92	63	91	299
10:00	53	65	86	79	283	100	96	83	64	343
11:00	88	76	77	95	336	95	78	83	75	331
12:00	100	90	91	108	389	98	103	99	76	376
13:00	91	110	103	94	398	84	76	75	73	308
14:00	93	76	91	83	343	80	87	85	92	344
15:00	87	77	83	79	326	97	95	108	88	388
16:00	92	89	83	78	342	74	112	77	92	355
17:00	81	75	57	72	285	90	90	53	70	303
18:00	60	56	51	73	240	49	47	60	40	196
19:00	50	44	42	54	190	49	35	41	33	158
20:00	44	47	38	37	166	26	42	27	21	116
21:00	52	39	22	20	133	34	20	28	17	99
22:00	21	21	22	18	82	13	12	7	4	36
23:00	14	9	5	10	38	7	2	5	10	24

Monday, June 16, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	8	2	3	20	0	2	4	1	7
1:00	4	3	3	9	19	4	0	0	1	5
2:00	0	1	3	1	5	0	2	0	3	5
3:00	2	1	1	2	6	0	2	2	0	4
4:00	0	2	2	2	6	2	5	7	6	20
5:00	1	3	9	9	22	11	13	18	24	66
6:00	27	33	29	34	123	30	34	50	68	182
7:00	44	47	39	59	189	84	114	147	143	488
8:00	48	80	68	75	271	122	118	132	98	470
9:00	68	78	56	73	275	98	119	93	96	406
10:00	76	70	57	81	284	96	89	98	88	371
11:00	65	88	87	74	314	90	84	91	102	367
12:00	96	98	81	92	367	76	97	78	100	351
13:00	74	94	84	104	356	78	70	99	95	342
14:00	94	80	89	84	347	92	91	109	75	367
15:00	101	83	96	115	395	93	88	93	80	354
16:00	113	123	128	128	492	88	86	92	97	363
17:00	105	142	117	131	495	109	94	90	64	357
18:00	121	112	91	79	403	62	49	44	47	202
19:00	78	60	61	58	257	38	37	35	19	129
20:00	51	49	45	44	189	18	18	21	20	77
21:00	32	40	23	30	125	26	27	18	19	90
22:00	23	35	15	13	86	10	10	9	4	33
23:00	7	11	4	8	30	6	4	4	7	21

Tuesday, June 17, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	4	4	5	4	17	2	1	6	4	13
1:00	8	3	5	2	18	1	5	2	0	8
2:00	2	1	2	1	6	3	2	0	6	11
3:00	1	1	0	1	3	1	1	2	0	4
4:00	4	1	0	5	10	4	4	3	12	23
5:00	2	6	9	8	25	9	15	12	27	63
6:00	28	33	41	45	147	36	36	46	60	178
7:00	38	52	50	55	195	101	119	141	131	492
8:00	74	73	56	86	289	123	120	158	112	513
9:00	63	85	69	73	290	113	122	118	90	443
10:00	76	64	63	75	278	99	86	85	96	366
11:00	68	72	65	72	277	113	103	97	89	402
12:00	90	83	113	104	390	94	74	80	94	342
13:00	76	84	86	82	328	74	109	81	94	358
14:00	91	78	121	96	386	113	80	75	79	347
15:00	93	86	96	93	368	89	99	87	100	375
16:00	103	112	118	155	488	111	98	105	75	389
17:00	122	124	128	131	505	106	92	79	76	353
18:00	127	112	113	90	442	67	72	43	50	232
19:00	78	75	79	54	286	31	46	27	34	138
20:00	66	38	40	49	193	22	27	34	18	101
21:00	48	54	31	32	165	21	11	20	15	67
22:00	33	16	16	16	81	9	19	13	12	53
23:00	16	11	8	8	43	7	6	5	2	20

Wednesday, June 18, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	10	6	4	3	23	1	2	0	2	5
1:00	3	0	0	1	4	1	0	1	1	3
2:00	2	3	5	1	11	0	2	1	0	3
3:00	0	1	2	0	3	3	2	2	3	10
4:00	2	2	2	1	7	6	8	7	11	32
5:00	2	6	4	8	20	8	10	15	22	55
6:00	32	29	47	42	150	32	39	44	47	162
7:00	33	65	50	49	197	94	111	154	126	485
8:00	66	67	63	53	249	144	125	131	113	513
9:00	80	70	75	75	300	99	97	99	100	395
10:00	68	55	85	69	277	88	102	102	130	422
11:00	80	92	70	108	350	95	98	106	78	377
12:00	96	97	87	93	373	90	83	101	81	355
13:00	79	92	89	90	350	92	110	79	104	385
14:00	103	101	91	117	412	82	98	91	96	367
15:00	105	89	111	128	433	98	77	91	110	376
16:00	113	108	110	133	464	125	75	88	109	397
17:00	95	133	128	152	508	86	86	92	62	326
18:00	127	93	103	80	403	79	56	59	33	227
19:00	70	76	60	56	262	50	34	37	29	150
20:00	83	54	50	45	232	34	24	44	34	136
21:00	41	49	47	35	172	30	21	28	20	99
22:00	36	28	15	16	95	16	11	10	5	42
23:00	7	11	17	7	42	4	3	8	3	18

Thursday, June 19, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	8	8	2	3	21	2	1	3	1	7
1:00	2	2	0	4	8	3	0	0	1	4
2:00	0	0	0	1	1	1	0	4	0	5
3:00	4	1	1	1	7	1	1	0	1	3
4:00	2	2	0	6	10	1	4	4	10	19
5:00	0	4	6	7	17	10	11	13	23	57
6:00	25	28	31	40	124	41	32	45	65	183
7:00	49	60	43	68	220	77	114	146	120	457
8:00	65	67	59	78	269	109	124	153	117	503
9:00	61	52	79	69	261	113	102	109	83	407
10:00	77	65	88	73	303	95	90	109	85	379
11:00	90	86	81	93	350	86	88	109	118	401
12:00	106	73	135	107	421	112	87	87	86	372
13:00	78	97	92	93	360	115	100	88	88	391
14:00	103	100	92	86	381	98	78	87	110	373
15:00	84	110	117	112	423	90	100	102	113	405
16:00	119	118	115	158	510	105	101	90	84	380
17:00	150	122	116	142	530	121	92	87	80	380
18:00	134	97	82	97	410	69	53	54	40	216
19:00	84	63	67	72	286	48	32	42	32	154
20:00	58	50	50	44	202	27	31	42	39	139
21:00	36	39	46	35	156	26	26	22	21	95
22:00	43	17	14	17	91	11	14	8	3	36
23:00	16	15	9	7	47	6	5	3	4	18

Friday, June 20, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	11	5	2	2	20	4	4	2	2	12
1:00	2	2	1	2	7	0	2	2	0	4
2:00	3	2	2	2	9	3	1	1	4	9
3:00	0	3	0	3	6	0	0	2	1	3
4:00	1	2	1	4	8	5	6	6	11	28
5:00	2	5	7	9	23	11	11	13	26	61
6:00	31	27	31	44	133	27	32	45	51	155
7:00	35	59	50	67	211	74	105	131	121	431
8:00	52	97	72	61	282	123	121	142	131	517
9:00	52	59	59	88	258	127	91	116	94	428
10:00	72	78	68	87	305	105	82	101	75	363
11:00	75	77	89	86	327	78	86	95	100	359
12:00	126	105	103	111	445	109	94	106	104	413
13:00	94	109	103	105	411	102	116	94	81	393
14:00	116	114	101	103	434	83	83	102	100	368
15:00	105	121	115	121	462	109	107	110	119	445
16:00	115	122	135	128	500	110	101	105	92	408
17:00	129	135	120	150	534	98	95	93	78	364
18:00	123	113	95	106	437	90	67	60	69	286
19:00	104	92	72	64	332	50	48	43	51	192
20:00	60	70	57	53	240	47	35	30	30	142
21:00	52	46	43	53	194	22	42	29	48	141
22:00	36	36	25	31	128	26	14	26	24	90
23:00	16	25	9	15	65	14	22	9	4	49

Saturday, June 21, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	5	7	8	27	13	9	3	2	27
1:00	4	3	4	3	14	2	2	4	0	8
2:00	2	2	2	4	10	1	0	0	4	5
3:00	6	3	1	2	12	2	2	3	3	10
4:00	3	1	3	0	7	2	3	3	4	12
5:00	2	6	2	8	18	3	7	7	13	30
6:00	18	15	27	26	86	17	17	27	26	87
7:00	25	40	40	57	162	28	31	47	51	157
8:00	52	52	53	61	218	56	61	85	72	274
9:00	61	74	63	77	275	82	90	108	90	370
10:00	69	65	82	92	308	93	104	93	102	392
11:00	112	121	109	125	467	99	101	85	93	378
12:00	143	152	134	123	552	88	93	95	94	370
13:00	144	119	118	140	521	99	121	112	96	428
14:00	123	119	108	119	469	91	109	123	123	446
15:00	122	99	103	125	449	102	124	121	131	478
16:00	102	119	89	103	413	135	113	128	94	470
17:00	106	105	87	86	384	98	130	104	79	411
18:00	103	118	67	68	356	82	62	91	55	290
19:00	53	54	40	44	191	47	59	45	35	186
20:00	46	42	42	41	171	45	39	49	47	180
21:00	41	39	34	38	152	49	37	29	33	148
22:00	33	28	30	28	119	31	28	35	12	106
23:00	18	18	19	22	77	17	19	12	6	54

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 5 - Laureles Grade to Robinson Canyon Road
Count Location No. 193 - west of Rancho Fiesta Road
Dates: 6/15/2014 to 6/21/2014
Sheet 1 of 2

Sunday, June 15, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
13:00					
14:00					
15:00					
16:00					
17:00					
18:00					
19:00					
20:00					
21:00					
22:00					
23:00					
				ADT =	

Monday, June 16, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
13:00					
14:00					
15:00					
16:00					
17:00					
18:00					
19:00					
20:00					
21:00					
22:00					
23:00					
				ADT =	

Tuesday, June 17, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	7	6	7	7	27
1:00	6	9	10	2	27
2:00	2	1	4	1	8
3:00	1	1	1	3	6
4:00	5	3	3	11	22
5:00	15	13	28	35	91
6:00	41	61	77	114	293
7:00	132	143	182	189	646
8:00	182	199	207	217	805
9:00	168	193	174	182	717
10:00	193	160	176	162	691
11:00	190	173	195	170	728
12:00	186	184	199	197	766
13:00	170	192	183	177	722
14:00	222	200	183	211	816
15:00	175	215	181	209	780
16:00	225	237	267	225	954
17:00	259	243	229	193	924
18:00	181	190	161	142	674
19:00	125	108	93	98	424
20:00	81	86	81	70	318
21:00	71	61	59	44	235
22:00	50	30	31	26	137
23:00	20	15	9	15	59
				ADT =	10870

Wednesday, June 18, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	10	3	3	2	18
1:00	4	0	0	3	7
2:00	1	4	4	1	10
3:00	1	1	3	3	8
4:00	2	4	8	11	25
5:00	13	12	30	37	92
6:00	38	65	83	89	275
7:00	135	154	181	193	663
8:00	220	190	200	187	797
9:00	218	192	199	167	776
10:00	162	158	177	201	698
11:00	172	210	193	198	773
12:00	176	167	205	162	710
13:00	167	184	197	190	738
14:00	191	214	214	201	820
15:00	202	230	216	226	874
16:00	221	230	234	268	953
17:00	218	220	236	219	893
18:00	197	181	142	119	639
19:00	114	102	88	87	391
20:00	94	98	101	95	388
21:00	76	71	63	63	273
22:00	51	42	24	21	138
23:00	17	13	20	12	62
				ADT =	11021

VPD Summary		CVMP
Date	VPD	Threshold
6/15/2014		12752
6/16/2014		12752
6/17/2014	10870	12752
6/18/2014	11021	12752
6/19/2014	11191	12752
6/20/2014		12752
6/21/2014		12752

ADT (3 Day) = 11027
ADT (5 Day) = -
ADT (7 Day) = -

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
6/15/2014				
6/16/2014				
6/17/2014	805	0.93	994	0.93
6/18/2014	803	0.91	953	0.89
6/19/2014	788	0.93	**1022**	**0.96**
6/20/2014				
6/21/2014				

Thursday, June 19, 2014

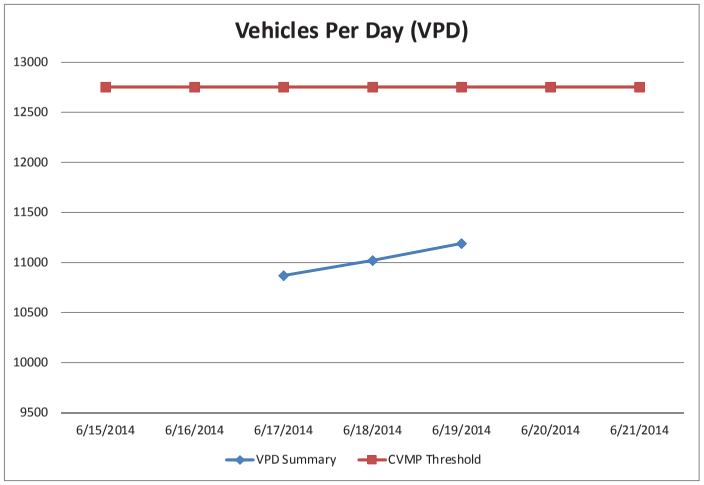
Hour	00-15	15-30	30-45	45-00	Total
0:00	19	8	8	3	38
1:00	5	4	2	3	14
2:00	2	1	1	0	4
3:00	4	0	2	1	7
4:00	2	3	3	15	23
5:00	11	12	23	32	78
6:00	52	47	85	96	280
7:00	134	149	193	185	661
8:00	168	175	212	218	773
9:00	176	182	197	171	726
10:00	184	157	196	176	713
11:00	197	172	186	214	769
12:00	176	198	218	189	781
13:00	185	206	221	170	782
14:00	214	211	196	199	820
15:00	189	213	222	240	864
16:00	222	249	259	233	963
17:00	267	263	241	235	1006
18:00	203	164	131	145	643
19:00	136	100	103	88	427
20:00	101	90	88	69	348
21:00	55	76	70	68	269
22:00	45	28	33	26	132
23:00	24	23	13	10	70
				ADT =	11191

Friday, June 20, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
13:00					
14:00					
15:00					
16:00					
17:00					
18:00					
19:00					
20:00					
21:00					
22:00					
23:00					
				ADT =	

Saturday, June 21, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
13:00					
14:00					
15:00					
16:00					
17:00					
18:00					
19:00					
20:00					
21:00					
22:00					
23:00					
				ADT =	



Carmel Valley Road
Segment 5 - Laureles Grade to Robinson Canyon Road
Count Location No. 193 - west of Rancho Fiesta Road
Dates: 6/15/2014 to 6/21/2014
Sheet 2 of 2

Sunday, June 15, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00										
1:00										
2:00										
3:00										
4:00										
5:00										
6:00										
7:00										
8:00										
9:00										
10:00										
11:00										
12:00										
13:00										
14:00										
15:00										
16:00										
17:00										
18:00										
19:00										
20:00										
21:00										
22:00										
23:00										

Monday, June 16, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00										
1:00										
2:00										
3:00										
4:00										
5:00										
6:00										
7:00										
8:00										
9:00										
10:00										
11:00										
12:00										
13:00										
14:00										
15:00										
16:00										
17:00										
18:00										
19:00										
20:00										
21:00										
22:00										
23:00										

Tuesday, June 17, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	5	1	4	17	0	1	6	3	10
1:00	5	4	6	1	16	1	5	4	1	11
2:00	1	0	3	0	4	1	1	1	1	4
3:00	1	0	0	2	3	0	1	1	1	3
4:00	2	2	1	4	9	3	1	2	7	13
5:00	3	2	10	5	20	12	11	18	30	71
6:00	11	20	12	38	81	30	41	65	76	212
7:00	26	32	36	69	163	106	111	146	120	483
8:00	59	57	48	79	243	123	142	159	138	562
9:00	58	68	51	79	256	110	125	123	103	461
10:00	77	63	89	68	297	116	97	87	94	394
11:00	82	66	78	80	306	108	107	117	90	422
12:00	102	93	121	109	425	84	91	78	88	341
13:00	85	96	101	101	383	85	96	82	76	339
14:00	102	108	107	122	439	120	92	76	89	377
15:00	92	112	115	118	437	83	103	66	91	343
16:00	127	149	182	143	601	98	88	85	82	353
17:00	172	169	152	133	626	87	74	77	60	298
18:00	118	124	114	97	453	63	66	47	45	221
19:00	80	70	65	60	275	45	38	28	38	149
20:00	59	56	48	50	213	22	30	33	20	105
21:00	52	47	40	35	174	19	14	19	9	61
22:00	37	22	20	17	96	13	8	11	9	41
23:00	16	12	6	13	47	4	3	3	2	12

Wednesday, June 18, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	5	2	1	1	9	5	1	2	1	9
1:00	3	0	0	2	5	1	0	0	1	2
2:00	1	4	4	1	10	0	0	0	0	0
3:00	0	0	0	3	3	1	1	3	0	5
4:00	0	1	3	2	6	2	3	5	9	19
5:00	4	2	5	13	24	9	10	25	24	68
6:00	13	28	16	26	83	25	37	67	63	192
7:00	33	50	45	49	177	102	104	136	144	486
8:00	65	61	49	53	228	155	129	151	134	569
9:00	95	83	76	67	321	123	109	123	100	455
10:00	77	71	78	65	291	85	87	99	136	407
11:00	78	91	79	91	339	94	119	114	107	434
12:00	92	87	114	92	385	84	80	91	70	325
13:00	83	97	101	83	364	84	87	96	107	374
14:00	107	111	120	112	450	84	103	94	89	370
15:00	96	139	140	133	508	106	91	76	93	366
16:00	131	158	155	179	623	90	72	79	89	330
17:00	132	162	154	161	609	86	58	82	58	284
18:00	119	131	98	82	430	78	50	44	37	209
19:00	78	64	55	59	256	36	38	33	28	135
20:00	67	63	51	46	227	27	35	50	49	161
21:00	45	52	45	47	189	31	19	18	16	84
22:00	34	25	17	19	95	17	17	7	2	43
23:00	12	9	15	7	43	5	4	5	5	19

Thursday, June 19, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	6	8	6	3	23	13	0	2	0	15
1:00	3	2	1	2	8	2	2	1	1	6
2:00	1	0	0	0	1	1	1	1	0	3
3:00	4	0	2	1	7	0	0	0	0	0
4:00	1	1	0	5	7	1	2	3	10	16
5:00	4	4	4	9	21	7	8	19	23	57
6:00	14	14	18	28	74	38	33	67	68	206
7:00	36	37	58	52	183	98	112	135	133	478
8:00	50	46	60	81	237	118	129	152	137	536
9:00	59	68	77	66	270	117	114	120	105	456
10:00	77	56	83	73	289	107	101	113	103	424
11:00	95	86	75	98	354	102	86	111	116	415
12:00	82	112	118	108	420	94	86	100	81	361
13:00	93	108	117	82	400	92	98	104	88	382
14:00	103	129	104	95	431	111	82	92	104	389
15:00	104	118	128	144	494	85	95	94	96	370
16:00	138	149	183	153	623	84	100	76	80	340
17:00	173	167	164	156	660	94	96	77	79	346
18:00	134	105	80	98	417	69	59	51	47	226
19:00	97	72	67	60	296	39	28	36	28	131
20:00	64	63	50	46	223	37	27	38	23	125
21:00	35	52	48	48	183	20	24	22	20	86
22:00	32	24	26	24	106	13	4	7	2	26
23:00	19	19	9	6	53	5	4	4	4	17

Friday, June 20, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00										
1:00										
2:00										
3:00										
4:00										
5:00										
6:00										
7:00										
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15:00										
16:00										
17:00										
18:00										
19:00										
20:00										
21:00										
22:00										
23:00										

Saturday, June 21, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00										
1:00										
2:00										
3:00										
4:00										
5:00										
6:00										
7:00										
8:00										
9:00										
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15:00										
16:00										
17:00										
18:00										
19:00										
20:00										
21:00										
22:00										
23:00										

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 6 - Robinson Canyon Road to Schulte Road
Count Location No. 235 - West of Loma Del Rey Road
Dates: 6/15/2014 to 6/21/2014
Sheet 1 of 2

Sunday, June 15, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	29	14	23	12	78
1:00	6	21	6	10	43
2:00	10	2	8	3	23
3:00	2	5	1	3	11
4:00	3	3	5	11	22
5:00	8	13	17	20	58
6:00	22	29	33	42	126
7:00	57	53	64	92	266
8:00	82	103	124	154	463
9:00	133	135	170	190	628
10:00	179	204	218	203	804
11:00	204	204	187	263	858
12:00	197	233	245	250	925
13:00	234	228	239	231	932
14:00	227	237	228	220	912
15:00	232	242	214	228	916
16:00	205	180	215	176	776
17:00	189	191	184	169	733
18:00	144	125	153	135	557
19:00	109	89	100	86	384
20:00	100	99	88	89	376
21:00	78	75	65	51	269
22:00	41	36	37	37	151
23:00	22	21	18	14	75
				ADT =	10386

Monday, June 16, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	13	8	2	7	30
1:00	7	4	6	5	22
2:00	0	3	2	0	5
3:00	3	7	3	3	16
4:00	2	1	8	14	25
5:00	13	23	30	42	108
6:00	47	68	100	110	325
7:00	116	170	215	240	741
8:00	208	241	258	293	1000
9:00	249	231	195	221	896
10:00	233	212	213	242	900
11:00	219	215	228	255	917
12:00	252	241	290	246	1029
13:00	245	230	220	263	958
14:00	254	216	264	252	986
15:00	232	243	286	243	1004
16:00	264	304	286	290	1144
17:00	287	280	285	242	1094
18:00	239	225	170	156	790
19:00	170	128	116	102	516
20:00	98	80	81	87	346
21:00	78	76	56	58	268
22:00	39	49	40	24	152
23:00	22	20	9	19	70
				ADT =	13342

Tuesday, June 17, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	12	8	4	14	38
1:00	7	9	6	2	24
2:00	1	3	4	2	10
3:00	3	0	4	5	12
4:00	5	6	6	9	26
5:00	14	23	35	43	115
6:00	37	68	92	125	322
7:00	135	174	202	270	781
8:00	217	273	262	320	1072
9:00	265	225	226	253	969
10:00	236	226	238	225	925
11:00	254	245	272	254	1025
12:00	237	262	217	268	984
13:00	238	232	230	232	932
14:00	271	253	278	257	1059
15:00	258	259	252	248	1017
16:00	284	285	304	305	1178
17:00	305	280	279	239	1103
18:00	227	224	215	179	845
19:00	147	145	131	128	551
20:00	101	112	101	95	409
21:00	91	68	77	62	298
22:00	66	44	35	29	174
23:00	23	25	16	19	83
				ADT =	13952

Wednesday, June 18, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	13	5	7	4	29
1:00	6	0	1	4	11
2:00	2	6	4	1	13
3:00	2	1	3	4	10
4:00	1	8	3	16	28
5:00	19	18	34	46	117
6:00	47	74	89	105	315
7:00	151	184	208	253	796
8:00	236	244	280	271	1031
9:00	259	253	253	209	974
10:00	215	204	204	276	899
11:00	235	249	251	276	1011
12:00	255	264	236	227	982
13:00	225	264	241	238	968
14:00	274	274	285	249	1082
15:00	266	257	305	286	1114
16:00	283	284	305	318	1190
17:00	278	264	310	288	1140
18:00	233	225	168	156	782
19:00	132	130	125	115	502
20:00	119	112	109	121	461
21:00	98	89	95	82	364
22:00	59	72	43	28	202
23:00	22	16	23	14	75
				ADT =	14096

VPD Summary		CVMP
Date	VPD	Threshold
6/15/2014	10386	15499
6/16/2014	13342	15499
6/17/2014	13952	15499
6/18/2014	14096	15499
6/19/2014	14204	15499
6/20/2014	14659	15499
6/21/2014	12861	15499

ADT (3 Day) = 14084
ADT (5 Day) = 14051
ADT (7 Day) = 13357

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
6/15/2014	858	0.82	962	0.96
6/16/2014	1041	0.89	1167	0.96
6/17/2014	1120	0.88	1199	0.98
6/18/2014	1063	0.95	1190	0.94
6/19/2014	1032	0.92	**1230**	**0.90**
6/20/2014	1063	0.89	1221	0.91
6/21/2014	1041	0.93	1113	0.97

Thursday, June 19, 2014

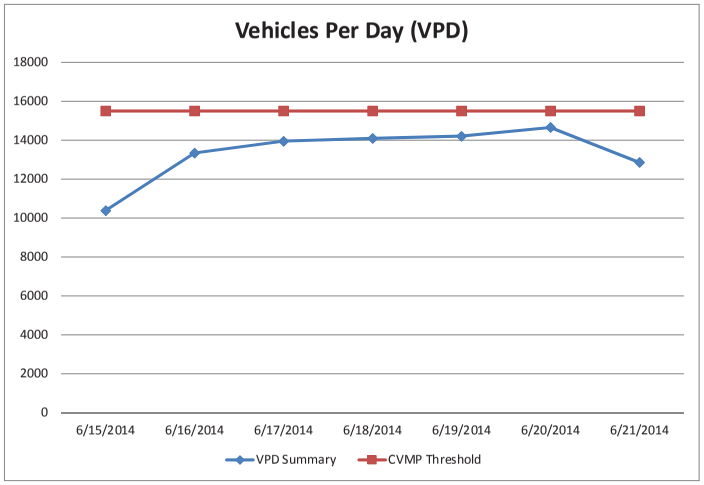
Hour	00-15	15-30	30-45	45-00	Total
0:00	17	13	13	4	47
1:00	4	6	5	1	16
2:00	3	1	2	1	7
3:00	5	2	2	2	11
4:00	4	4	5	13	26
5:00	22	13	32	34	101
6:00	60	57	90	121	328
7:00	124	178	211	241	754
8:00	221	254	271	280	1026
9:00	227	263	259	223	972
10:00	212	230	257	235	934
11:00	258	232	235	281	1006
12:00	276	257	277	242	1052
13:00	238	273	262	234	1007
14:00	234	269	254	232	989
15:00	273	277	291	263	1104
16:00	317	264	329	280	1190
17:00	275	332	343	251	1201
18:00	239	196	179	187	801
19:00	180	120	120	123	543
20:00	127	122	119	97	465
21:00	81	95	89	75	340
22:00	57	47	47	37	188
23:00	30	37	12	17	96
				ADT =	14204

Friday, June 20, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	12	14	11	8	45
1:00	7	7	6	8	28
2:00	1	6	2	5	14
3:00	1	1	3	2	7
4:00	3	3	6	13	25
5:00	15	16	31	44	106
6:00	56	51	83	104	294
7:00	119	154	221	226	720
8:00	231	231	291	300	1053
9:00	241	226	234	256	957
10:00	232	255	213	251	951
11:00	223	229	280	245	977
12:00	272	278	268	269	1087
13:00	268	264	286	261	1079
14:00	265	275	279	276	1095
15:00	279	316	296	314	1205
16:00	314	304	336	267	1221
17:00	278	290	296	239	1103
18:00	245	233	191	199	868
19:00	153	126	135	147	561
20:00	128	93	111	106	438
21:00	106	101	95	84	386
22:00	85	73	54	66	278
23:00	52	54	26	29	161
				ADT =	14659

Saturday, June 21, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	20	16	18	6	60
1:00	14	10	9	7	40
2:00	3	2	4	11	20
3:00	5	8	3	8	24
4:00	4	5	3	10	22
5:00	7	16	17	29	69
6:00	34	29	53	44	160
7:00	68	81	98	128	375
8:00	113	142	167	193	615
9:00	164	212	186	201	763
10:00	193	224	221	226	864
11:00	229	271	262	279	1041
12:00	295	259	265	268	1087
13:00	246	274	276	285	1081
14:00	247	283	282	251	1063
15:00	260	279	288	281	1108
16:00	265	263	250	246	1024
17:00	238	204	226	217	885
18:00	205	222	164	159	750
19:00	122	120	105	86	433
20:00	107	88	119	115	429
21:00	141	107	90	93	431
22:00	108	77	65	68	318
23:00	54	65	40	40	199
				ADT =	12861



Carmel Valley Road
Segment 6 - Robinson Canyon Road to Schulte Road
Count Location No. 235 - West of Loma Del Rey Road
Dates: 6/15/2014 to 6/21/2014
Sheet 2 of 2

Sunday, June 15, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	17	7	13	5	42	12	7	10	7	36
1:00	3	9	5	3	20	3	12	1	7	23
2:00	8	2	4	1	15	2	0	4	2	8
3:00	2	3	1	2	8	0	2	0	1	3
4:00	2	2	3	7	14	1	1	2	4	8
5:00	4	8	9	8	29	4	5	8	12	29
6:00	6	12	10	21	49	16	17	23	21	77
7:00	20	28	24	46	118	37	25	40	46	148
8:00	48	50	56	69	223	34	53	68	85	240
9:00	51	53	70	76	250	82	82	100	114	378
10:00	75	96	89	114	374	104	108	129	89	430
11:00	96	91	106	121	414	108	113	81	142	444
12:00	84	119	125	126	454	113	114	120	124	471
13:00	121	118	126	116	481	113	110	113	115	451
14:00	128	133	117	118	496	99	104	111	102	416
15:00	98	122	108	99	427	134	120	106	129	489
16:00	100	84	102	92	378	105	96	113	84	398
17:00	87	84	81	88	340	102	107	103	81	393
18:00	59	58	86	78	281	85	67	67	57	276
19:00	51	48	60	46	205	58	41	40	40	179
20:00	54	58	44	62	218	46	41	44	27	158
21:00	51	46	31	37	165	27	29	34	14	104
22:00	28	26	25	24	103	13	10	12	13	48
23:00	10	11	14	7	42	12	10	4	7	33

Monday, June 16, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	7	2	2	18	6	1	0	5	12
1:00	4	3	5	3	15	3	1	1	2	7
2:00	0	3	2	0	5	0	0	0	0	0
3:00	2	4	0	2	8	1	3	3	1	8
4:00	2	1	1	7	11	0	0	7	7	14
5:00	5	7	15	12	39	8	16	15	30	69
6:00	19	26	33	29	107	28	42	67	81	218
7:00	31	49	56	71	207	85	121	159	169	534
8:00	83	78	104	98	363	125	163	154	195	637
9:00	102	91	63	93	349	147	140	132	128	547
10:00	100	97	83	87	367	133	115	130	155	533
11:00	105	95	106	106	412	114	120	122	149	505
12:00	133	127	145	118	523	119	114	145	128	506
13:00	125	132	123	116	496	120	98	97	147	462
14:00	137	114	136	122	509	117	102	128	130	477
15:00	131	141	177	151	600	101	102	109	92	404
16:00	164	184	176	187	711	100	120	110	103	433
17:00	171	185	194	155	705	116	95	91	87	389
18:00	160	147	100	96	503	79	78	70	60	287
19:00	103	83	75	78	339	67	45	41	24	177
20:00	63	57	55	63	238	35	23	26	24	108
21:00	46	46	30	33	155	32	30	26	25	113
22:00	23	34	22	18	97	16	15	18	6	55
23:00	14	8	9	10	41	8	12	0	9	29

Tuesday, June 17, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	5	2	4	18	5	3	2	10	20
1:00	6	6	5	1	18	1	3	1	1	6
2:00	0	2	4	0	6	1	1	0	2	4
3:00	2	0	0	3	5	1	0	4	2	7
4:00	2	4	3	5	14	3	2	3	4	12
5:00	3	8	16	13	40	11	15	19	30	75
6:00	18	29	26	39	112	19	39	66	86	210
7:00	40	41	61	99	241	95	133	141	171	540
8:00	100	98	69	126	393	117	175	193	194	679
9:00	109	71	80	86	346	156	154	146	167	623
10:00	110	95	110	97	412	126	131	128	128	513
11:00	97	105	124	105	431	157	140	148	149	594
12:00	122	139	122	135	518	115	123	95	133	466
13:00	115	120	120	120	475	123	112	110	112	457
14:00	142	130	149	139	560	129	123	129	118	499
15:00	140	137	135	138	550	118	122	117	110	467
16:00	151	171	187	166	675	133	114	117	139	503
17:00	190	175	171	155	691	115	105	108	84	412
18:00	155	143	149	122	569	72	81	66	57	276
19:00	93	90	88	88	359	54	55	43	40	192
20:00	71	72	73	64	280	30	40	28	31	129
21:00	65	53	56	42	216	26	15	21	20	82
22:00	50	28	24	15	117	16	16	11	14	57
23:00	15	17	8	14	54	8	8	8	5	29

Wednesday, June 18, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	5	2	4	3	14	8	3	3	1	15
1:00	4	0	0	3	7	2	0	1	1	4
2:00	2	5	4	1	12	0	1	0	0	1
3:00	2	0	0	4	6	0	1	3	0	4
4:00	0	1	2	9	12	1	7	1	7	16
5:00	6	9	12	21	48	13	9	22	25	69
6:00	21	31	30	44	126	26	43	59	61	189
7:00	48	61	67	74	250	103	123	141	179	546
8:00	98	93	93	89	373	138	151	187	182	658
9:00	110	95	101	90	396	149	158	152	119	578
10:00	75	85	87	108	355	140	119	117	168	544
11:00	113	118	113	126	470	122	131	138	150	541
12:00	124	123	120	116	483	131	141	116	111	499
13:00	126	139	122	129	516	99	125	119	109	452
14:00	137	128	132	140	537	137	146	153	109	545
15:00	135	145	186	161	627	131	112	119	125	487
16:00	141	165	189	192	687	142	119	116	126	503
17:00	164	187	185	190	726	114	77	125	98	414
18:00	139	146	107	103	495	94	79	61	53	287
19:00	85	85	71	77	318	47	45	54	38	184
20:00	89	76	62	71	298	30	36	47	50	163
21:00	65	62	63	55	245	33	27	32	27	119
22:00	40	49	24	21	134	19	23	19	7	68
23:00	14	11	14	8	47	8	5	9	6	28

Thursday, June 19, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	6	7	9	3	25	11	6	4	1	22
1:00	3	4	4	1	12	1	2	1	0	4
2:00	1	1	1	1	4	2	0	1	0	3
3:00	4	1	1	2	8	1	1	1	0	3
4:00	3	1	1	5	10	1	3	4	8	16
5:00	5	7	16	16	44	17	6	16	18	57
6:00	20	18	31	45	114	40	39	59	76	214
7:00	39	44	74	79	236	85	134	137	162	518
8:00	86	94	99	96	375	135	160	172	184	651
9:00	87	84	111	86	368	140	179	148	137	604
10:00	97	99	118	103	417	115	131	139	132	517
11:00	125	115	96	126	462	133	117	139	155	544
12:00	134	128	145	131	538	142	129	132	111	514
13:00	122	147	140	110	519	116	126	122	124	488
14:00	122	149	131	115	517	112	120	123	117	472
15:00	142	147	161	152	602	131	130	130	111	502
16:00	184	154	199	185	722	133	110	130	95	468
17:00	191	201	221	157	770	84	131	122	94	431
18:00	148	127	111	126	512	91	69	68	61	289
19:00	100	77	90	83	350	80	43	30	40	193
20:00	81	81	72	60	294	46	41	47	37	171
21:00	54	57	64	47	222	27	38	25	28	118
22:00	37	31	34	28	130	20	16	13	9	58
23:00	18	27	7	10	62	12	10	5	7	34

Friday, June 20, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	5	5	7	24	5	9	6	1	21
1:00	2	4	2	7	15	5	3	4	1	13
2:00	0	4	1	2	7	1	2	1	3	7
3:00	0	1	2	1	4	1	0	1	1	3
4:00	2	2	4	8	16	1	1	2	5	9
5:00	5	11	13	18	47	10	5	18	26	59
6:00	21	18	27	37	103	35	33	56	67	191
7:00	42	51	72	84	249	77	103	149	142	471
8:00	95	103	101	114	413	136	128	190	186	640
9:00	79	86	82	110	357	162	140	152	146	600
10:00	94	109	97	107	407	138	146	116	144	544
11:00	87	109	119	103	418	136	120	161	142	559
12:00	143	140	150	132	565	129	138	118	137	522
13:00	134	121	144	128	527	134	143	142	133	552
14:00	152	175	151	136	614	113	100	128	140	481
15:00	141	184	159	184	668	138	132	137	130	537
16:00	179	185	226	156	746	135	119	110	111	475
17:00	155	191	178	146	670	123	99	118	93	433
18:00	149	146	111	124	530	96	87	80	75	338
19:00	99	70	90	96	355	54	56	45	51	206
20:00	80	61	75	72	288	48	32	36	34	150
21:00	77	65	52	55	249	29	36	43	29	137
22:00	46	44	39	41	170	39	29	15	25	108
23:00	22	27	12	15	76	30	27	14	14	85

Saturday, June 21, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	12	8	13	4	37	8	8	5	2	23
1:00	5	7	5	6	23	9	3	4	1	17
2:00	2	2	2	8	14	1	0	2	3	6
3:00	1	4	2	3	10	4	4	1	5	14
4:00	4	3	0	6	13	0	2	3	4	9
5:00	1	8	6	15	30	6	8	11	14	39
6:00	15	9	29	19	72	19	20	24	25	88
7:00	16	38	38	61	153	52	43	60	67	222
8:00	63	64	82	92	301	50	78	85	101	314
9:00	66	84	76	89	315	98	128	110	112	448
10:00	84	91	108	106	389	109	133	113	120	475
11:00	111	137	131	140	519	118	134	131	139	522
12:00	162	128	139	136	565	133	131	126	132	522
13:00	126	140	144	163	573	120	134	132	122	508
14:00	136	148	139	128	551	111	135	143	123	512
15:00	131	150	158	143	582	129	129	130	138	526
16:00	136	125	108	130	499	129	138	142	116	525
17:00	108	99	120	108	435	130	105	106	109	450
18:00	109	135	87	87	418	96	87	77	72	332
19:00	64	56	53	53	226	58	64	52	33	207
20:00	58	47	71	60	236	49	41	48	55	193
21:00	68	58	44	50	220	73	49	46	43	211
22:00	56	44	44	39	183	52	33	21	29	135
23:00	31	34	27	23	115	23	31	13	17	84

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 7 - Schulte Road to Rancho San Carlos Road
Count Location No. 192 - West of Carmel Meadows Road
Dates: 6/15/2014 to 6/21/2014
Sheet 1 of 2

Sunday, June 15, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	31	22	29	15	97
1:00	8	25	9	10	52
2:00	12	5	5	5	27
3:00	2	6	1	3	12
4:00	4	3	5	15	27
5:00	9	15	19	20	63
6:00	23	36	34	52	145
7:00	60	55	62	104	281
8:00	87	105	139	160	491
9:00	153	146	191	211	701
10:00	192	236	243	229	900
11:00	199	239	208	286	932
12:00	223	274	303	254	1054
13:00	272	251	242	258	1023
14:00	249	254	260	243	1006
15:00	228	273	216	246	963
16:00	218	176	235	195	824
17:00	203	210	203	166	782
18:00	158	137	167	153	615
19:00	116	103	107	93	419
20:00	131	100	96	97	424
21:00	83	75	69	59	286
22:00	46	38	44	42	170
23:00	24	20	19	22	85
				ADT =	11379

Monday, June 16, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	19	11	5	7	42
1:00	6	6	7	9	28
2:00	1	2	3	0	6
3:00	5	6	5	4	20
4:00	6	1	13	15	35
5:00	12	29	32	50	123
6:00	48	74	111	125	358
7:00	110	197	226	270	803
8:00	241	253	283	323	1100
9:00	275	250	238	237	1000
10:00	259	229	236	249	973
11:00	261	233	261	271	1026
12:00	272	280	310	287	1149
13:00	254	258	251	283	1046
14:00	270	253	280	282	1085
15:00	240	293	330	274	1137
16:00	289	327	312	312	1240
17:00	327	335	305	264	1231
18:00	252	249	184	170	855
19:00	175	130	144	116	565
20:00	124	95	79	103	401
21:00	87	80	63	66	296
22:00	46	53	42	29	170
23:00	20	22	13	19	74
				ADT =	14763

Tuesday, June 17, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	22	10	7	13	52
1:00	8	10	5	2	25
2:00	2	3	5	3	13
3:00	3	0	5	5	13
4:00	9	5	10	8	32
5:00	16	28	42	53	139
6:00	41	74	99	135	349
7:00	152	187	213	329	881
8:00	248	272	291	331	1142
9:00	287	245	264	285	1081
10:00	237	239	266	247	989
11:00	272	269	279	274	1094
12:00	256	315	224	282	1077
13:00	259	268	254	261	1042
14:00	291	295	283	292	1161
15:00	292	286	295	272	1145
16:00	299	337	307	328	1271
17:00	330	290	305	270	1195
18:00	228	236	240	207	911
19:00	147	160	156	135	598
20:00	121	123	121	103	468
21:00	100	82	78	64	324
22:00	61	54	34	32	181
23:00	24	26	16	26	92
				ADT =	15275

Wednesday, June 18, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	18	6	10	7	41
1:00	8	1	2	3	14
2:00	3	5	4	1	13
3:00	2	1	2	6	11
4:00	2	8	4	22	36
5:00	23	24	41	50	138
6:00	45	79	111	115	350
7:00	149	201	229	297	876
8:00	248	267	291	306	1112
9:00	291	285	268	258	1102
10:00	245	227	219	301	992
11:00	270	291	272	306	1139
12:00	293	275	267	235	1070
13:00	245	281	250	261	1037
14:00	313	286	314	279	1192
15:00	299	305	346	313	1263
16:00	320	319	331	332	1302
17:00	321	284	345	283	1233
18:00	279	233	183	183	878
19:00	169	132	151	130	582
20:00	144	118	120	129	511
21:00	106	87	97	89	379
22:00	66	64	48	31	209
23:00	22	20	27	16	85
				ADT =	15565

VPD Summary		CVMP
Date	VPD	Threshold
6/15/2014	11379	16340
6/16/2014	14763	16340
6/17/2014	15275	16340
6/18/2014	15565	16340
6/19/2014	15677	16340
6/20/2014	16107	16340
6/21/2014	13869	16340

ADT (3 Day) = 15506
ADT (5 Day) = 15477
ADT (7 Day) = 14662

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
6/15/2014	932	0.81	1103	0.91
6/16/2014	1134	0.88	1286	0.96
6/17/2014	1181	0.89	1302	0.97
6/18/2014	1155	0.94	1303	0.98
6/19/2014	1115	0.90	1313	0.92
6/20/2014	1150	0.87	**1375**	**0.97**
6/21/2014	1113	0.95	1194	0.97

Thursday, June 19, 2014

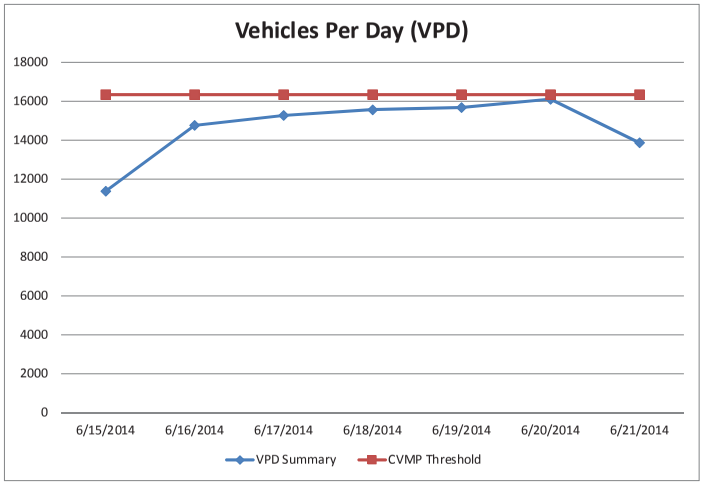
Hour	00-15	15-30	30-45	45-00	Total
0:00	19	20	12	9	60
1:00	4	6	5	1	16
2:00	3	3	3	2	11
3:00	4	3	3	3	13
4:00	3	3	8	14	28
5:00	21	19	31	44	115
6:00	60	67	95	133	355
7:00	128	191	227	284	830
8:00	252	254	300	309	1115
9:00	250	284	269	272	1075
10:00	224	241	296	277	1038
11:00	262	271	280	322	1135
12:00	294	285	311	265	1155
13:00	271	290	291	267	1119
14:00	252	296	276	257	1081
15:00	319	282	342	307	1250
16:00	356	292	340	325	1313
17:00	321	349	353	280	1303
18:00	250	220	204	196	870
19:00	181	135	145	136	597
20:00	147	126	132	96	501
21:00	91	109	99	67	366
22:00	67	50	54	39	210
23:00	32	48	11	30	121
				ADT =	15677

Friday, June 20, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	15	19	11	8	53
1:00	7	7	6	10	30
2:00	1	6	0	5	12
3:00	2	0	5	7	14
4:00	1	7	8	18	34
5:00	19	14	40	45	118
6:00	59	57	95	117	328
7:00	124	169	228	268	789
8:00	252	231	303	331	1117
9:00	273	243	262	288	1066
10:00	258	264	242	277	1041
11:00	256	247	295	261	1059
12:00	304	317	285	311	1217
13:00	290	284	318	305	1197
14:00	314	310	302	300	1226
15:00	327	339	353	356	1375
16:00	327	319	346	290	1282
17:00	310	312	321	252	1195
18:00	259	254	222	214	949
19:00	154	160	147	168	629
20:00	140	110	124	106	480
21:00	129	111	99	92	431
22:00	90	89	50	70	299
23:00	50	50	35	31	166
				ADT =	16107

Saturday, June 21, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	23	19	20	12	74
1:00	16	13	11	11	51
2:00	2	2	3	8	15
3:00	9	8	3	10	30
4:00	4	5	1	14	24
5:00	9	18	22	28	77
6:00	32	37	61	59	189
7:00	73	87	100	132	392
8:00	129	152	164	209	654
9:00	175	216	196	233	820
10:00	210	253	251	255	969
11:00	240	293	288	292	1113
12:00	313	287	286	255	1141
13:00	279	285	297	302	1163
14:00	275	299	308	256	1138
15:00	282	297	309	306	1194
16:00	276	281	266	254	1077
17:00	237	246	223	254	960
18:00	232	222	176	177	807
19:00	136	130	134	93	493
20:00	128	102	126	134	490
21:00	136	113	91	103	443
22:00	107	88	72	70	337
23:00	67	64	44	43	218
				ADT =	13869



Carmel Valley Road
Segment 7 - Schulte Road to Rancho San Carlos Road
Count Location No. 192 - West of Carmel Meadows Road
Dates: 6/15/2014 to 6/21/2014
Sheet 2 of 2

Sunday, June 15, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	18	11	15	9	53	13	11	14	6	44
1:00	4	13	7	7	31	4	12	2	3	21
2:00	7	4	2	1	14	5	1	3	4	13
3:00	2	4	1	2	9	0	2	0	1	3
4:00	3	2	3	9	17	1	1	2	6	10
5:00	5	9	10	9	33	4	6	9	11	30
6:00	7	19	12	28	66	16	17	22	24	79
7:00	19	22	24	51	116	41	33	38	53	165
8:00	45	47	61	71	224	42	58	78	89	267
9:00	60	50	79	86	275	93	96	112	125	426
10:00	84	120	111	122	437	108	116	132	107	463
11:00	88	101	108	120	417	111	138	100	166	515
12:00	102	116	151	120	489	121	158	152	134	565
13:00	139	139	124	137	539	133	112	118	121	484
14:00	129	143	133	120	525	120	111	127	123	481
15:00	105	132	116	104	457	123	141	100	142	506
16:00	109	86	118	106	419	109	90	117	89	405
17:00	92	92	94	79	357	111	118	109	87	425
18:00	72	64	104	84	324	86	73	63	69	291
19:00	62	57	62	56	237	54	46	45	37	182
20:00	78	57	51	67	253	53	43	45	30	171
21:00	58	50	37	41	186	25	25	32	18	100
22:00	31	28	29	31	119	15	10	15	11	51
23:00	11	13	14	14	52	13	7	5	8	33

Monday, June 16, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	10	7	4	2	23	9	4	1	5	19
1:00	4	4	5	7	20	2	2	2	2	8
2:00	0	2	2	0	4	1	0	1	0	2
3:00	2	3	0	3	8	3	3	5	1	12
4:00	5	1	3	7	16	1	0	10	8	19
5:00	6	10	14	17	47	6	19	18	33	76
6:00	20	28	41	42	131	28	46	70	83	227
7:00	30	58	63	92	243	80	139	163	178	560
8:00	86	79	115	98	378	155	174	168	225	722
9:00	105	91	95	94	385	170	159	143	143	615
10:00	114	90	93	94	391	145	139	143	155	582
11:00	126	107	119	118	470	135	126	142	153	556
12:00	135	146	150	137	568	137	134	160	150	581
13:00	135	138	138	137	548	119	120	113	146	498
14:00	150	121	147	133	551	120	132	133	149	534
15:00	119	176	205	165	665	121	117	125	109	472
16:00	182	193	188	203	766	107	134	124	109	474
17:00	197	206	212	174	789	130	129	93	90	442
18:00	170	168	110	114	562	82	81	74	56	293
19:00	105	85	94	80	364	70	45	50	36	201
20:00	77	67	52	70	266	47	28	27	33	135
21:00	58	50	36	41	185	29	30	27	25	111
22:00	30	35	24	23	112	16	18	18	6	58
23:00	15	8	11	12	46	5	14	2	7	28

Tuesday, June 17, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	11	3	5	4	23	11	7	2	9	29
1:00	7	8	3	1	19	1	2	2	1	6
2:00	1	2	4	1	8	1	1	1	2	5
3:00	2	0	0	3	5	1	0	5	2	8
4:00	6	2	6	4	18	3	3	4	4	14
5:00	5	14	17	20	56	11	14	25	33	83
6:00	14	33	37	52	136	27	41	62	83	213
7:00	48	44	65	129	286	104	143	148	200	595
8:00	106	97	79	123	405	142	175	212	208	737
9:00	111	76	93	101	381	176	169	171	184	700
10:00	109	100	119	107	435	128	139	147	140	554
11:00	102	115	129	101	447	170	154	150	173	647
12:00	127	169	135	141	572	129	146	89	141	505
13:00	130	138	129	131	528	129	130	125	130	514
14:00	144	148	147	155	594	147	147	136	137	567
15:00	150	151	156	161	618	142	135	139	111	527
16:00	162	199	192	182	735	137	138	115	146	536
17:00	207	190	190	182	769	123	100	115	88	426
18:00	153	162	159	149	623	75	74	81	58	288
19:00	104	101	104	91	400	43	59	52	44	198
20:00	77	81	84	71	313	44	42	37	32	155
21:00	67	62	55	44	228	33	20	23	20	96
22:00	44	36	24	20	124	17	18	10	12	57
23:00	13	18	8	18	57	11	8	8	8	35

Wednesday, June 18, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	1	6	6	20	11	5	4	1	21
1:00	5	1	1	2	9	3	0	1	1	5
2:00	3	4	2	1	10	0	1	2	0	3
3:00	2	0	0	4	6	0	1	2	2	5
4:00	1	2	2	10	15	1	6	2	12	21
5:00	11	9	16	20	56	12	15	25	30	82
6:00	19	38	43	50	150	26	41	68	65	200
7:00	45	71	72	98	286	104	130	157	199	590
8:00	103	94	88	101	386	145	173	203	205	726
9:00	126	105	99	106	436	165	180	169	152	666
10:00	97	94	87	120	398	148	133	132	181	594
11:00	126	136	128	146	536	144	155	144	160	603
12:00	143	132	134	114	523	150	143	133	121	547
13:00	138	157	113	143	551	107	124	137	118	486
14:00	160	134	143	156	593	153	152	171	123	599
15:00	151	168	210	176	705	148	137	136	137	558
16:00	152	188	214	197	751	168	131	117	135	551
17:00	182	205	221	184	792	139	79	124	99	441
18:00	170	150	120	118	558	109	83	63	65	320
19:00	116	79	89	88	372	53	53	62	42	210
20:00	93	81	76	75	325	51	37	44	54	186
21:00	71	62	74	63	270	35	25	23	26	109
22:00	45	46	29	20	140	21	18	19	11	69
23:00	15	15	17	13	60	7	5	10	3	25

Thursday, June 19, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	9	8	5	29	12	11	4	4	31
1:00	3	4	4	1	12	1	2	1	0	4
2:00	2	1	1	1	5	1	2	2	1	6
3:00	4	2	0	3	9	0	1	3	0	4
4:00	3	1	1	7	12	0	2	7	7	16
5:00	5	9	14	21	49	16	10	17	23	66
6:00	18	26	36	56	136	42	41	59	77	219
7:00	40	54	75	103	272	88	137	152	181	558
8:00	86	92	99	100	377	166	162	201	209	738
9:00	98	90	113	97	398	152	194	156	175	677
10:00	108	105	127	126	466	116	136	169	151	572
11:00	119	140	120	146	525	143	131	160	176	610
12:00	140	147	172	129	588	154	138	139	136	567
13:00	141	153	146	133	573	130	137	145	134	546
14:00	125	160	137	136	558	127	136	139	121	523
15:00	166	149	175	180	670	153	133	167	127	580
16:00	208	172	205	218	803	148	120	135	107	510
17:00	213	213	226	168	820	108	136	127	112	483
18:00	153	147	128	131	559	97	73	76	65	311
19:00	113	89	105	90	397	68	46	40	46	200
20:00	92	87	82	58	319	55	39	50	38	182
21:00	63	74	68	46	251	28	35	31	21	115
22:00	46	30	39	31	146	21	20	15	8	64
23:00	19	32	6	21	78	13	16	5	9	43

Friday, June 20, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	8	7	5	6	26	7	12	6	2	27
1:00	3	5	1	7	16	4	2	5	3	14
2:00	1	3	0	2	6	0	3	0	3	6
3:00	0	0	2	5	7	2	0	3	2	7
4:00	0	5	5	11	21	1	2	3	7	13
5:00	6	8	19	14	47	13	6	21	31	71
6:00	24	20	34	49	127	35	37	61	68	201
7:00	47	56	85	100	288	77	113	143	168	501
8:00	102	88	110	120	420	150	143	193	211	697
9:00	98	93	81	120	392	175	150	181	168	674
10:00	107	117	113	106	443	151	147	129	171	598
11:00	115	112	121	120	468	141	135	174	141	591
12:00	156	155	160	145	616	148	162	125	166	601
13:00	153	121	155	155	584	137	163	163	150	613
14:00	175	190	165	156	686	139	120	137	144	540
15:00	164	213	182	198	757	163	126	171	158	618
16:00	183	197	238	167	785	144	122	108	123	497
17:00	175	196	195	146	712	135	116	126	106	483
18:00	173	156	137	140	606	86	98	85	74	343
19:00	98	92	105	107	402	56	68	42	61	227
20:00	76	72	84	75	307	64	38	40	31	173
21:00	93	72	57	64	286	36	39	42	28	145
22:00	49	56	39	43	187	41	33	11	27	112
23:00	24	23	19	17	83	26	27	16	14	83

Saturday, June 21, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	11	9	14	7	41	12	10	6	5	33
1:00	9	8	6	10	33	7	5	5	1	18
2:00	1	2	2	6	11	1	0	1	2	4
3:00	3	5	1	4	13	6	3	2	6	17
4:00	4	3	0	7	14	0	2	1	7	10
5:00	3	10	10	15	38	6	8	12	13	39
6:00	14	13	35	25	87	18	24	26	34	102
7:00	17	41	37	63	158	56	46	63	69	234
8:00	66	72	77	89	304	63	80	87	120	350
9:00	70	86	75	102	333	105	130	121	131	487
10:00	80	108	116	119	423	130	145	135	136	546
11:00	116	148	137	151	552	124	145	151	141	561
12:00	177	141	143	137	598	136	146	143	118	543
13:00	134	147	153	170	604	145	138	144	132	559
14:00	144	151	155	136	586	131	148	153	120	552
15:00	138	168	167	159	632	144	129	142	147	562
16:00	147	132	122	138	539	129	149	144	116	538
17:00	104	123	128	118	473	133	123	95	136	487
18:00	127	137	96	95	455	105	85	80	82	352
19:00	73	64	62	57	256	63	66	72	36	237
20:00	66	55	78	72	271	62	47	48	62	219
21:00	71	65	46	64	246	65	48	45	39	197
22:00	54	56	48	44	202	53	32	24	26	135
23:00	43	36	28	28	135	24	28	16	15	83

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 9 - Rio Road to Carmel Rancho Boulevard
Count Location No. 190 - East of Carmel Rancho Boulevard
Dates: 6/15/2014 to 6/21/2014
Sheet 1 of 2

Sunday, June 15, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	49	43	33	24	149
1:00	22	26	21	13	82
2:00	12	6	6	8	32
3:00	3	7	2	3	15
4:00	7	5	12	11	35
5:00	16	26	28	37	107
6:00	28	50	71	68	217
7:00	88	94	108	153	443
8:00	125	157	186	241	709
9:00	227	221	285	288	1021
10:00	297	316	329	343	1285
11:00	279	369	324	381	1353
12:00	374	405	442	390	1611
13:00	359	376	362	366	1463
14:00	362	338	380	297	1377
15:00	329	373	328	333	1363
16:00	326	329	308	299	1262
17:00	310	305	316	263	1194
18:00	211	220	230	235	896
19:00	186	159	175	168	688
20:00	175	160	157	151	643
21:00	123	110	110	80	423
22:00	69	66	66	47	248
23:00	46	31	27	29	133
				ADT =	16749

Monday, June 16, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	27	15	14	10	66
1:00	10	9	9	6	34
2:00	5	3	5	3	16
3:00	7	4	6	8	25
4:00	4	4	16	24	48
5:00	23	49	45	61	178
6:00	66	110	156	184	516
7:00	186	264	337	416	1203
8:00	349	391	391	453	1584
9:00	435	388	373	442	1638
10:00	365	394	389	426	1574
11:00	396	384	428	510	1718
12:00	513	454	447	447	1861
13:00	437	436	444	442	1759
14:00	473	419	428	475	1795
15:00	466	475	493	483	1917
16:00	450	467	532	467	1916
17:00	491	449	434	364	1738
18:00	363	365	300	241	1269
19:00	210	212	222	167	811
20:00	172	141	129	134	576
21:00	124	116	112	92	444
22:00	83	79	61	44	267
23:00	41	28	30	28	127
				ADT =	23080

Tuesday, June 17, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	23	16	13	9	61
1:00	14	12	9	6	41
2:00	1	6	7	5	19
3:00	4	1	7	9	21
4:00	8	7	13	15	43
5:00	29	52	50	63	194
6:00	74	114	138	214	540
7:00	201	285	325	451	1262
8:00	354	374	430	485	1643
9:00	457	398	412	427	1694
10:00	375	404	394	430	1603
11:00	388	477	489	486	1840
12:00	469	484	435	410	1798
13:00	438	436	418	450	1742
14:00	470	496	448	445	1859
15:00	476	461	466	461	1864
16:00	478	502	474	495	1949
17:00	497	460	459	428	1844
18:00	347	375	324	329	1375
19:00	264	234	213	195	906
20:00	204	167	151	159	681
21:00	155	141	108	111	515
22:00	81	79	60	49	269
23:00	33	39	29	34	135
				ADT =	23898

Wednesday, June 18, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	30	12	15	13	70
1:00	11	9	1	8	29
2:00	6	9	3	4	22
3:00	1	1	4	7	13
4:00	4	11	10	21	46
5:00	31	53	55	55	194
6:00	67	116	153	208	544
7:00	184	277	358	419	1238
8:00	372	384	404	453	1613
9:00	448	430	418	413	1709
10:00	352	351	396	426	1525
11:00	489	430	419	516	1854
12:00	498	470	462	464	1894
13:00	453	419	425	451	1748
14:00	465	436	496	461	1858
15:00	476	531	504	479	1990
16:00	463	499	519	525	2006
17:00	501	461	464	400	1826
18:00	411	345	288	283	1327
19:00	246	224	199	224	893
20:00	208	192	177	174	751
21:00	171	146	110	137	564
22:00	96	76	80	45	297
23:00	34	34	41	30	139
				ADT =	24150

VPD Summary		CVMP
Date	VPD	Threshold
6/15/2014	16749	51401
6/16/2014	23080	51401
6/17/2014	23898	51401
6/18/2014	24150	51401
6/19/2014	24279	51401
6/20/2014	24802	51401
6/21/2014	20640	51401

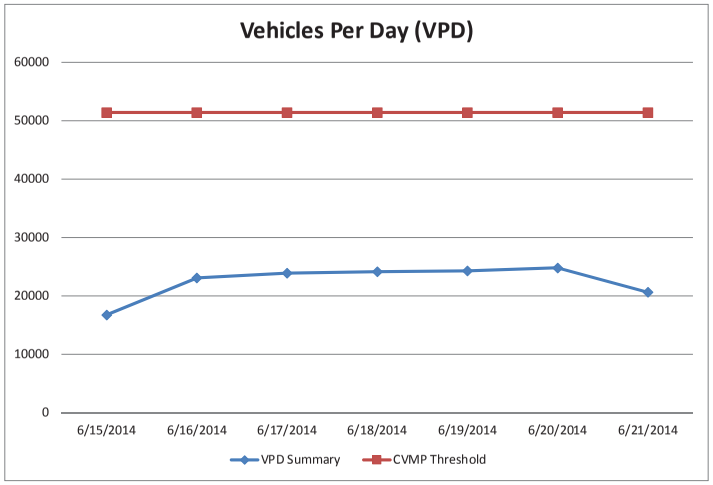
ADT (3 Day) = 24109
ADT (5 Day) = 24042
ADT (7 Day) = 22514

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
6/15/2014	1353	0.89	1611	0.91
6/16/2014	1718	0.84	1939	0.91
6/17/2014	1840	0.94	1968	0.98
6/18/2014	1854	0.90	1990	0.94
6/19/2014	1820	0.89	2138	0.96
6/20/2014	1812	0.91	**2160**	**0.95**
6/21/2014	1733	0.92	1795	0.90

Thursday, June 19, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	24	22	16	11	73
1:00	6	5	14	2	27
2:00	6	3	3	5	17
3:00	2	10	7	4	23
4:00	2	8	5	25	40
5:00	33	39	44	54	170
6:00	69	111	150	189	519
7:00	193	254	326	418	1191
8:00	382	357	441	482	1662
9:00	405	422	422	413	1662
10:00	391	395	408	419	1613
11:00	419	436	456	509	1820
12:00	484	421	442	461	1808
13:00	439	439	448	418	1744
14:00	409	471	437	435	1752
15:00	503	479	516	477	1975
16:00	556	512	511	559	2138
17:00	514	487	501	408	1910
18:00	391	346	295	298	1330
19:00	268	241	237	227	973
20:00	217	200	176	156	749
21:00	138	173	145	121	577
22:00	85	96	73	70	324
23:00	52	61	35	34	182
				ADT =	24279

Friday, June 20, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	26	28	17	12	83
1:00	10	8	10	9	37
2:00	3	10	2	4	19
3:00	3	3	4	8	18
4:00	7	12	11	21	51
5:00	31	31	57	64	183
6:00	70	106	151	211	538
7:00	176	271	321	404	1172
8:00	382	400	371	479	1632
9:00	430	369	409	476	1684
10:00	406	428	407	403	1644
11:00	428	434	453	497	1812
12:00	487	486	490	451	1914
13:00	471	448	502	497	1918
14:00	507	455	437	509	1908
15:00	498	525	526	566	2115
16:00	516	552	504	456	2028
17:00	435	430	439	401	1705
18:00	405	325	358	289	1377
19:00	232	250	219	208	909
20:00	206	176	184	184	750
21:00	180	168	147	137	632
22:00	125	140	80	74	419
23:00	73	66	66	49	254
				ADT =	24802

Saturday, June 21, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	32	33	22	19	106
1:00	22	15	20	12	69
2:00	3	6	8	10	27
3:00	10	6	6	12	34
4:00	10	5	6	13	34
5:00	13	26	39	46	124
6:00	35	63	95	94	287
7:00	109	149	194	218	670
8:00	194	212	229	309	944
9:00	260	324	321	378	1283
10:00	333	386	391	396	1506
11:00	421	390	469	453	1733
12:00	422	444	410	390	1666
13:00	405	379	430	422	1636
14:00	417	435	457	402	1711
15:00	422	400	500	473	1795
16:00	412	399	391	353	1555
17:00	375	324	337	389	1425
18:00	340	324	243	282	1189
19:00	197	182	201	155	735
20:00	165	173	161	169	668
21:00	181	177	146	135	639
22:00	153	124	105	99	481
23:00	90	92	88	53	323
				ADT =	20640



Carmel Valley Road
Segment 9 - Rio Road to Carmel Rancho Boulevard
Count Location No. 190 - East of Carmel Rancho Boulevard
Dates: 6/15/2014 to 6/21/2014
Sheet 2 of 2

Sunday, June 15, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	20	22	18	14	74	29	21	15	10	75
1:00	8	11	12	8	39	14	15	9	5	43
2:00	5	4	2	4	15	7	2	4	4	17
3:00	2	4	2	3	11	1	3	0	0	4
4:00	3	3	9	5	20	4	2	3	6	15
5:00	12	19	16	25	72	4	7	12	12	35
6:00	12	34	38	37	121	16	16	33	31	96
7:00	35	39	59	77	210	53	55	49	76	233
8:00	58	76	95	115	344	67	81	91	126	365
9:00	95	87	122	131	435	132	134	163	157	586
10:00	141	166	160	158	625	156	150	169	185	660
11:00	124	181	149	188	642	155	188	175	193	711
12:00	182	189	212	196	779	192	216	230	194	832
13:00	180	192	194	186	752	179	184	168	180	711
14:00	193	184	192	130	699	169	154	188	167	678
15:00	150	191	146	162	649	179	182	182	171	714
16:00	153	161	149	145	608	173	168	159	154	654
17:00	136	138	148	136	558	174	167	168	127	636
18:00	97	104	141	127	469	114	116	89	108	427
19:00	96	79	97	88	360	90	80	78	80	328
20:00	91	88	74	91	344	84	72	83	60	299
21:00	70	67	63	45	245	53	43	47	35	178
22:00	38	34	39	29	140	31	32	27	18	108
23:00	20	17	20	17	74	26	14	7	12	59

Monday, June 16, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	9	8	11	4	32	18	7	3	6	34
1:00	7	5	6	5	23	3	4	3	1	11
2:00	1	2	3	2	8	4	1	2	1	8
3:00	4	2	2	5	13	3	2	4	3	12
4:00	3	3	6	10	22	1	1	10	14	26
5:00	19	28	25	31	103	4	21	20	30	75
6:00	28	60	85	99	272	38	50	71	85	244
7:00	88	121	162	192	563	98	143	175	224	640
8:00	156	178	180	186	700	193	213	211	267	884
9:00	181	163	167	185	696	254	225	206	257	942
10:00	144	177	167	184	672	221	217	222	242	902
11:00	175	179	200	251	805	221	205	228	259	913
12:00	247	236	208	201	892	266	218	239	246	969
13:00	238	211	217	225	891	199	225	227	217	868
14:00	228	213	221	202	864	245	206	207	273	931
15:00	234	261	255	271	1021	232	214	238	212	896
16:00	245	249	278	252	1024	205	218	254	215	892
17:00	288	264	263	217	1032	203	185	171	147	706
18:00	222	214	173	159	768	141	151	127	82	501
19:00	121	123	131	97	472	89	89	91	70	339
20:00	97	80	76	81	334	75	61	53	53	242
21:00	69	61	56	52	238	55	55	56	40	206
22:00	46	45	39	27	157	37	34	22	17	110
23:00	26	12	17	21	76	15	16	13	7	51

Tuesday, June 17, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	9	5	9	2	25	14	11	4	7	36
1:00	9	9	5	4	27	5	3	4	2	14
2:00	1	2	4	2	9	0	4	3	3	10
3:00	2	1	2	7	12	2	0	5	2	9
4:00	6	5	9	9	29	2	2	4	6	14
5:00	14	34	31	35	114	15	18	19	28	80
6:00	33	57	79	119	288	41	57	59	95	252
7:00	80	135	147	223	585	121	150	178	228	677
8:00	171	158	194	203	726	183	216	236	282	917
9:00	196	145	174	189	704	261	253	238	238	990
10:00	167	187	173	195	722	208	217	221	235	881
11:00	168	207	243	243	861	220	270	246	243	979
12:00	232	232	235	222	921	237	252	200	188	877
13:00	212	206	219	200	837	226	230	199	250	905
14:00	194	241	231	220	886	276	255	217	225	973
15:00	248	229	228	248	953	228	232	238	213	911
16:00	224	263	255	266	1008	254	239	219	229	941
17:00	278	253	278	253	1062	219	207	181	175	782
18:00	208	227	197	200	832	139	148	127	129	543
19:00	134	134	123	106	497	130	100	90	89	409
20:00	121	93	100	104	418	83	74	51	55	263
21:00	95	82	76	72	325	60	59	32	39	190
22:00	48	56	36	28	168	33	23	24	21	101
23:00	14	24	18	25	81	19	15	11	9	54

Wednesday, June 18, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	15	3	9	8	35	15	9	6	5	35
1:00	4	5	0	5	14	7	4	1	3	15
2:00	5	8	2	1	16	1	1	1	3	6
3:00	1	1	1	4	7	0	0	3	3	6
4:00	3	5	7	13	28	1	6	3	8	18
5:00	20	29	23	35	107	11	24	32	20	87
6:00	35	72	88	123	318	32	44	65	85	226
7:00	84	126	166	211	587	100	151	192	208	651
8:00	176	151	185	197	709	196	233	219	256	904
9:00	204	196	160	199	759	244	234	258	214	950
10:00	154	144	176	187	661	198	207	220	239	864
11:00	217	210	205	257	889	272	220	214	259	965
12:00	223	220	228	216	887	275	250	234	248	1007
13:00	217	236	196	237	886	236	183	229	214	862
14:00	214	220	227	235	896	251	216	269	226	962
15:00	228	287	264	249	1028	248	244	240	230	962
16:00	220	245	276	289	1030	243	254	243	236	976
17:00	266	296	301	240	1103	235	165	163	160	723
18:00	237	196	167	165	765	174	149	121	118	562
19:00	131	126	113	116	486	115	98	86	108	407
20:00	97	119	104	100	420	111	73	73	74	331
21:00	99	89	85	79	352	72	57	25	58	212
22:00	61	50	45	29	185	35	26	35	16	112
23:00	24	20	26	20	90	10	14	15	10	49

Thursday, June 19, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	8	9	9	5	31	16	13	7	6	42
1:00	3	4	8	2	17	3	1	6	0	10
2:00	2	1	1	3	7	4	2	2	2	10
3:00	1	6	2	4	13	1	4	5	0	10
4:00	2	6	1	14	23	0	2	4	11	17
5:00	17	28	27	28	100	16	11	17	26	70
6:00	34	56	84	108	282	35	55	66	81	237
7:00	88	119	145	194	546	105	135	181	224	645
8:00	180	169	199	184	732	202	188	242	298	930
9:00	177	185	176	173	711	228	237	246	240	951
10:00	184	190	170	182	726	207	205	238	237	887
11:00	204	198	213	253	868	215	238	243	256	952
12:00	221	210	252	225	908	263	211	190	236	900
13:00	231	219	226	201	877	208	220	222	217	867
14:00	203	245	212	224	884	206	226	225	211	868
15:00	227	248	252	270	997	276	231	264	207	978
16:00	293	252	285	345	1175	263	260	226	214	963
17:00	322	287	309	237	1155	192	200	192	171	755
18:00	233	185	166	158	742	158	161	129	140	588
19:00	144	127	137	133	541	124	114	100	94	432
20:00	116	109	99	85	409	101	91	77	71	340
21:00	79	107	76	63	325	59	66	69	58	252
22:00	46	55	44	36	181	39	41	29	34	143
23:00	37	30	14	22	103	15	31	21	12	79

Friday, June 20, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	8	9	7	8	32	18	19	10	4	51
1:00	5	6	2	7	20	5	2	8	2	17
2:00	2	6	1	2	11	1	4	1	2	8
3:00	1	3	2	5	11	2	0	2	3	7
4:00	5	9	6	14	34	2	3	5	7	17
5:00	18	24	32	35	109	13	7	25	29	74
6:00	30	59	88	126	303	40	47	63	85	235
7:00	86	132	166	196	580	90	139	155	208	592
8:00	188	186	187	209	770	194	214	184	270	862
9:00	166	149	190	194	699	264	220	219	282	985
10:00	183	182	175	181	721	223	246	232	222	923
11:00	186	199	195	253	833	242	235	258	244	979
12:00	239	237	270	227	973	248	249	220	224	941
13:00	237	225	257	265	984	234	223	245	232	934
14:00	276	240	218	260	994	231	215	219	249	914
15:00	257	278	249	285	1069	241	247	277	281	1046
16:00	285	279	282	228	1074	231	273	222	228	954
17:00	236	247	249	212	944	199	183	190	189	761
18:00	248	178	219	158	803	157	147	139	131	574
19:00	124	142	108	124	498	108	108	111	84	411
20:00	113	94	119	103	429	93	82	65	81	321
21:00	111	99	83	83	376	69	69	64	54	256
22:00	65	86	48	41	240	60	54	32	33	179
23:00	37	22	25	23	107	36	44	41	26	147

Saturday, June 21, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	19	12	15	11	57	13	21	7	8	49
1:00	12	9	8	9	38	10	6	12	3	31
2:00	2	4	7	6	19	1	2	1	4	8
3:00	5	4	1	7	17	5	2	5	5	17
4:00	6	3	6	7	22	4	2	0	6	12
5:00	9	18	27	25	79	4	8	12	21	45
6:00	21	37	56	51	165	14	26	39	43	122
7:00	53	84	108	125	370	56	65	86	93	300
8:00	113	120	116	156	505	81	92	113	153	439
9:00	118	140	144	184	586	142	184	177	194	697
10:00	144	173	165	199	681	189	213	226	197	825
11:00	210	190	232	232	864	211	200	237	221	869
12:00	228	200	203	208	839	194	244	207	182	827
13:00	204	200	235	212	851	201	179	195	210	785
14:00	213	220	222	206	861	204	215	235	196	850
15:00	214	210	262	248	934	208	190	238	225	861
16:00	194	205	196	179	774	218	194	195	174	781
17:00	188	155	176	187	706	187	169	161	202	719
18:00	180	182	127	146	635	160	142	116	136	554
19:00	83	85	107	82	357	114	97	94	73	378
20:00	84	83	88	92	347	81	90	73	77	321
21:00	91	86	77	63	317	90	91	69	72	322
22:00	67	59	63	54	243	86	65	42	45	238
23:00	45	35	32	26	138	45	57	56	27	185

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 10 - Carmel Rancho Boulevard to SR 1
Count Location No.189 - East of Hwy 1
Dates: 6/17/2014 to 6/23/2014
Sheet 1 of 2

Sunday, June 22, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	60	41	23	26	150
1:00	10	23	21	28	82
2:00	11	12	11	7	41
3:00	7	7	7	5	26
4:00	4	9	13	13	39
5:00	18	22	32	39	111
6:00	40	45	70	55	210
7:00	73	86	84	141	384
8:00	110	148	160	207	625
9:00	202	220	242	276	940
10:00	288	319	303	332	1242
11:00	327	292	354	334	1307
12:00	337	333	336	342	1348
13:00	331	379	343	297	1350
14:00	332	323	305	295	1255
15:00	303	317	275	316	1211
16:00	273	261	253	254	1041
17:00	279	294	242	257	1072
18:00	220	245	185	183	833
19:00	171	158	148	158	635
20:00	122	156	136	116	530
21:00	122	89	88	84	383
22:00	87	76	74	56	293
23:00	43	50	39	37	169
				ADT =	15277

Monday, June 23, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	21	25	15	10	71
1:00	13	13	7	6	39
2:00	8	3	12	1	24
3:00	8	4	6	5	23
4:00	5	9	15	27	56
5:00	28	49	70	68	215
6:00	65	105	161	188	519
7:00	199	260	327	368	1154
8:00	352	381	431	448	1612
9:00	351	302	326	393	1372
10:00	349	360	367	385	1461
11:00	369	304	394	426	1493
12:00	392	423	432	442	1689
13:00	420	429	405	377	1631
14:00	398	442	389	411	1640
15:00	421	391	429	412	1653
16:00	436	410	408	429	1683
17:00	395	400	394	313	1502
18:00	335	288	258	240	1121
19:00	211	183	196	173	763
20:00	163	153	157	154	627
21:00	115	103	78	87	383
22:00	65	64	49	50	228
23:00	51	48	41	30	170
				ADT =	21129

Tuesday, June 17, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	21	17	21	12	71
1:00	9	12	10	5	36
2:00	3	6	6	4	19
3:00	4	1	8	6	19
4:00	7	8	15	19	49
5:00	33	54	55	65	207
6:00	82	111	144	219	556
7:00	191	290	356	448	1285
8:00	336	393	433	466	1628
9:00	409	349	421	419	1598
10:00	370	374	356	413	1513
11:00	369	445	419	411	1644
12:00	421	448	391	367	1627
13:00	386	404	377	398	1565
14:00	409	416	447	399	1671
15:00	440	406	439	391	1676
16:00	442	446	431	436	1755
17:00	414	430	377	386	1607
18:00	331	363	311	276	1281
19:00	263	219	185	194	861
20:00	194	168	144	160	666
21:00	150	126	103	94	473
22:00	81	73	64	46	264
23:00	43	46	32	37	158
				ADT =	22229

Wednesday, June 18, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	27	11	17	14	69
1:00	12	9	2	7	30
2:00	6	10	2	6	24
3:00	1	2	3	6	12
4:00	9	16	13	34	72
5:00	32	51	65	59	207
6:00	71	111	149	219	550
7:00	187	274	354	407	1222
8:00	408	384	412	415	1619
9:00	394	395	368	383	1540
10:00	320	333	353	416	1422
11:00	441	387	385	435	1648
12:00	449	424	437	414	1724
13:00	427	398	393	439	1657
14:00	432	399	449	461	1741
15:00	429	410	478	419	1736
16:00	418	421	425	455	1719
17:00	451	428	389	356	1624
18:00	367	333	272	278	1250
19:00	258	190	185	190	823
20:00	217	167	157	171	712
21:00	160	141	104	127	532
22:00	95	77	71	49	292
23:00	44	37	48	28	157
				ADT =	22382

VPD Summary		CVMP
Date	VPD	Threshold
6/22/2014	15277	27839
6/23/2014	21129	27839
6/17/2014	22229	27839
6/18/2014	22382	27839
6/19/2014	22412	27839
6/20/2014	22765	27839
6/21/2014	18649	27839

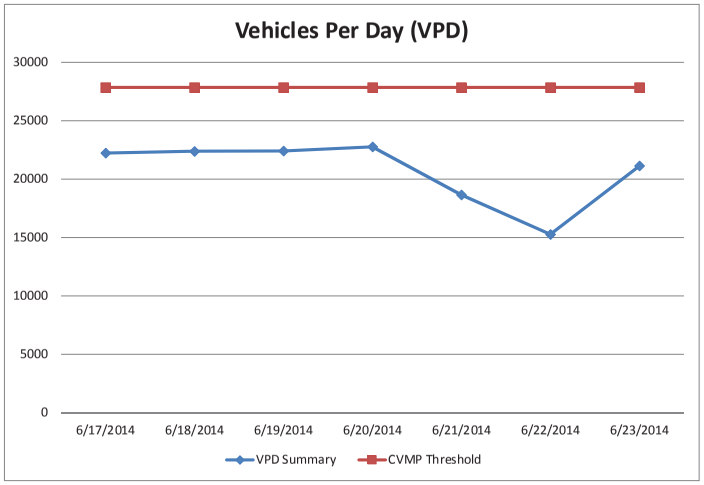
ADT (3 Day) = 22341
ADT (5 Day) = 22183
ADT (7 Day) = 20692

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
6/22/2014	1307	0.92	1395	0.92
6/23/2014	1493	0.88	1723	0.97
6/17/2014	1701	0.91	1755	0.98
6/18/2014	1619	0.98	1741	0.94
6/19/2014	1692	0.92	1785	0.98
6/20/2014	1647	0.91	**1848**	**0.95**
6/21/2014	1475	0.91	1590	0.92

Thursday, June 19, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	32	27	15	11	85
1:00	4	7	12	3	26
2:00	8	4	4	5	21
3:00	2	11	10	4	27
4:00	3	7	14	26	50
5:00	38	43	42	58	181
6:00	77	121	152	201	551
7:00	207	260	325	398	1190
8:00	373	366	462	443	1644
9:00	386	401	387	383	1557
10:00	393	359	425	360	1537
11:00	377	380	402	445	1604
12:00	421	401	421	442	1685
13:00	446	397	408	383	1634
14:00	408	411	393	405	1617
15:00	434	422	431	420	1707
16:00	457	429	450	449	1785
17:00	423	394	423	395	1635
18:00	346	315	266	270	1197
19:00	257	230	221	189	897
20:00	204	194	165	139	702
21:00	155	151	132	126	564
22:00	91	96	66	67	320
23:00	50	62	41	43	196
				ADT =	22412

Friday, June 20, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	29	24	18	14	85
1:00	12	11	11	7	41
2:00	6	11	2	6	25
3:00	4	2	3	6	15
4:00	7	14	14	27	62
5:00	36	32	59	67	194
6:00	76	108	156	228	568
7:00	188	262	334	400	1184
8:00	340	399	401	454	1594
9:00	393	375	394	426	1588
10:00	368	366	361	383	1478
11:00	398	379	424	445	1646
12:00	453	422	417	404	1696
13:00	411	403	455	440	1709
14:00	439	442	412	441	1734
15:00	462	462	438	486	1848
16:00	448	445	393	389	1675
17:00	387	367	372	334	1460
18:00	349	315	331	265	1260
19:00	234	233	211	195	873
20:00	181	169	179	176	705
21:00	180	147	153	139	619
22:00	131	141	91	77	440
23:00	77	74	68	47	266
				ADT =	22765

Saturday, June 21, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	34	29	24	19	106
1:00	15	13	19	14	61
2:00	3	4	7	11	25
3:00	9	6	6	7	28
4:00	8	5	7	19	39
5:00	18	20	38	48	124
6:00	37	60	80	108	285
7:00	108	144	194	202	648
8:00	190	210	210	303	913
9:00	251	305	309	323	1188
10:00	305	331	346	350	1332
11:00	357	329	382	407	1475
12:00	368	384	360	353	1465
13:00	371	360	381	384	1496
14:00	359	372	400	386	1517
15:00	372	402	430	364	1568
16:00	391	361	337	311	1400
17:00	306	266	311	335	1218
18:00	287	300	235	244	1066
19:00	186	179	177	154	696
20:00	144	160	147	148	599
21:00	166	177	144	131	618
22:00	146	125	95	93	459
23:00	83	100	89	51	323
				ADT =	18649



Carmel Valley Road
Segment 10 - Carmel Rancho Boulevard to SR 1
Count Location No.189 - East of Hwy 1
Dates: 6/17/2014 to 6/23/2014
Sheet 2 of 2

Sunday, June 22, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	18	20	13	13	64	42	21	10	13	86
1:00	5	13	9	9	36	5	10	12	19	46
2:00	3	9	5	5	22	8	3	6	2	19
3:00	3	5	2	2	12	4	2	5	3	14
4:00	4	5	9	8	26	0	4	4	5	13
5:00	13	19	17	23	72	5	3	15	16	39
6:00	27	25	45	36	133	13	20	25	19	77
7:00	38	52	47	91	228	35	34	37	50	156
8:00	69	84	96	116	365	41	64	64	91	260
9:00	92	95	127	133	447	110	125	115	143	493
10:00	167	168	149	154	638	121	151	154	178	604
11:00	155	134	175	168	632	172	158	179	166	675
12:00	179	173	175	197	724	158	160	161	145	624
13:00	185	205	178	155	723	146	174	165	142	627
14:00	144	172	168	166	650	188	151	137	129	605
15:00	142	158	130	167	597	161	159	145	149	614
16:00	125	128	116	123	492	148	133	137	131	549
17:00	125	143	119	122	509	154	151	123	135	563
18:00	110	110	86	95	401	110	135	99	88	432
19:00	82	95	80	72	329	89	63	68	86	306
20:00	57	80	67	65	269	65	76	69	51	261
21:00	60	45	40	47	192	62	44	48	37	191
22:00	40	39	37	35	151	47	37	37	21	142
23:00	16	29	13	20	78	27	21	26	17	91

Monday, June 23, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	10	9	5	3	27	11	16	10	7	44
1:00	8	6	4	5	23	5	7	3	1	16
2:00	4	2	6	0	12	4	1	6	1	12
3:00	5	1	2	3	11	3	3	4	2	12
4:00	5	6	8	19	38	0	3	7	8	18
5:00	15	31	47	41	134	13	18	23	27	81
6:00	38	64	101	118	321	27	41	60	70	198
7:00	115	143	172	209	639	84	117	155	159	515
8:00	197	218	229	239	883	155	163	202	209	729
9:00	188	149	164	202	703	163	153	162	191	669
10:00	179	167	176	164	686	170	193	191	221	775
11:00	178	127	193	227	725	191	177	201	199	768
12:00	188	247	239	231	905	204	176	193	211	784
13:00	224	210	215	197	846	196	219	190	180	785
14:00	177	235	169	212	793	221	207	220	199	847
15:00	181	203	191	218	793	240	188	238	194	860
16:00	208	216	190	228	842	228	194	218	201	841
17:00	184	191	218	170	763	211	209	176	143	739
18:00	183	148	134	124	589	152	140	124	116	532
19:00	120	93	113	99	425	91	90	83	74	338
20:00	83	72	84	84	323	80	81	73	70	304
21:00	61	57	32	51	201	54	46	46	36	182
22:00	32	37	38	34	141	33	27	11	16	87
23:00	24	30	20	18	92	27	18	21	12	78

Tuesday, June 17, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	5	13	3	28	14	12	8	9	43
1:00	6	9	8	5	28	3	3	2	0	8
2:00	3	2	3	2	10	0	4	3	2	9
3:00	2	1	2	5	10	2	0	6	1	9
4:00	5	7	11	15	38	2	1	4	4	11
5:00	20	37	38	39	134	13	17	17	26	73
6:00	50	67	97	142	356	32	44	47	77	200
7:00	100	155	197	260	712	91	135	159	188	573
8:00	200	216	234	250	900	136	177	199	216	728
9:00	214	172	222	233	841	195	177	199	186	757
10:00	204	188	184	204	780	166	186	172	209	733
11:00	186	229	203	227	845	183	216	216	184	799
12:00	215	239	215	196	865	206	209	176	171	762
13:00	193	210	197	194	794	193	194	180	204	771
14:00	179	204	231	200	814	230	212	216	199	857
15:00	208	191	207	199	805	232	215	232	192	871
16:00	206	217	204	210	837	236	229	227	226	918
17:00	193	215	200	201	809	221	215	177	185	798
18:00	162	201	163	157	683	169	162	148	119	598
19:00	122	112	97	96	427	141	107	88	98	434
20:00	110	91	84	96	381	84	77	60	64	285
21:00	87	69	66	55	277	63	57	37	39	196
22:00	46	50	36	23	155	35	23	28	23	109
23:00	22	23	22	24	91	21	23	10	13	67

Wednesday, June 18, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	12	3	12	10	37	15	8	5	4	32
1:00	4	5	0	4	13	8	4	2	3	17
2:00	4	9	1	2	16	2	1	1	4	8
3:00	1	2	0	3	6	0	0	3	3	6
4:00	6	8	8	25	47	3	8	5	9	25
5:00	23	31	29	43	126	9	20	36	16	81
6:00	42	81	103	140	366	29	30	46	79	184
7:00	104	148	192	242	686	83	126	162	165	536
8:00	243	200	233	222	898	165	184	179	193	721
9:00	220	213	180	221	834	174	182	188	162	706
10:00	161	157	168	231	717	159	176	185	185	705
11:00	205	193	206	219	823	236	194	179	216	825
12:00	230	202	222	191	845	219	222	215	223	879
13:00	201	226	192	239	858	226	172	201	200	799
14:00	195	192	195	232	814	237	207	254	229	927
15:00	194	212	233	200	839	235	198	245	219	897
16:00	189	205	192	234	820	229	216	233	221	899
17:00	198	238	222	188	846	253	190	167	168	778
18:00	190	168	151	144	653	177	165	121	134	597
19:00	130	97	100	89	416	128	93	85	101	407
20:00	102	91	86	97	376	115	76	71	74	336
21:00	90	81	69	68	308	70	60	35	59	224
22:00	59	50	34	29	172	36	27	37	20	120
23:00	28	18	24	19	89	16	19	24	9	68

Thursday, June 19, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	11	12	8	4	35	21	15	7	7	50
1:00	3	6	9	3	21	1	1	3	0	5
2:00	3	1	2	3	9	5	3	2	2	12
3:00	1	8	5	3	17	1	3	5	1	10
4:00	2	6	8	18	34	1	1	6	8	16
5:00	22	35	28	36	121	16	8	14	22	60
6:00	48	69	105	138	360	29	52	47	63	191
7:00	112	148	184	222	666	95	112	141	176	524
8:00	221	207	250	220	898	152	159	212	223	746
9:00	210	222	193	208	833	176	179	194	175	724
10:00	228	198	203	163	792	165	161	222	197	745
11:00	201	179	194	226	800	176	201	208	219	804
12:00	207	222	224	228	881	214	179	197	214	804
13:00	239	186	198	191	814	207	211	210	192	820
14:00	190	202	202	194	788	218	209	191	211	829
15:00	183	202	205	227	817	251	220	226	193	890
16:00	231	196	225	266	918	226	233	225	183	867
17:00	220	203	240	225	888	203	191	183	170	747
18:00	189	155	137	132	613	157	160	129	138	584
19:00	125	120	106	103	454	132	110	115	86	443
20:00	95	95	94	74	358	109	99	71	65	344
21:00	83	83	69	67	302	72	68	63	59	262
22:00	46	57	36	36	175	45	39	30	31	145
23:00	30	24	16	28	98	20	38	25	15	98

Friday, June 20, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	10	7	6	8	31	19	17	12	6	54
1:00	7	5	4	4	20	5	6	7	3	21
2:00	4	7	1	3	15	2	4	1	3	10
3:00	2	2	1	3	8	2	0	2	3	7
4:00	5	11	8	19	43	2	3	6	8	19
5:00	25	25	37	42	129	11	7	22	25	65
6:00	47	71	104	155	377	29	37	52	73	191
7:00	103	153	193	246	695	85	109	141	154	489
8:00	191	233	231	240	895	149	166	170	214	699
9:00	197	192	216	231	836	196	183	178	195	752
10:00	189	163	184	199	735	179	203	177	184	743
11:00	185	183	200	227	795	213	196	224	218	851
12:00	241	223	232	207	903	212	199	185	197	793
13:00	210	206	227	242	885	201	197	228	198	824
14:00	214	232	199	210	855	225	210	213	231	879
15:00	225	236	201	233	895	237	226	237	253	953
16:00	222	202	213	175	812	226	243	180	214	863
17:00	165	197	190	176	728	222	170	182	158	732
18:00	193	169	181	129	672	156	146	150	136	588
19:00	116	113	110	107	446	118	120	101	88	427
20:00	91	85	104	103	383	90	84	75	73	322
21:00	101	82	74	77	334	79	65	79	62	285
22:00	64	82	50	44	240	67	59	41	33	200
23:00	40	28	34	21	123	37	46	34	26	143

Saturday, June 21, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	19	12	14	13	58	15	17	10	6	48
1:00	9	7	10	9	35	6	6	9	5	26
2:00	1	3	7	6	17	2	1	0	5	8
3:00	6	4	2	2	14	3	2	4	5	14
4:00	6	3	7	13	29	2	2	0	6	10
5:00	13	13	28	29	83	5	7	10	19	41
6:00	26	38	57	63	184	11	22	23	45	101
7:00	61	91	122	128	402	47	53	72	74	246
8:00	128	131	122	187	568	62	79	88	116	345
9:00	140	150	162	184	636	111	155	147	139	552
10:00	171	169	155	181	676	134	162	191	169	656
11:00	193	180	192	226	791	164	149	190	181	684
12:00	205	178	190	189	762	163	206	170	164	703
13:00	194	206	208	193	801	177	154	173	191	695
14:00	178	190	193	205	766	181	182	207	181	751
15:00	187	221	230	178	816	185	181	200	186	752
16:00	196	171	168	145	680	195	190	169	166	720
17:00	142	127	149	168	586	164	139	162	167	632
18:00	140	146	120	115	521	147	154	115	129	545
19:00	73	90	79	76	318	113	89	98	78	378
20:00	66	71	71	70	278	78	89	76	78	321
21:00	84	82	72	59	297	82	95	72	72	321
22:00	65	61	55	49	230	81	64	40	44	229
23:00	39	39	35	26	139	44	61	54	25	184

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 3 - Esquiline Road to Ford Road
Count Location No. 236 - East of Pilot Road
Dates: 10/27/2014 to 11/2/2014
Sheet 1 of 2

Sunday, November 2, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	7	8	6	7	28
1:00	3	4	5	1	13
2:00	3	2	2	5	12
3:00	1	1	0	3	5
4:00	0	1	6	2	9
5:00	1	2	5	12	20
6:00	9	15	22	35	81
7:00	38	70	69	113	290
8:00	154	190	131	156	631
9:00	128	180	154	153	615
10:00	138	119	133	130	520
11:00	117	96	139	125	477
12:00	121	121	118	134	494
13:00	122	131	130	143	526
14:00	125	121	131	169	546
15:00	138	125	129	126	518
16:00	141	153	155	159	608
17:00	160	167	156	164	647
18:00	178	191	176	133	678
19:00	145	105	106	82	438
20:00	78	56	49	47	230
21:00	40	35	39	30	144
22:00	33	34	23	13	103
23:00	23	14	18	14	69
				ADT =	7702

Monday, October 27, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	5	4	4	3	16
1:00	2	3	4	0	9
2:00	1	0	2	1	4
3:00	2	1	2	3	8
4:00	1	4	2	9	16
5:00	10	16	16	22	64
6:00	41	70	62	83	256
7:00	131	172	139	181	623
8:00	141	174	159	150	624
9:00	139	115	118	114	486
10:00	128	126	133	110	497
11:00	109	139	120	131	499
12:00	122	157	128	150	557
13:00	137	118	133	131	519
14:00	127	121	118	157	523
15:00	171	154	132	171	628
16:00	128	187	156	167	638
17:00	189	180	153	167	689
18:00	161	131	113	93	498
19:00	69	63	56	59	247
20:00	60	53	53	45	211
21:00	53	31	39	29	152
22:00	24	27	20	20	91
23:00	7	12	8	7	34
				ADT =	7889

Tuesday, October 28, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	7	1	4	6	18
1:00	2	3	2	0	7
2:00	0	0	0	2	2
3:00	1	1	2	1	5
4:00	0	3	2	8	13
5:00	14	14	11	23	62
6:00	32	61	65	93	251
7:00	124	197	160	151	632
8:00	108	165	170	153	596
9:00	141	146	121	107	515
10:00	125	130	134	122	511
11:00	117	125	130	146	518
12:00	153	140	144	142	579
13:00	134	132	124	148	538
14:00	115	137	130	148	530
15:00	136	183	155	151	625
16:00	173	160	165	179	677
17:00	183	173	172	168	696
18:00	179	136	105	74	494
19:00	85	58	64	53	260
20:00	55	47	45	58	205
21:00	60	40	37	31	168
22:00	39	24	20	12	95
23:00	19	7	4	4	34
				ADT =	8031

Wednesday, October 29, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	7	4	0	3	14
1:00	2	0	2	2	6
2:00	1	8	0	1	10
3:00	0	2	2	5	9
4:00	2	3	2	12	19
5:00	12	10	19	19	60
6:00	27	73	70	90	260
7:00	141	181	144	166	632
8:00	147	163	191	169	670
9:00	142	164	135	129	570
10:00	135	103	107	117	462
11:00	135	115	144	145	539
12:00	148	140	146	128	562
13:00	161	152	149	185	647
14:00	131	124	148	182	585
15:00	160	147	181	159	647
16:00	162	185	168	177	692
17:00	176	182	147	165	670
18:00	152	153	127	105	537
19:00	97	84	63	80	324
20:00	53	55	53	55	216
21:00	43	45	31	45	164
22:00	28	27	21	21	97
23:00	13	9	9	9	40
				ADT =	8432

VPD Summary		CVMP
Date	VPD	Threshold
11/2/2014	7702	9065
10/27/2014	7889	9065
10/28/2014	8031	9065
10/29/2014	8432	9065
10/30/2014	8331	9065
10/31/2014	6840	9065
11/1/2014	6014	9065

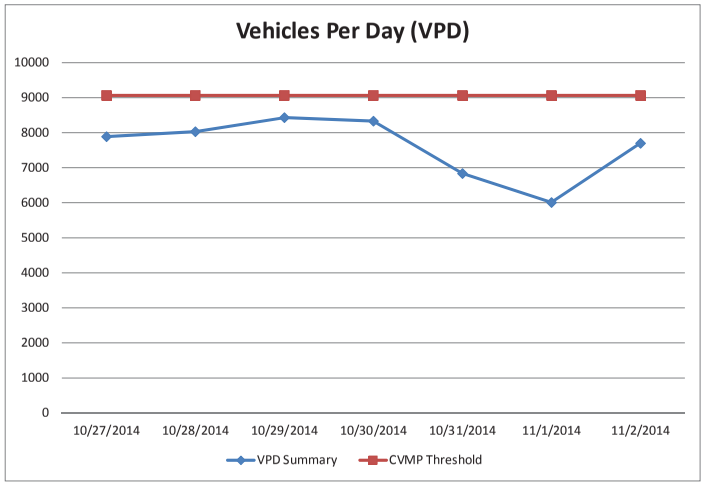
ADT (3 Day) = 8265
ADT (5 Day) = 7905
ADT (7 Day) = 7606

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
11/2/2014	625	0.87	709	0.93
10/27/2014	655	0.90	689	0.91
10/28/2014	632	0.80	707	0.97
10/29/2014	670	0.88	692	0.94
10/30/2014	634	0.94	666	0.95
10/31/2014	557	0.92	606	0.95
11/1/2014	521	0.94	625	0.94

Thursday, October 30, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	13	3	4	3	23
1:00	4	4	5	3	16
2:00	1	1	1	2	5
3:00	3	2	2	1	8
4:00	1	3	6	8	18
5:00	7	13	11	22	53
6:00	35	39	49	71	194
7:00	113	162	118	151	544
8:00	159	143	168	164	634
9:00	155	140	137	126	558
10:00	138	141	138	148	565
11:00	147	139	166	159	611
12:00	168	156	166	176	666
13:00	170	171	172	145	658
14:00	140	158	180	164	642
15:00	154	161	151	149	615
16:00	153	136	145	156	590
17:00	159	174	142	133	608
18:00	132	113	118	89	452
19:00	102	58	60	45	265
20:00	51	61	60	56	228
21:00	51	43	53	46	193
22:00	48	30	32	27	137
23:00	20	11	9	8	48
				ADT =	8331

Friday, October 31, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	11	10	15	12	48
1:00	8	10	5	5	28
2:00	3	13	5	2	23
3:00	6	1	1	4	12
4:00	2	6	0	6	14
5:00	1	8	5	5	19
6:00	7	12	14	28	61
7:00	34	34	60	60	188
8:00	58	78	77	80	293
9:00	82	78	86	114	360
10:00	116	111	126	106	459
11:00	137	132	137	151	557
12:00	160	149	141	156	606
13:00	142	139	159	131	571
14:00	132	141	144	140	557
15:00	130	113	127	126	496
16:00	155	131	119	144	549
17:00	122	147	136	121	526
18:00	124	140	112	101	477
19:00	87	75	61	54	277
20:00	57	42	50	41	190
21:00	65	37	48	53	203
22:00	39	58	43	51	191
23:00	49	32	36	18	135
				ADT =	6840

Saturday, November 1, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	24	18	11	12	65
1:00	12	4	1	5	22
2:00	2	8	4	1	15
3:00	4	0	4	2	10
4:00	2	1	1	1	5
5:00	3	1	2	3	9
6:00	4	6	8	7	25
7:00	10	18	29	28	85
8:00	29	39	57	67	192
9:00	64	68	84	111	327
10:00	102	109	125	129	465
11:00	139	127	123	132	521
12:00	135	145	119	127	526
13:00	166	166	143	150	625
14:00	139	146	128	136	549
15:00	146	138	138	111	533
16:00	112	132	136	120	500
17:00	100	103	105	106	414
18:00	105	107	96	94	402
19:00	82	67	38	51	238
20:00	64	38	38	43	183
21:00	34	33	39	32	138
22:00	33	33	33	28	127
23:00	13	10	4	11	38
				ADT =	6014



Carmel Valley Road
Segment 3 - Esquiline Road to Ford Road
Count Location No. 236 - East of Pilot Road
Dates: 10/27/2014 to 11/2/2014
Sheet 2 of 2

Sunday, November 2, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	3	6	4	6	19	4	2	2	1	9
1:00	3	3	4	0	10	0	1	1	1	3
2:00	2	1	1	4	8	1	1	1	1	4
3:00	0	0	0	1	1	1	1	0	2	4
4:00	0	0	1	2	3	0	1	5	0	6
5:00	0	0	1	1	2	1	2	4	11	18
6:00	2	3	7	15	27	7	12	15	20	54
7:00	13	33	33	43	122	25	37	36	70	168
8:00	39	45	31	51	166	115	145	100	105	465
9:00	52	51	55	71	229	76	129	99	82	386
10:00	57	47	56	54	214	81	72	77	76	306
11:00	45	40	56	57	198	72	56	83	68	279
12:00	54	59	50	73	236	67	62	68	61	258
13:00	68	66	71	80	285	54	65	59	63	241
14:00	57	57	71	92	277	68	64	60	77	269
15:00	66	71	76	65	278	72	54	53	61	240
16:00	75	83	84	92	334	66	70	71	67	274
17:00	88	89	106	105	388	72	78	50	59	259
18:00	116	110	105	101	432	62	81	71	32	246
19:00	99	73	70	60	302	46	32	36	22	136
20:00	60	43	29	35	167	18	13	20	12	63
21:00	31	24	28	22	105	9	11	11	8	39
22:00	21	24	12	9	66	12	10	11	4	37
23:00	16	7	8	8	39	7	7	10	6	30

Monday, October 27, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	3	3	3	3	12	2	1	1	0	4
1:00	2	2	4	0	8	0	1	0	0	1
2:00	1	0	1	0	2	0	0	1	1	2
3:00	1	0	1	1	3	1	1	1	2	5
4:00	0	0	1	2	3	1	4	1	7	13
5:00	3	3	4	9	19	7	13	12	13	45
6:00	11	32	24	28	95	30	38	38	55	161
7:00	39	41	28	60	168	92	131	111	121	455
8:00	42	52	51	70	215	99	122	108	80	409
9:00	54	39	53	57	203	85	76	65	57	283
10:00	57	70	52	46	225	71	56	81	64	272
11:00	56	70	51	59	236	53	69	69	72	263
12:00	60	81	69	70	280	62	76	59	80	277
13:00	66	59	78	68	271	71	59	55	63	248
14:00	57	64	65	81	267	70	57	53	76	256
15:00	75	82	85	92	334	96	72	47	79	294
16:00	74	104	85	97	360	54	83	71	70	278
17:00	118	105	99	101	423	71	75	54	66	266
18:00	90	96	75	69	330	71	35	38	24	168
19:00	49	43	36	38	166	20	20	20	21	81
20:00	38	40	36	33	147	22	13	17	12	64
21:00	41	25	24	16	106	12	6	15	13	46
22:00	17	24	15	14	70	7	3	5	6	21
23:00	7	9	5	3	24	0	3	3	4	10

Tuesday, October 28, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	6	1	3	4	14	1	0	1	2	4
1:00	2	1	0	0	3	0	2	2	0	4
2:00	0	0	0	1	1	0	0	0	1	1
3:00	0	1	0	1	2	1	0	2	0	3
4:00	0	0	0	2	2	0	3	2	6	11
5:00	3	4	3	8	18	11	10	8	15	44
6:00	11	27	31	41	110	21	34	34	52	141
7:00	40	51	33	50	174	84	146	127	101	458
8:00	42	69	43	50	204	66	96	127	103	392
9:00	56	63	53	52	224	85	83	68	55	291
10:00	53	57	45	54	209	72	73	89	68	302
11:00	54	60	58	67	239	63	65	72	79	279
12:00	82	66	83	65	296	71	74	61	77	283
13:00	73	74	67	75	289	61	58	57	73	249
14:00	48	63	71	74	256	67	74	59	74	274
15:00	77	89	78	85	329	59	94	77	66	296
16:00	83	83	105	113	384	90	77	60	66	293
17:00	119	116	102	106	443	64	57	70	62	253
18:00	117	97	71	45	330	62	39	34	29	164
19:00	52	41	46	38	177	33	17	18	15	83
20:00	37	31	31	40	139	18	16	14	18	66
21:00	42	29	28	21	120	18	11	9	10	48
22:00	24	15	13	7	59	15	9	7	5	36
23:00	10	4	3	2	19	9	3	1	2	15

Wednesday, October 29, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	6	2	0	2	10	1	2	0	1	4
1:00	1	0	1	1	3	1	0	1	1	3
2:00	0	4	0	0	4	1	4	0	1	6
3:00	0	1	0	2	3	0	1	2	3	6
4:00	1	1	1	3	6	1	2	1	9	13
5:00	3	2	4	7	16	9	8	15	12	44
6:00	9	25	35	36	105	18	48	35	54	155
7:00	38	47	44	48	177	103	134	100	118	455
8:00	43	61	54	74	232	104	102	137	95	438
9:00	67	67	67	56	257	75	97	68	73	313
10:00	59	44	42	65	210	76	59	65	52	252
11:00	63	48	75	76	262	72	67	69	69	277
12:00	73	63	69	73	278	75	77	77	55	284
13:00	85	81	70	80	316	76	71	79	105	331
14:00	55	62	78	86	281	76	62	70	96	304
15:00	85	83	105	97	370	75	64	76	62	277
16:00	85	111	86	113	395	77	74	82	64	297
17:00	107	114	85	101	407	69	68	62	64	263
18:00	98	113	86	70	367	54	40	41	35	170
19:00	63	54	40	48	205	34	30	23	32	119
20:00	35	37	40	33	145	18	18	13	22	71
21:00	24	27	17	27	95	19	18	14	18	69
22:00	21	20	14	17	72	7	7	7	4	25
23:00	9	6	6	6	27	4	3	3	3	13

Thursday, October 30, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	5	2	3	2	12	8	1	1	1	11
1:00	0	2	4	1	7	4	2	1	2	9
2:00	0	1	1	1	3	1	0	0	1	2
3:00	1	1	1	1	4	2	1	1	0	4
4:00	1	0	1	2	4	0	3	5	6	14
5:00	1	3	2	4	10	6	10	9	18	43
6:00	11	13	18	26	68	24	26	31	45	126
7:00	25	37	34	42	138	88	125	84	109	406
8:00	54	48	54	75	231	105	95	114	89	403
9:00	67	60	60	52	239	88	80	77	74	319
10:00	55	59	65	67	246	83	82	73	81	319
11:00	67	77	76	77	297	80	62	90	82	314
12:00	80	76	102	92	350	88	80	64	84	316
13:00	92	111	73	76	352	78	60	99	69	306
14:00	65	83	92	89	329	75	75	88	75	313
15:00	73	95	89	89	346	81	66	62	60	269
16:00	94	93	98	93	378	59	43	47	63	212
17:00	106	108	95	91	400	53	66	47	42	208
18:00	81	66	86	58	291	51	47	32	31	161
19:00	59	31	34	21	145	43	27	26	24	120
20:00	25	38	33	29	125	26	23	27	27	103
21:00	22	27	27	23	99	29	16	26	23	94
22:00	22	14	21	19	76	26	16	11	8	61
23:00	9	8	6	7	30	11	3	3	1	18

Friday, October 31, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	8	6	8	7	29	3	4	7	5	19
1:00	5	5	3	2	15	3	5	2	3	13
2:00	2	5	3	1	11	1	8	2	1	12
3:00	4	0	0	2	6	2	1	1	2	6
4:00	0	2	0	1	3	2	4	0	5	11
5:00	0	2	1	2	5	1	6	4	3	14
6:00	3	5	5	20	33	4	7	9	8	28
7:00	15	12	20	25	72	19	22	40	35	116
8:00	19	39	31	25	114	39	39	46	55	179
9:00	38	33	33	38	142	44	45	53	76	218
10:00	53	50	66	50	219	63	61	60	56	240
11:00	64	63	63	76	266	73	69	74	75	291
12:00	93	70	73	85	321	67	79	68	71	285
13:00	72	67	89	70	298	70	72	70	61	273
14:00	65	71	87	73	296	67	70	57	67	261
15:00	66	57	68	70	261	64	56	59	56	235
16:00	81	78	63	81	303	74	53	56	63	246
17:00	72	69	82	60	283	50	78	54	61	243
18:00	61	74	70	65	270	63	66	42	36	207
19:00	40	47	30	32	149	47	28	31	22	128
20:00	33	25	30	24	112	24	17	20	17	78
21:00	40	16	33	38	127	25	21	15	15	76
22:00	20	35	25	31	111	19	23	18	20	80
23:00	35	19	23	14	91	14	13	13	4	44

Saturday, November 1, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	14	14	7	11	46	10	4	4	1	19
1:00	3	2	0	2	7	9	2	1	3	15
2:00	1	6	1	0	8	1	2	3	1	7
3:00	3	0	2	2	7	1	0	2	0	3
4:00	2	0	1	0	3	0	1	0	1	2
5:00	2	0	0	2	4	1	1	2	1	5
6:00	1	2	2	4	9	3	4	6	3	16
7:00	5	8	9	12	34	5	10	20	16	51
8:00	12	19	16	20	67	17	20	41	47	125
9:00	24	30	33	60	147	40	38	51	51	180
10:00	45	45	58	49	197	57	64	67	80	268
11:00	49	51	60	66	226	90	76	63	66	295
12:00	83	79	55	68	285	52	66	64	59	241
13:00	70	82	78	69	299	96	84	65	81	326
14:00	59	76	68	66	269	80	70	60	70	280
15:00	81	65	70	59	275	65	73	68	52	258
16:00	52	70	70	72	264	60	62	66	48	236
17:00	56	59	51	58	224	44	44	54	48	190
18:00	62	68	56	64	250	43	39	40	30	152
19:00	50	41	27	29	147	32	26	11	22	91
20:00	36	20	20	23	99	28	18	18	20	84
21:00	18	15	25	18	76	16	18	14	14	62
22:00	11	17	12	19	59	22	16	21	9	68
23:00	5	7	3	7	22	8	3	1	4	16

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 4 - Ford Road to Laureles Grade
Count Location No. 238 - East of Boronda Road
Dates: 10/27/2014 to 11/2/2014
Sheet 1 of 2

Sunday, November 2, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	28	18	17	12	75
1:00	15	6	1	8	30
2:00	7	7	3	3	20
3:00	3	2	2	2	9
4:00	3	0	1	1	5
5:00	5	2	4	3	14
6:00	9	8	12	11	40
7:00	11	21	41	35	108
8:00	43	44	63	92	242
9:00	87	99	125	149	460
10:00	125	153	167	191	636
11:00	171	167	180	179	697
12:00	161	179	167	193	700
13:00	202	204	181	186	773
14:00	174	180	180	175	709
15:00	171	185	160	172	688
16:00	149	196	167	159	671
17:00	141	145	133	146	565
18:00	144	152	121	127	544
19:00	91	84	64	68	307
20:00	77	52	54	52	235
21:00	47	44	48	40	179
22:00	43	45	43	26	157
23:00	22	16	11	13	62
				ADT =	7926

Monday, October 27, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	3	7	5	4	19
1:00	4	3	1	2	10
2:00	0	1	4	2	7
3:00	0	3	0	1	4
4:00	2	9	6	15	32
5:00	15	19	25	36	95
6:00	45	61	89	118	313
7:00	185	235	208	201	829
8:00	176	250	317	237	980
9:00	172	192	172	180	716
10:00	146	172	170	156	644
11:00	166	145	176	178	665
12:00	165	209	164	176	714
13:00	173	153	155	195	676
14:00	170	183	183	232	768
15:00	247	211	207	217	882
16:00	244	224	225	239	932
17:00	243	254	228	197	922
18:00	196	158	147	109	610
19:00	96	90	60	86	332
20:00	56	46	40	51	193
21:00	49	50	32	30	161
22:00	24	21	24	24	93
23:00	11	17	9	4	41
				ADT =	10638

Tuesday, October 28, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	9	4	3	6	22
1:00	3	4	4	0	11
2:00	1	3	4	1	9
3:00	2	1	3	3	9
4:00	1	6	4	15	26
5:00	14	17	23	25	79
6:00	51	69	99	126	345
7:00	194	229	195	246	864
8:00	206	260	308	247	1021
9:00	179	154	156	127	616
10:00	176	136	168	171	651
11:00	138	143	161	172	614
12:00	170	205	178	188	741
13:00	195	168	178	177	718
14:00	181	172	182	239	774
15:00	274	240	201	245	960
16:00	219	224	232	243	918
17:00	239	219	205	191	854
18:00	193	172	138	118	621
19:00	97	72	81	81	331
20:00	77	64	72	60	273
21:00	67	45	61	31	204
22:00	38	25	22	17	102
23:00	8	14	9	11	42
				ADT =	10805

Wednesday, October 29, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	5	6	7	8	26
1:00	2	2	2	0	6
2:00	2	0	0	1	3
3:00	3	0	3	2	8
4:00	1	5	6	12	24
5:00	17	16	16	24	73
6:00	48	75	83	125	331
7:00	184	248	228	221	881
8:00	181	260	328	243	1012
9:00	171	182	177	132	662
10:00	153	174	173	166	666
11:00	148	174	153	197	672
12:00	172	174	164	168	678
13:00	151	189	142	177	659
14:00	189	169	182	237	777
15:00	263	245	213	232	953
16:00	237	238	253	255	983
17:00	254	237	251	206	948
18:00	210	153	134	113	610
19:00	104	81	75	65	325
20:00	66	67	60	73	266
21:00	72	52	56	33	213
22:00	42	26	26	13	107
23:00	14	7	6	9	36
				ADT =	10919

VPD Summary		CVMP
Date	VPD	Threshold
11/2/2014	7926	11600
10/27/2014	10638	11600
10/28/2014	10805	11600
10/29/2014	10919	11600
10/30/2014	11384	11600
10/31/2014	11286	11600
11/1/2014	8947	11600

ADT (3 Day) = 11036
ADT (5 Day) = 11006
ADT (7 Day) = 10272

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
11/2/2014	709	0.93	780	0.96
10/27/2014	980	0.77	964	0.95
10/28/2014	1021	0.83	960	0.88
10/29/2014	1012	0.77	1000	0.98
10/30/2014	1070	0.79	983	0.96
10/31/2014	1025	0.85	986	0.88
11/1/2014	690	0.92	800	0.97

Thursday, October 30, 2014

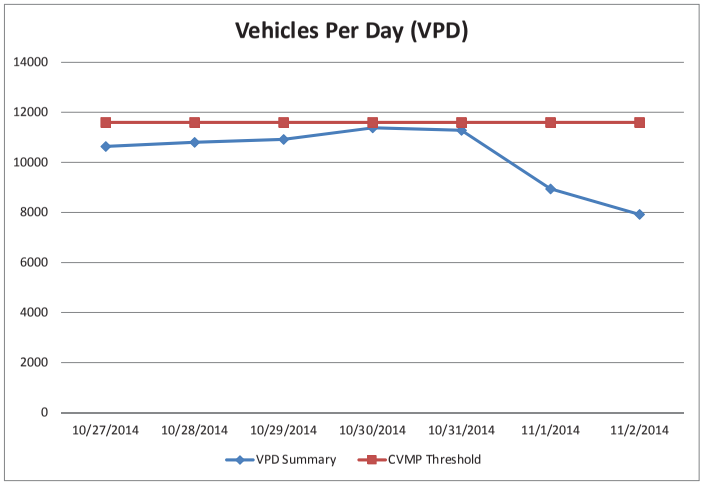
Hour	00-15	15-30	30-45	45-00	Total
0:00	4	2	0	7	13
1:00	2	0	3	0	5
2:00	1	7	0	0	8
3:00	0	3	3	3	9
4:00	0	6	4	15	25
5:00	12	14	21	27	74
6:00	38	84	83	129	334
7:00	191	227	188	234	840
8:00	212	272	340	246	1070
9:00	200	188	157	155	700
10:00	167	160	143	158	628
11:00	174	168	201	175	718
12:00	178	169	168	172	687
13:00	185	175	197	179	736
14:00	201	198	217	280	896
15:00	258	218	250	228	954
16:00	236	229	253	256	974
17:00	245	227	213	212	897
18:00	205	193	170	143	711
19:00	127	106	75	98	406
20:00	78	74	77	73	302
21:00	54	70	45	47	216
22:00	43	40	27	24	134
23:00	16	11	9	11	47
				ADT =	11384

Friday, October 31, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	12	9	6	0	27
1:00	4	4	6	3	17
2:00	1	2	0	3	6
3:00	4	2	1	3	10
4:00	2	4	9	13	28
5:00	12	21	16	31	80
6:00	40	53	72	92	257
7:00	167	209	185	191	752
8:00	217	250	303	255	1025
9:00	183	177	181	158	699
10:00	197	170	176	204	747
11:00	191	178	227	205	801
12:00	196	193	238	249	876
13:00	232	173	219	190	814
14:00	210	207	198	217	832
15:00	280	260	229	184	953
16:00	238	217	210	218	883
17:00	174	213	191	175	753
18:00	164	138	139	115	556
19:00	111	72	74	65	322
20:00	71	85	88	59	303
21:00	68	68	67	65	268
22:00	62	51	40	39	192
23:00	27	21	17	20	85
				ADT =	11286

Saturday, November 1, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	12	18	14	14	58
1:00	8	13	5	6	32
2:00	5	12	6	5	28
3:00	8	4	4	7	23
4:00	2	5	0	7	14
5:00	4	12	6	8	30
6:00	12	21	21	43	97
7:00	31	50	81	74	236
8:00	74	89	111	105	379
9:00	109	111	105	156	481
10:00	123	136	169	149	577
11:00	163	168	172	187	690
12:00	196	199	199	206	800
13:00	182	183	222	164	751
14:00	176	179	202	187	744
15:00	182	145	174	177	678
16:00	190	158	178	164	690
17:00	186	191	179	153	709
18:00	146	154	131	121	552
19:00	100	90	77	68	335
20:00	77	68	69	73	287
21:00	87	64	76	72	299
22:00	74	75	75	78	302
23:00	52	42	33	28	155
				ADT =	8947



Carmel Valley Road
Segment 4 - Ford Road to Laureles Grade
Count Location No. 238 - East of Boronda Road
Dates: 10/27/2014 to 11/2/2014
Sheet 2 of 2

Sunday, November 2, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	17	12	10	9	48	11	6	7	3	27
1:00	5	3	0	5	13	10	3	1	3	17
2:00	3	5	1	2	11	4	2	2	1	9
3:00	2	1	1	2	6	1	1	1	0	3
4:00	3	0	1	0	4	0	0	0	1	1
5:00	3	0	2	2	7	2	2	2	1	7
6:00	2	2	1	6	11	7	6	11	5	29
7:00	5	9	13	13	40	6	12	28	22	68
8:00	14	20	22	46	102	29	24	41	46	140
9:00	37	39	47	75	198	50	60	78	74	262
10:00	53	60	57	66	236	72	93	110	125	400
11:00	55	56	88	86	285	116	111	92	93	412
12:00	84	89	76	100	349	77	90	91	93	351
13:00	85	99	100	88	372	117	105	81	98	401
14:00	80	97	96	92	365	94	83	84	83	344
15:00	81	90	77	97	345	90	95	83	75	343
16:00	80	107	90	89	366	69	89	77	70	305
17:00	77	75	65	79	296	64	70	68	67	269
18:00	76	92	71	84	323	68	60	50	43	221
19:00	53	59	38	41	191	38	25	26	27	116
20:00	42	32	30	29	133	35	20	24	23	102
21:00	24	21	28	21	94	23	23	20	19	85
22:00	13	22	17	15	67	30	23	26	11	90
23:00	13	12	9	9	43	9	4	2	4	19

Monday, October 27, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	2	5	4	2	13	1	2	1	2	6
1:00	3	1	0	1	5	1	2	1	1	5
2:00	0	1	4	1	6	0	0	0	1	1
3:00	0	0	0	0	0	0	3	0	1	4
4:00	0	3	0	5	8	2	6	6	10	24
5:00	1	3	6	15	25	14	16	19	21	70
6:00	10	31	37	50	128	35	30	52	68	185
7:00	59	59	57	76	251	126	176	151	125	578
8:00	74	122	101	67	364	102	128	216	170	616
9:00	68	83	67	75	293	104	109	105	105	423
10:00	61	69	68	71	269	85	103	102	85	375
11:00	83	56	87	83	309	83	89	89	95	356
12:00	92	91	79	85	347	73	118	85	91	367
13:00	91	73	72	109	345	82	80	83	86	331
14:00	87	100	96	144	427	83	83	87	88	341
15:00	97	89	104	121	411	150	122	103	96	471
16:00	134	129	129	143	535	110	95	96	96	397
17:00	150	175	135	107	567	93	79	93	90	355
18:00	137	108	95	72	412	59	50	52	37	198
19:00	76	59	52	70	257	20	31	8	16	75
20:00	37	35	27	33	132	19	11	13	18	61
21:00	32	30	23	23	108	17	20	9	7	53
22:00	17	15	18	14	64	7	6	6	10	29
23:00	5	13	4	2	24	6	4	5	2	17

Tuesday, October 28, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	3	3	5	18	2	1	0	1	4
1:00	3	3	4	0	10	0	1	0	0	1
2:00	1	1	3	0	5	0	2	1	1	4
3:00	1	0	2	1	4	1	1	1	2	5
4:00	0	0	2	5	7	1	6	2	10	19
5:00	1	3	2	7	13	13	14	21	18	66
6:00	14	31	39	49	133	37	38	60	77	212
7:00	59	59	49	92	259	135	170	146	154	605
8:00	68	124	92	103	387	138	136	216	144	634
9:00	59	61	68	52	240	120	93	88	75	376
10:00	87	54	60	72	273	89	82	108	99	378
11:00	65	62	76	77	280	73	81	85	95	334
12:00	81	102	97	94	374	89	103	81	94	367
13:00	91	76	102	98	367	104	92	76	79	351
14:00	79	90	100	149	418	102	82	82	90	356
15:00	108	128	110	137	483	166	112	91	108	477
16:00	114	125	130	136	505	105	99	102	107	413
17:00	145	133	137	129	544	94	86	68	62	310
18:00	114	122	88	88	412	79	50	50	30	209
19:00	70	46	54	55	225	27	26	27	26	106
20:00	47	43	44	43	177	30	21	28	17	96
21:00	53	34	39	19	145	14	11	22	12	59
22:00	26	22	20	10	78	12	3	2	7	24
23:00	8	12	6	5	31	0	2	3	6	11

Wednesday, October 29, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	5	5	6	6	22	0	1	1	2	4
1:00	2	1	0	0	3	0	1	2	0	3
2:00	1	0	0	1	2	1	0	0	0	1
3:00	2	0	0	1	3	1	0	3	1	5
4:00	1	1	1	4	7	0	4	5	8	17
5:00	3	2	5	3	13	14	14	11	21	60
6:00	18	32	37	52	139	30	43	46	73	192
7:00	55	71	63	85	274	129	177	165	136	607
8:00	82	132	100	73	387	99	128	228	170	625
9:00	70	78	69	56	273	101	104	108	76	389
10:00	63	73	63	71	270	90	101	110	95	396
11:00	59	86	67	90	302	89	88	86	107	370
12:00	84	84	88	91	347	88	90	76	77	331
13:00	80	101	81	96	358	71	88	61	81	301
14:00	88	77	101	153	419	101	92	81	84	358
15:00	111	107	103	141	462	152	138	110	91	491
16:00	104	129	151	170	554	133	109	102	85	429
17:00	165	150	154	133	602	89	87	97	73	346
18:00	135	111	94	62	402	75	42	40	51	208
19:00	66	54	52	47	219	38	27	23	18	106
20:00	48	47	31	57	183	18	20	29	16	83
21:00	53	34	44	18	149	19	18	12	15	64
22:00	24	19	17	8	68	18	7	9	5	39
23:00	10	6	4	6	26	4	1	2	3	10

Thursday, October 30, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	4	1	0	6	11	0	1	0	1	2
1:00	1	0	2	0	3	1	0	1	0	2
2:00	0	5	0	0	5	1	2	0	0	3
3:00	0	2	0	2	4	0	1	3	1	5
4:00	0	1	1	6	8	0	5	3	9	17
5:00	2	3	3	8	16	10	11	18	19	58
6:00	14	25	36	52	127	24	59	47	77	207
7:00	51	62	54	83	250	140	165	134	151	590
8:00	77	139	97	97	410	135	133	243	149	660
9:00	85	72	73	66	296	115	116	84	89	404
10:00	70	73	58	75	276	97	87	85	83	352
11:00	78	70	92	95	335	96	98	109	80	383
12:00	84	84	89	87	344	94	85	79	85	343
13:00	92	89	103	89	373	93	86	94	90	363
14:00	74	101	124	163	462	127	97	93	117	434
15:00	106	111	139	134	490	152	107	111	94	464
16:00	126	130	133	144	533	110	99	120	112	441
17:00	145	127	130	139	541	100	100	83	73	356
18:00	133	139	105	99	476	72	54	65	44	235
19:00	85	67	51	57	260	42	39	24	41	146
20:00	48	49	52	45	194	30	25	25	28	108
21:00	32	42	23	27	124	22	28	22	20	92
22:00	27	28	21	17	93	16	12	6	7	41
23:00	12	9	7	8	36	4	2	2	3	11

Friday, October 31, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	5	4	0	16	5	4	2	0	11
1:00	1	2	5	1	9	3	2	1	2	8
2:00	0	2	0	1	3	1	0	0	2	3
3:00	2	1	1	1	5	2	1	0	2	5
4:00	1	0	3	6	10	1	4	6	7	18
5:00	0	4	4	7	15	12	17	12	24	65
6:00	10	21	28	32	91	30	32	44	60	166
7:00	35	52	71	64	222	132	157	114	127	530
8:00	81	121	110	107	419	136	129	193	148	606
9:00	72	69	60	68	269	111	108	121	90	430
10:00	80	78	81	98	337	117	92	95	106	410
11:00	96	91	100	95	382	95	87	127	110	419
12:00	90	102	155	147	494	106	91	83	102	382
13:00	144	106	95	86	431	88	67	124	104	383
14:00	100	110	102	123	435	110	97	96	94	397
15:00	112	123	139	97	471	168	137	90	87	482
16:00	140	148	138	135	561	98	69	72	83	322
17:00	98	125	120	119	462	76	88	71	56	291
18:00	105	83	98	80	366	59	55	41	35	190
19:00	64	42	40	34	180	47	30	34	31	142
20:00	39	52	51	30	172	32	33	37	29	131
21:00	33	40	33	32	138	35	28	34	33	130
22:00	29	28	25	26	108	33	23	15	13	84
23:00	15	12	14	14	55	12	9	3	6	30

Saturday, November 1, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	9	9	8	8	34	3	9	6	6	24
1:00	5	8	3	3	19	3	5	2	3	13
2:00	4	2	4	5	15	1	10	2	0	13
3:00	5	1	2	4	12	3	3	2	3	11
4:00	0	3	0	2	5	2	2	0	5	9
5:00	1	3	0	3	7	3	9	6	5	23
6:00	4	8	10	29	51	8	13	11	14	46
7:00	12	16	35	33	96	19	34	46	41	140
8:00	34	42	45	47	168	40	47	66	58	211
9:00	40	49	31	61	181	69	62	74	95	300
10:00	44	58	80	71	253	79	78	89	78	324
11:00	81	66	78	106	331	82	102	94	81	359
12:00	100	101	101	112	414	96	98	98	94	386
13:00	93	90	114	89	386	89	93	108	75	365
14:00	88	92	118	108	406	88	87	84	79	338
15:00	102	72	96	96	366	80	73	78	81	312
16:00	86	83	100	91	360	104	75	78	73	330
17:00	107	93	92	82	374	79	98	87	71	335
18:00	84	90	88	82	344	62	64	43	39	208
19:00	53	60	45	43	201	47	30	32	25	134
20:00	46	33	37	40	156	31	35	32	33	131
21:00	44	26	43	37	150	43	38	33	35	149
22:00	32	33	37	31	133	42	42	38	47	169
23:00	27	19	17	18	81	25	23	16	10	74

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 5 - Laureles Grade to Robinson Canyon Road
Count Location No. 193 - west of Rancho Fiesta Road
Dates: 10/27/2014 to 11/2/2014
Sheet 1 of 2

Sunday, November 2, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
13:00					
14:00					
15:00					
16:00					
17:00					
18:00					
19:00					
20:00					
21:00					
22:00					
23:00					
				ADT =	-

Monday, October 27, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	12	7	6	4	29
1:00	1	3	0	1	5
2:00	4	1	4	3	12
3:00	0	1	1	0	2
4:00	3	2	9	11	25
5:00	10	19	21	29	79
6:00	37	56	70	102	265
7:00	150	250	227	240	867
8:00	210	212	246	251	919
9:00	178	185	180	168	711
10:00	144	172	169	159	644
11:00	158	138	186	178	660
12:00	180	204	154	194	732
13:00	176	135	173	199	683
14:00	170	182	201	230	783
15:00	218	242	230	228	918
16:00	237	242	227	277	983
17:00	252	277	233	196	958
18:00	197	170	143	117	627
19:00	109	80	71	76	336
20:00	58	45	36	56	195
21:00	54	45	37	35	171
22:00	27	23	25	18	93
23:00	18	16	9	7	50
				ADT =	10747

Tuesday, October 28, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	15	5	4	7	31
1:00	4	1	4	0	9
2:00	3	3	3	1	10
3:00	1	2	1	0	4
4:00	0	2	5	9	16
5:00	13	13	31	31	88
6:00	39	64	79	103	285
7:00	152	254	201	252	859
8:00	204	256	249	262	971
9:00	196	201	162	149	708
10:00	181	143	170	194	688
11:00	157	149	145	179	630
12:00	162	199	192	186	739
13:00	191	176	178	173	718
14:00	174	166	211	245	796
15:00	228	275	233	243	979
16:00	241	227	258	253	979
17:00	257	247	231	184	919
18:00	162	186	142	122	612
19:00	98	84	80	80	342
20:00	63	61	69	68	261
21:00	59	50	44	31	184
22:00	35	22	26	17	100
23:00	12	10	7	13	42
				ADT =	10970

Wednesday, October 29, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	6	6	2	9	23
1:00	3	1	1	0	5
2:00	1	1	0	2	4
3:00	1	0	0	2	3
4:00	1	2	3	12	18
5:00	14	14	28	17	73
6:00	45	67	65	107	284
7:00	157	247	207	255	866
8:00	200	207	256	275	938
9:00	187	198	177	164	726
10:00	156	163	165	162	646
11:00	172	159	173	184	688
12:00	209	166	193	178	746
13:00	166	184	168	185	703
14:00	184	159	200	261	804
15:00	235	275	242	278	1030
16:00	233	268	242	289	1032
17:00	246	323	264	186	1019
18:00	216	175	140	105	636
19:00	112	90	75	58	335
20:00	66	54	57	72	249
21:00	89	47	43	35	214
22:00	33	29	26	12	100
23:00	14	16	7	9	46
				ADT =	11188

VPD Summary		CVMP
Date	VPD	Threshold
11/2/2014		12752
10/27/2014	10747	12752
10/28/2014	10970	12752
10/29/2014	11188	12752
10/30/2014	11524	12752
10/31/2014	11143	12752
11/1/2014		12752

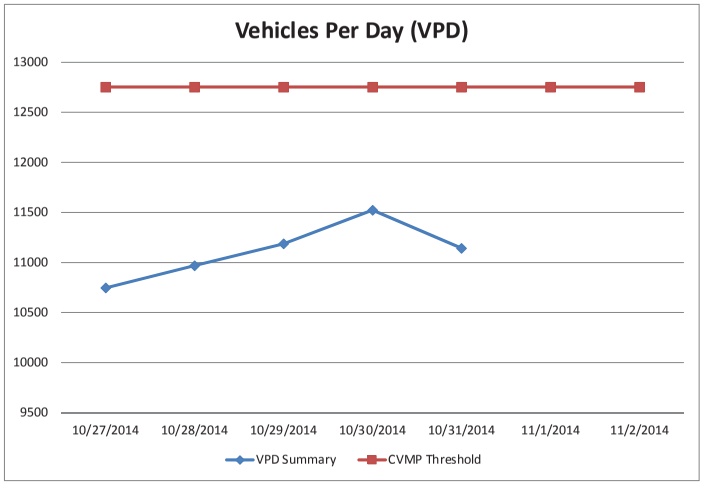
ADT (3 Day) = 11227
ADT (5 Day) = -
ADT (7 Day) = -

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
11/2/2014				
10/27/2014	919	0.92	1039	0.94
10/28/2014	971	0.93	1015	0.98
10/29/2014	938	0.85	1032	0.89
10/30/2014	1039	0.93	1040	0.92
10/31/2014	965	0.92	999	0.79
11/1/2014				

Thursday, October 30, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	10	3	0	7	20
1:00	2	2	1	1	6
2:00	1	3	2	0	6
3:00	0	4	2	1	7
4:00	0	2	4	10	16
5:00	5	14	32	29	80
6:00	34	64	75	83	256
7:00	149	224	220	249	842
8:00	223	261	278	277	1039
9:00	211	169	189	160	729
10:00	160	173	165	204	702
11:00	164	167	177	193	701
12:00	169	185	169	174	697
13:00	184	190	200	194	768
14:00	217	213	243	244	917
15:00	229	279	260	224	992
16:00	255	237	239	281	1012
17:00	283	236	228	219	966
18:00	200	198	159	151	708
19:00	124	113	77	83	397
20:00	83	63	73	73	292
21:00	47	71	51	36	205
22:00	35	36	28	19	118
23:00	21	11	7	9	48
				ADT =	11524

Friday, October 31, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00	7	6	3	3	19
1:00	3	3	8	2	16
2:00	2	1	1	3	7
3:00	1	1	1	2	5
4:00	4	2	5	9	20
5:00	10	12	30	24	76
6:00	38	45	66	85	234
7:00	144	219	206	217	786
8:00	202	257	245	261	965
9:00	183	183	148	202	716
10:00	191	172	193	194	750
11:00	191	181	180	191	743
12:00	212	193	238	218	861
13:00	218	196	179	184	777
14:00	211	211	206	209	837
15:00	209	316	243	204	972
16:00	236	252	216	205	909
17:00	174	189	180	175	718
18:00	174	137	141	115	567
19:00	81	77	74	79	311
20:00	67	80	75	55	277
21:00	55	59	59	67	240
22:00	55	48	46	54	203
23:00	36	38	33	27	134
				ADT =	11143

Saturday, November 1, 2014					
Hour	00-15	15-30	30-45	45-00	Total
0:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
13:00					
14:00					
15:00					
16:00					
17:00					
18:00					
19:00					
20:00					
21:00					
22:00					
23:00					
				ADT =	-



Carmel Valley Road
Segment 5 - Laureles Grade to Robinson Canyon Road
Count Location No. 193 - west of Rancho Fiesta Road
Dates: 10/27/2014 to 11/2/2014
Sheet 2 of 2

Sunday, November 2, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00										
1:00										
2:00										
3:00										
4:00										
5:00										
6:00										
7:00										
8:00										
9:00										
10:00										
11:00										
12:00										
13:00										
14:00										
15:00										
16:00										
17:00										
18:00										
19:00										
20:00										
21:00										
22:00										
23:00										

Monday, October 27, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	3	2	4	2	11	9	5	2	2	18
1:00	1	1	0	1	3	0	2	0	0	2
2:00	3	1	4	1	9	1	0	0	2	3
3:00	0	0	0	0	0	0	1	1	0	2
4:00	3	0	2	4	9	0	2	7	7	16
5:00	2	5	4	8	19	8	14	17	21	60
6:00	12	21	16	29	78	25	35	54	73	187
7:00	45	54	58	73	230	105	196	169	167	637
8:00	81	90	87	53	311	129	122	159	198	608
9:00	61	69	59	75	264	117	116	121	93	447
10:00	64	68	72	75	279	80	104	97	84	365
11:00	68	64	84	83	299	90	74	102	95	361
12:00	91	87	77	105	360	89	117	77	89	372
13:00	98	69	83	109	359	78	66	90	90	324
14:00	84	96	112	131	423	86	86	89	99	360
15:00	114	116	138	147	515	104	126	92	81	403
16:00	149	157	157	181	644	88	85	70	96	339
17:00	161	196	150	128	635	91	81	83	68	323
18:00	140	118	98	77	433	57	52	45	40	194
19:00	76	55	55	66	252	33	25	16	10	84
20:00	43	34	27	37	141	15	11	9	19	54
21:00	41	32	24	28	125	13	13	13	7	46
22:00	20	16	19	15	70	7	7	6	3	23
23:00	9	13	4	4	30	9	3	5	3	20

Tuesday, October 28, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	9	3	2	6	20	6	2	2	1	11
1:00	2	1	3	0	6	2	0	1	0	3
2:00	2	2	1	0	5	1	1	2	1	5
3:00	0	1	1	0	2	1	1	0	0	2
4:00	0	1	1	4	6	0	1	4	5	10
5:00	0	2	2	4	8	13	11	29	27	80
6:00	8	24	26	21	79	31	40	53	82	206
7:00	40	59	42	83	224	112	195	159	169	635
8:00	72	109	74	79	334	132	147	175	183	637
9:00	65	69	55	53	242	131	132	107	96	466
10:00	80	54	66	70	270	101	89	104	124	418
11:00	76	70	66	88	300	81	79	79	91	330
12:00	76	106	95	94	371	86	93	97	92	368
13:00	95	83	105	87	370	96	93	73	86	348
14:00	88	105	134	128	455	86	61	77	117	341
15:00	116	141	130	144	531	112	134	103	99	448
16:00	145	149	174	178	646	96	78	84	75	333
17:00	185	183	156	137	661	72	64	75	47	258
18:00	112	121	93	95	421	50	65	49	27	191
19:00	71	54	56	61	242	27	30	24	19	100
20:00	49	41	43	51	184	14	20	26	17	77
21:00	50	41	36	21	148	9	9	8	10	36
22:00	27	17	19	13	76	8	5	7	4	24
23:00	9	10	5	5	29	3	0	2	8	13

Wednesday, October 29, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	5	4	1	7	17	1	2	1	2	6
1:00	2	1	0	0	3	1	0	1	0	2
2:00	1	1	0	1	3	0	0	0	1	1
3:00	1	0	0	1	2	0	0	0	1	1
4:00	0	2	0	4	6	1	0	3	8	12
5:00	2	3	7	0	12	12	11	21	17	61
6:00	11	23	20	29	83	34	44	45	78	201
7:00	39	44	41	79	203	118	203	166	176	663
8:00	84	102	72	74	332	116	105	184	201	606
9:00	74	75	63	57	269	113	123	114	107	457
10:00	64	67	67	66	264	92	96	98	96	382
11:00	70	78	77	85	310	102	81	96	99	378
12:00	104	88	107	97	396	105	78	86	81	350
13:00	83	109	89	99	380	83	75	79	86	323
14:00	99	80	104	154	437	85	79	96	107	367
15:00	125	144	139	173	581	110	131	103	105	449
16:00	131	167	166	204	668	102	101	76	85	364
17:00	181	216	183	144	724	65	107	81	42	295
18:00	159	126	99	72	456	57	49	41	33	180
19:00	70	69	53	46	238	42	21	22	12	97
20:00	48	43	26	49	166	18	11	31	23	83
21:00	61	37	32	22	152	28	10	11	13	62
22:00	22	22	15	7	66	11	7	11	5	34
23:00	12	10	7	6	35	2	6	0	3	11

Thursday, October 30, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	6	2	0	6	14	4	1	0	1	6
1:00	1	1	1	1	4	1	1	0	0	2
2:00	0	3	0	0	3	1	0	2	0	3
3:00	0	2	0	1	3	0	2	2	0	4
4:00	0	1	1	4	6	0	1	3	6	10
5:00	1	3	5	6	15	4	11	27	23	65
6:00	8	14	22	15	59	26	50	53	68	197
7:00	39	46	42	80	207	110	178	178	169	635
8:00	85	118	80	87	370	138	143	198	190	669
9:00	82	71	76	66	295	129	98	113	94	434
10:00	64	67	63	86	280	96	106	102	118	422
11:00	68	81	70	88	307	96	86	107	105	394
12:00	87	88	86	88	349	82	97	83	86	348
13:00	106	102	113	87	408	78	88	87	107	360
14:00	93	105	145	132	475	124	108	98	112	442
15:00	127	153	175	140	595	102	126	85	84	397
16:00	149	154	155	181	639	106	83	84	100	373
17:00	191	168	156	152	667	92	68	72	67	299
18:00	134	139	102	102	477	66	59	57	49	231
19:00	85	72	55	58	270	39	41	22	25	127
20:00	57	39	55	40	191	26	24	18	33	101
21:00	24	47	35	22	128	23	24	16	14	77
22:00	24	28	19	14	85	11	8	9	5	33
23:00	13	9	5	5	32	8	2	2	4	16

Friday, October 31, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	5	3	3	1	12	2	3	0	2	7
1:00	1	2	7	1	11	2	1	1	1	5
2:00	0	1	1	2	4	2	0	0	1	3
3:00	1	0	0	2	3	0	1	1	0	2
4:00	1	0	1	4	6	3	2	4	5	14
5:00	1	2	4	3	10	9	10	26	21	66
6:00	9	13	19	24	65	29	32	47	61	169
7:00	24	42	67	64	197	120	177	139	153	589
8:00	79	117	84	95	375	123	140	161	166	590
9:00	73	62	43	64	242	110	121	105	138	474
10:00	76	66	85	91	318	115	106	108	103	432
11:00	78	75	84	85	322	113	106	96	106	421
12:00	113	103	153	113	482	99	90	85	105	379
13:00	131	115	100	86	432	87	81	79	98	345
14:00	122	110	125	105	462	89	101	81	104	375
15:00	124	161	154	130	569	85	155	89	74	403
16:00	160	166	155	146	627	76	86	61	59	282
17:00	100	128	115	116	459	74	61	65	59	259
18:00	117	93	88	79	377	57	44	53	36	190
19:00	53	43	45	45	186	28	34	29	34	125
20:00	37	59	40	34	170	30	21	35	21	107
21:00	33	44	45	56	178	22	15	14	11	62
22:00	36	37	38	46	157	19	11	8	8	46
23:00	27	28	31	26	112	9	10	2	1	22

Saturday, November 1, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00										
1:00										
2:00										
3:00										
4:00										
5:00										
6:00										
7:00										
8:00										
9:00										
10:00										
11:00										
12:00										
13:00										
14:00										
15:00										
16:00										
17:00										
18:00										
19:00										
20:00										
21:00										
22:00										
23:00										

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 6 - Robinson Canyon Road to Schulte Road
Count Location No. 235 - West of Loma Del Rey Road
Dates: 10/27/2014 to 11/2/2014
Sheet 1 of 2

Sunday, November 2, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	36	34	22	16	108
1:00	11	7	8	6	32
2:00	5	6	3	5	19
3:00	3	2	4	2	11
4:00	1	2	1	3	7
5:00	4	4	4	8	20
6:00	12	15	23	29	79
7:00	22	24	37	43	126
8:00	53	47	82	95	277
9:00	108	104	141	156	509
10:00	147	171	210	209	737
11:00	206	220	223	221	870
12:00	215	205	254	285	959
13:00	229	276	245	216	966
14:00	246	239	223	224	932
15:00	225	236	234	225	920
16:00	189	225	213	173	800
17:00	175	160	203	186	724
18:00	173	179	157	129	638
19:00	111	95	93	81	380
20:00	81	93	78	53	305
21:00	57	47	58	37	199
22:00	46	47	49	24	166
23:00	36	21	25	17	99
				ADT =	9883

Monday, October 27, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	15	9	9	6	39
1:00	5	2	1	2	10
2:00	4	1	6	4	15
3:00	0	3	2	4	9
4:00	3	3	9	15	30
5:00	20	21	30	38	109
6:00	47	63	95	106	311
7:00	176	293	292	298	1059
8:00	265	257	277	334	1133
9:00	236	228	223	250	937
10:00	188	204	207	220	819
11:00	188	223	244	240	895
12:00	249	265	234	248	996
13:00	224	199	206	226	855
14:00	213	215	267	247	942
15:00	265	342	312	268	1187
16:00	305	294	306	297	1202
17:00	322	300	310	229	1161
18:00	234	201	175	145	755
19:00	130	105	93	85	413
20:00	65	47	49	69	230
21:00	59	66	44	51	220
22:00	38	34	23	24	119
23:00	21	17	10	10	58
				ADT =	13504

Tuesday, October 28, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	13	5	6	3	27
1:00	3	2	6	1	12
2:00	1	2	4	2	9
3:00	3	0	3	2	8
4:00	2	5	9	13	29
5:00	11	17	38	41	107
6:00	48	71	83	121	323
7:00	171	287	293	324	1075
8:00	261	282	332	319	1194
9:00	224	252	218	195	889
10:00	206	209	229	246	890
11:00	217	228	222	247	914
12:00	242	267	253	236	998
13:00	233	242	244	204	923
14:00	223	220	261	265	969
15:00	290	328	308	289	1215
16:00	327	272	316	315	1230
17:00	335	266	285	203	1089
18:00	182	218	195	157	752
19:00	128	112	106	100	446
20:00	95	67	82	82	326
21:00	70	53	54	39	216
22:00	44	33	30	12	119
23:00	24	11	5	18	58
				ADT =	13818

Wednesday, October 29, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	9	8	6	8	31
1:00	3	1	4	2	10
2:00	1	1	0	7	9
3:00	0	0	0	2	2
4:00	4	4	6	17	31
5:00	14	27	38	32	111
6:00	59	90	89	113	351
7:00	189	301	288	350	1128
8:00	256	282	270	375	1183
9:00	250	223	247	242	962
10:00	212	235	235	237	919
11:00	236	237	255	239	967
12:00	268	256	243	239	1006
13:00	228	270	218	238	954
14:00	227	218	269	286	1000
15:00	325	356	315	303	1299
16:00	296	313	304	340	1253
17:00	312	362	300	258	1232
18:00	213	204	150	131	698
19:00	133	117	99	74	423
20:00	72	51	88	77	288
21:00	94	65	47	46	252
22:00	48	38	27	18	131
23:00	23	18	15	12	68
				ADT =	14308

VPD Summary		CVMP
Date	VPD	Threshold
11/2/2014	9883	15499
10/27/2014	13504	15499
10/28/2014	13818	15499
10/29/2014	14308	15499
10/30/2014	14672	15499
10/31/2014	14004	15499
11/1/2014	11606	15499

ADT (3 Day) = 14266
ADT (5 Day) = 14061
ADT (7 Day) = 13114

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
11/2/2014	870	0.98	1044	0.92
10/27/2014	1133	0.85	1202	0.98
10/28/2014	1194	0.90	1238	0.92
10/29/2014	1183	0.79	1299	0.91
10/30/2014	1250	0.90	1305	0.90
10/31/2014	1211	0.96	1190	0.91
11/1/2014	888	0.91	927	0.97

Thursday, October 30, 2014

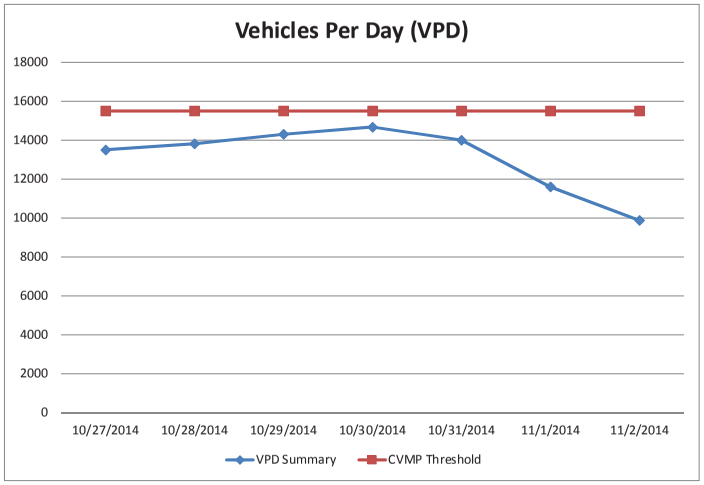
Hour	00-15	15-30	30-45	45-00	Total
0:00	7	5	3	6	21
1:00	4	3	5	0	12
2:00	2	1	4	1	8
3:00	2	5	3	4	14
4:00	2	1	8	8	19
5:00	10	19	38	38	105
6:00	52	66	98	103	319
7:00	174	275	274	323	1046
8:00	282	320	300	348	1250
9:00	253	257	225	222	957
10:00	221	260	230	227	938
11:00	220	223	256	228	927
12:00	236	246	238	283	1003
13:00	234	241	245	226	946
14:00	269	289	291	308	1157
15:00	293	362	342	291	1288
16:00	297	300	312	340	1249
17:00	344	281	279	273	1177
18:00	266	239	193	180	878
19:00	140	139	110	111	500
20:00	94	93	97	80	364
21:00	67	79	62	56	264
22:00	53	49	27	24	153
23:00	35	16	17	9	77
				ADT =	14672

Friday, October 31, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	11	8	7	3	29
1:00	2	4	10	3	19
2:00	3	3	1	4	11
3:00	3	3	1	3	10
4:00	3	3	6	13	25
5:00	10	19	39	25	93
6:00	46	50	79	101	276
7:00	139	284	284	295	1002
8:00	263	315	269	364	1211
9:00	211	247	224	279	961
10:00	223	261	229	268	981
11:00	244	224	286	249	1003
12:00	284	297	291	277	1149
13:00	256	254	218	235	963
14:00	254	239	266	272	1031
15:00	279	326	286	290	1181
16:00	288	277	238	214	1017
17:00	240	220	231	230	921
18:00	194	168	179	123	664
19:00	109	96	94	102	401
20:00	95	102	71	74	342
21:00	71	86	86	80	323
22:00	59	69	53	53	234
23:00	55	29	48	25	157
				ADT =	14004

Saturday, November 1, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	30	20	17	24	91
1:00	18	10	10	9	47
2:00	12	8	7	6	33
3:00	8	6	9	7	30
4:00	1	2	3	11	17
5:00	11	12	19	20	62
6:00	20	26	25	46	117
7:00	36	53	77	104	270
8:00	92	107	129	148	476
9:00	146	152	172	195	665
10:00	200	204	230	205	839
11:00	183	221	241	243	888
12:00	252	229	240	262	983
13:00	222	251	231	244	948
14:00	231	239	243	220	933
15:00	212	215	226	210	863
16:00	221	242	217	238	918
17:00	230	230	229	232	921
18:00	180	211	158	142	691
19:00	128	124	108	100	460
20:00	84	97	96	86	363
21:00	108	92	97	107	404
22:00	91	109	90	90	380
23:00	75	46	39	47	207
				ADT =	11606



Carmel Valley Road
Segment 6 - Robinson Canyon Road to Schulte Road
Count Location No. 235 - West of Loma Del Rey Road
Dates: 10/27/2014 to 11/2/2014
Sheet 2 of 2

Sunday, November 2, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	25	17	14	10	66	11	17	8	6	42
1:00	3	3	4	5	15	8	4	4	1	17
2:00	4	2	0	2	8	1	4	3	3	11
3:00	3	2	2	1	8	0	0	2	1	3
4:00	1	2	1	2	6	0	0	0	1	1
5:00	4	1	3	4	12	0	3	1	4	8
6:00	2	6	12	15	35	10	9	11	14	44
7:00	10	7	13	23	53	12	17	24	20	73
8:00	22	18	35	46	121	31	29	47	49	156
9:00	41	38	60	70	209	67	66	81	86	300
10:00	57	76	89	84	306	90	95	121	125	431
11:00	84	84	106	90	364	122	136	117	131	506
12:00	96	95	91	109	391	119	110	163	176	568
13:00	112	126	116	118	472	117	150	129	98	494
14:00	119	119	114	107	459	127	120	109	117	473
15:00	120	134	120	115	489	105	102	114	110	431
16:00	105	121	103	99	428	84	104	110	74	372
17:00	97	82	107	109	395	78	78	96	77	329
18:00	95	110	95	75	375	78	69	62	54	263
19:00	66	59	59	56	240	45	36	34	25	140
20:00	54	49	48	35	186	27	44	30	18	119
21:00	30	27	27	17	101	27	20	31	20	98
22:00	26	22	23	13	84	20	25	26	11	82
23:00	19	14	16	12	61	17	7	9	5	38

Monday, October 27, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	4	4	4	2	14	11	5	5	4	25
1:00	4	0	1	1	6	1	2	0	1	4
2:00	3	1	6	1	11	1	0	0	3	4
3:00	0	1	1	4	6	0	2	1	0	3
4:00	1	1	2	5	9	2	2	7	10	21
5:00	7	10	13	14	44	13	11	17	24	65
6:00	21	24	31	33	109	26	39	64	73	202
7:00	50	59	87	107	303	126	234	205	191	756
8:00	113	110	107	90	420	152	147	170	244	713
9:00	90	85	78	103	356	146	143	145	147	581
10:00	80	86	85	96	347	108	118	122	124	472
11:00	75	100	97	116	388	113	123	147	124	507
12:00	129	130	124	129	512	120	135	110	119	484
13:00	115	111	100	122	448	109	88	106	104	407
14:00	116	111	141	123	491	97	104	126	124	451
15:00	143	187	179	154	663	122	155	133	114	524
16:00	186	168	216	192	762	119	126	90	105	440
17:00	205	206	195	156	762	117	94	115	73	399
18:00	160	134	122	96	512	74	67	53	49	243
19:00	88	79	71	67	305	42	26	22	18	108
20:00	47	34	31	46	158	18	13	18	23	72
21:00	41	49	24	36	150	18	17	20	15	70
22:00	20	20	16	14	70	18	14	7	10	49
23:00	13	7	4	6	30	8	10	6	4	28

Tuesday, October 28, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	7	4	2	3	16	6	1	4	0	11
1:00	2	2	5	1	10	1	0	1	0	2
2:00	1	1	2	1	5	0	1	2	1	4
3:00	1	0	1	2	4	2	0	2	0	4
4:00	1	3	4	6	14	1	2	5	7	15
5:00	2	7	10	13	32	9	10	28	28	75
6:00	24	17	34	35	110	24	54	49	86	213
7:00	50	51	84	120	305	121	236	209	204	770
8:00	109	118	134	118	479	152	164	198	201	715
9:00	83	90	80	73	326	141	162	138	122	563
10:00	84	80	105	92	361	122	129	124	154	529
11:00	96	93	109	114	412	121	135	113	133	502
12:00	122	155	133	117	527	120	112	120	119	471
13:00	120	124	127	101	472	113	118	117	103	451
14:00	117	126	142	139	524	106	94	119	126	445
15:00	154	179	181	151	665	136	149	127	138	550
16:00	194	148	198	215	755	133	124	118	100	475
17:00	230	182	194	151	757	105	84	91	52	332
18:00	116	137	127	103	483	66	81	68	54	269
19:00	88	62	74	71	295	40	50	32	29	151
20:00	72	46	58	57	233	23	21	24	25	93
21:00	58	41	40	25	164	12	12	14	14	52
22:00	33	19	20	4	76	11	14	10	8	43
23:00	13	8	3	6	30	11	3	2	12	28

Wednesday, October 29, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	6	6	2	7	21	3	2	4	1	10
1:00	0	1	2	2	5	3	0	2	0	5
2:00	1	0	0	7	8	0	1	0	0	1
3:00	0	0	0	1	1	0	0	0	1	1
4:00	1	3	0	8	12	3	1	6	9	19
5:00	4	12	15	11	42	10	15	23	21	69
6:00	19	37	34	34	124	40	53	55	79	227
7:00	55	52	74	133	314	134	249	214	217	814
8:00	124	126	93	128	471	132	156	177	247	712
9:00	98	86	98	84	366	152	137	149	158	596
10:00	92	102	84	103	381	120	133	151	134	538
11:00	91	120	106	115	432	145	117	149	124	535
12:00	130	143	123	112	508	138	113	120	127	498
13:00	115	147	109	120	491	113	123	109	118	463
14:00	129	110	137	151	527	98	108	132	135	473
15:00	175	208	178	174	735	150	148	137	129	564
16:00	161	192	199	240	792	135	121	105	100	461
17:00	210	242	181	187	820	102	120	119	71	412
18:00	147	148	94	92	481	66	56	56	39	217
19:00	79	88	70	57	294	54	29	29	17	129
20:00	58	42	52	52	204	14	9	36	25	84
21:00	68	50	33	29	180	26	15	14	17	72
22:00	34	25	17	10	86	14	13	10	8	45
23:00	14	8	13	5	40	9	10	2	7	28

Thursday, October 30, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	4	3	1	4	12	3	2	2	2	9
1:00	3	3	4	0	10	1	0	1	0	2
2:00	2	1	1	1	5	0	0	3	0	3
3:00	2	1	1	2	6	0	4	2	2	8
4:00	2	1	1	3	7	0	0	7	5	12
5:00	3	9	12	15	39	7	10	26	23	66
6:00	23	19	31	34	107	29	47	67	69	212
7:00	46	49	67	122	284	128	226	207	201	762
8:00	104	148	115	123	490	178	172	185	225	760
9:00	111	116	81	83	391	142	141	144	139	566
10:00	93	110	96	93	392	128	150	134	134	546
11:00	100	100	114	114	428	120	123	142	114	499
12:00	108	125	113	135	481	128	121	125	148	522
13:00	120	124	128	98	470	114	117	117	128	476
14:00	124	153	165	163	605	145	136	126	145	552
15:00	153	224	193	165	735	140	138	149	126	553
16:00	170	186	187	218	761	127	114	125	122	488
17:00	208	197	186	174	765	136	84	93	99	412
18:00	172	164	123	112	571	94	75	70	68	307
19:00	95	92	79	76	342	45	47	31	35	158
20:00	61	63	73	50	247	33	30	24	30	117
21:00	41	56	41	34	172	26	23	21	22	92
22:00	37	36	17	21	111	16	13	10	3	42
23:00	16	8	7	6	37	19	8	10	3	40

Friday, October 31, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	6	3	3	2	14	5	5	4	1	15
1:00	2	2	7	3	14	0	2	3	0	5
2:00	1	2	1	2	6	2	1	0	2	5
3:00	3	1	0	3	7	0	2	1	0	3
4:00	1	2	1	8	12	2	1	5	5	13
5:00	3	5	13	9	30	7	14	26	16	63
6:00	13	19	28	30	90	33	31	51	71	186
7:00	31	56	99	109	295	108	228	185	186	707
8:00	120	153	92	154	519	143	162	177	210	692
9:00	84	84	78	104	350	127	163	146	175	611
10:00	82	116	109	114	421	141	145	120	154	560
11:00	98	85	141	120	444	146	139	145	129	559
12:00	149	157	148	159	613	135	140	143	118	536
13:00	127	134	111	125	497	129	120	107	110	466
14:00	138	118	122	146	524	116	121	144	126	507
15:00	171	188	172	188	719	108	138	114	102	462
16:00	200	173	163	137	673	88	104	75	77	344
17:00	142	138	140	148	568	98	82	91	82	353
18:00	114	109	122	79	424	80	59	57	44	240
19:00	62	57	59	62	240	47	39	35	40	161
20:00	63	70	40	48	221	32	32	31	26	121
21:00	38	48	60	45	191	33	38	26	35	132
22:00	35	38	31	31	135	24	31	22	22	99
23:00	31	15	19	18	83	24	14	29	7	74

Saturday, November 1, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	11	12	8	15	46	19	8	9	9	45
1:00	7	6	6	5	24	11	4	4	4	23
2:00	5	4	4	3	16	7	4	3	3	17
3:00	4	1	4	3	12	4	5	5	4	18
4:00	1	1	1	8	11	0	1	2	3	6
5:00	3	7	8	8	26	8	5	11	12	36
6:00	9	10	12	26	57	11	16	13	20	60
7:00	9	21	29	40	99	27	32	48	64	171
8:00	37	47	52	67	203	55	60	77	81	273
9:00	60	60	58	80	258	86	92	114	115	407
10:00	71	74	102	92	339	129	130	128	113	500
11:00	89	96	102	113	400	94	125	139	130	488
12:00	124	109	106	129	468	128	120	134	133	515
13:00	115	129	118	139	501	107	122	113	105	447
14:00	121	129	135	131	516	110	110	108	89	417
15:00	115	108	135	102	460	97	107	91	108	403
16:00	134	137	132	143	546	87	105	85	95	372
17:00	131	127	141	136	535	99	103	88	96	386
18:00	113	117	94	79	403	67	94	64	63	288
19:00	75	62	63	64	264	53	62	45	36	196
20:00	45	56	54	55	210	39	41	42	31	153
21:00	57	43	55	60	215	51	49	42	47	189
22:00	39	42	36	42	159	52	67	54	48	221
23:00	36	26	16	30	108	39	20	23	17	99

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 7 - Schulte Road to Rancho San Carlos Road
Count Location No. 192 - West of Carmel Meadows Road
Dates: 10/27/2014 to 11/2/2014
Sheet 1 of 2

Sunday, November 2, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	41	29	25	17	112
1:00	13	11	8	6	38
2:00	6	7	2	9	24
3:00	2	2	5	2	11
4:00	1	4	2	5	12
5:00	6	4	4	11	25
6:00	16	22	23	33	94
7:00	25	27	46	52	150
8:00	52	56	76	104	288
9:00	111	112	150	173	546
10:00	155	189	209	244	797
11:00	206	236	243	231	916
12:00	213	216	267	300	996
13:00	255	307	265	246	1073
14:00	257	254	242	237	990
15:00	250	261	238	239	988
16:00	207	235	216	204	862
17:00	193	171	206	198	768
18:00	182	205	168	148	703
19:00	114	110	99	88	411
20:00	89	95	80	64	328
21:00	66	53	59	50	228
22:00	49	45	59	26	179
23:00	39	24	26	17	106
				ADT =	10645

Monday, October 27, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	18	9	10	7	44
1:00	5	2	2	2	11
2:00	4	1	7	3	15
3:00	2	2	4	4	12
4:00	5	2	16	16	39
5:00	16	30	33	45	124
6:00	56	79	92	129	356
7:00	181	308	358	359	1206
8:00	312	276	274	368	1230
9:00	265	265	253	287	1070
10:00	208	234	217	260	919
11:00	215	242	276	273	1006
12:00	277	287	257	268	1089
13:00	245	242	217	269	973
14:00	239	246	293	290	1068
15:00	312	384	320	331	1347
16:00	350	357	330	331	1368
17:00	363	347	330	280	1320
18:00	239	229	184	164	816
19:00	130	118	101	99	448
20:00	59	57	50	75	241
21:00	56	69	48	47	220
22:00	45	29	21	23	118
23:00	30	15	11	14	70
				ADT =	15110

Tuesday, October 28, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	15	10	6	4	35
1:00	3	2	7	1	13
2:00	1	2	7	3	13
3:00	2	0	6	4	12
4:00	3	7	11	15	36
5:00	14	20	45	50	129
6:00	60	78	93	139	370
7:00	169	327	351	371	1218
8:00	309	309	305	349	1272
9:00	259	276	247	237	1019
10:00	205	243	257	263	968
11:00	257	242	270	287	1056
12:00	263	293	265	270	1091
13:00	249	268	292	215	1024
14:00	285	242	261	335	1123
15:00	332	407	346	343	1428
16:00	362	318	363	353	1396
17:00	359	287	313	223	1182
18:00	193	242	222	174	831
19:00	140	121	130	96	487
20:00	122	75	107	84	388
21:00	75	64	55	46	240
22:00	40	37	31	14	122
23:00	23	12	9	18	62
				ADT =	15515

Wednesday, October 29, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	18	9	5	12	44
1:00	1	3	5	3	12
2:00	1	2	2	6	11
3:00	0	0	1	2	3
4:00	4	6	10	18	38
5:00	12	31	47	41	131
6:00	61	90	107	124	382
7:00	192	344	375	409	1320
8:00	307	292	295	367	1261
9:00	286	248	268	248	1050
10:00	226	264	257	242	989
11:00	281	273	276	270	1100
12:00	287	294	263	255	1099
13:00	267	293	248	262	1070
14:00	261	250	284	313	1108
15:00	344	408	383	319	1454
16:00	326	366	372	393	1457
17:00	345	391	312	289	1337
18:00	227	221	175	150	773
19:00	150	122	107	98	477
20:00	89	61	82	103	335
21:00	100	62	58	46	266
22:00	51	48	25	27	151
23:00	30	20	17	10	77
				ADT =	15945

VPD Summary		CVMP
Date	VPD	Threshold
11/2/2014	10645	16340
10/27/2014	15110	16340
10/28/2014	15515	16340
10/29/2014	15945	16340
10/30/2014	16130	16340
10/31/2014	15342	16340
11/1/2014	12662	16340

ADT (3 Day) = 15863
ADT (5 Day) = 15608
ADT (7 Day) = 14478

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
11/2/2014	929	0.95	1127	0.92
10/27/2014	1230	0.84	1381	0.95
10/28/2014	1272	0.91	1458	0.90
10/29/2014	1435	0.88	1501	0.95
10/30/2014	1347	0.87	1458	0.88
10/31/2014	1258	0.84	1337	0.96
11/1/2014	954	0.90	1075	0.98

Thursday, October 30, 2014

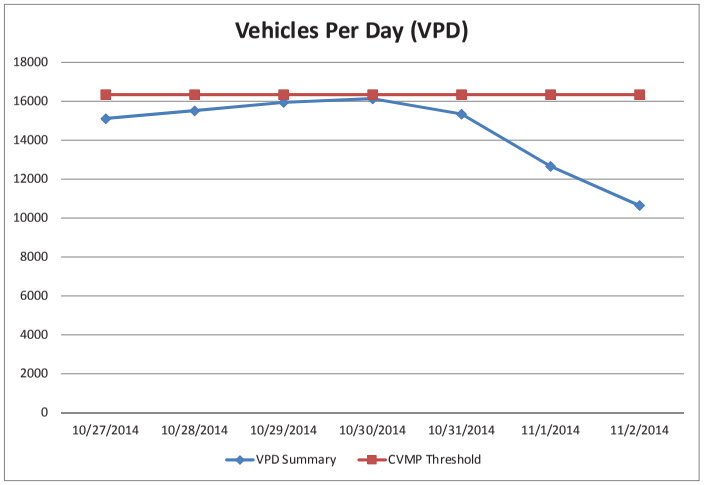
Hour	00-15	15-30	30-45	45-00	Total
0:00	11	7	4	4	26
1:00	3	3	3	1	10
2:00	1	2	5	1	9
3:00	2	10	4	5	21
4:00	6	3	8	14	31
5:00	16	17	41	40	114
6:00	52	70	120	119	361
7:00	166	322	327	385	1200
8:00	340	317	305	373	1335
9:00	263	284	241	263	1051
10:00	237	269	246	246	998
11:00	266	231	298	260	1055
12:00	249	274	263	297	1083
13:00	279	263	267	240	1049
14:00	293	318	324	330	1265
15:00	349	414	376	319	1458
16:00	335	319	365	370	1389
17:00	357	306	308	294	1265
18:00	280	256	219	192	947
19:00	147	144	120	125	536
20:00	89	120	92	75	376
21:00	81	94	58	59	292
22:00	68	48	34	23	173
23:00	30	22	16	18	86
				ADT =	16130

Friday, October 31, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	11	11	9	4	35
1:00	3	6	5	4	18
2:00	3	4	3	6	16
3:00	3	2	3	4	12
4:00	3	6	7	11	27
5:00	14	22	43	29	108
6:00	56	59	83	117	315
7:00	141	327	332	330	1130
8:00	296	307	281	374	1258
9:00	268	262	254	279	1063
10:00	264	281	268	266	1079
11:00	266	266	287	281	1100
12:00	306	331	299	291	1227
13:00	287	275	233	275	1070
14:00	270	267	288	310	1135
15:00	345	347	324	321	1337
16:00	330	313	273	229	1145
17:00	254	238	240	245	977
18:00	210	183	185	128	706
19:00	109	99	118	120	446
20:00	104	106	85	85	380
21:00	82	89	82	74	327
22:00	71	71	62	59	263
23:00	56	30	49	33	168
				ADT =	15342

Saturday, November 1, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	37	19	17	28	101
1:00	22	9	11	11	53
2:00	10	9	5	6	30
3:00	7	6	9	11	33
4:00	3	2	4	15	24
5:00	11	14	21	23	69
6:00	17	31	35	51	134
7:00	34	57	76	116	283
8:00	104	110	135	167	516
9:00	180	157	177	213	727
10:00	216	226	230	234	906
11:00	187	254	247	266	954
12:00	274	259	272	270	1075
13:00	235	262	250	256	1003
14:00	260	264	252	244	1020
15:00	221	256	243	238	958
16:00	249	248	232	252	981
17:00	232	255	252	252	991
18:00	204	216	180	163	763
19:00	154	129	138	116	537
20:00	106	101	106	98	411
21:00	104	96	138	123	461
22:00	106	102	106	96	410
23:00	79	47	40	56	222
				ADT =	12662



Carmel Valley Road
Segment 7 - Schulte Road to Rancho San Carlos Road
Count Location No. 192 - West of Carmel Meadows Road
Dates: 10/27/2014 to 11/2/2014
Sheet 2 of 2

Sunday, November 2, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	26	14	14	11	65	15	15	11	6	47
1:00	5	6	5	4	20	8	5	3	2	18
2:00	4	3	1	4	12	2	4	1	5	12
3:00	2	2	2	1	7	0	0	3	1	4
4:00	1	3	1	4	9	0	1	1	1	3
5:00	4	1	3	4	12	2	3	1	7	13
6:00	5	14	10	18	47	11	8	13	15	47
7:00	15	10	18	25	68	10	17	28	27	82
8:00	20	23	34	49	126	32	33	42	55	162
9:00	37	39	62	78	216	74	73	88	95	330
10:00	68	81	81	102	332	87	108	128	142	465
11:00	90	102	116	100	408	116	134	127	131	508
12:00	95	95	95	120	405	118	121	172	180	591
13:00	122	111	122	128	483	133	196	143	118	590
14:00	129	121	125	112	487	128	133	117	125	503
15:00	129	156	124	107	516	121	105	114	132	472
16:00	106	130	115	105	456	101	105	101	99	406
17:00	111	93	101	120	425	82	78	105	78	343
18:00	105	127	106	84	422	77	78	62	64	281
19:00	76	66	64	62	268	38	44	35	26	143
20:00	56	56	51	41	204	33	39	29	23	124
21:00	36	30	33	27	126	30	23	26	23	102
22:00	29	22	29	12	92	20	23	30	14	87
23:00	23	18	18	11	70	16	6	8	6	36

Monday, October 27, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	4	3	4	2	13	14	6	6	5	31
1:00	4	1	1	1	7	1	1	1	1	4
2:00	3	1	7	0	11	1	0	0	3	4
3:00	1	1	1	4	7	1	1	3	0	5
4:00	3	1	5	5	14	2	1	11	11	25
5:00	5	14	12	18	49	11	16	21	27	75
6:00	26	31	34	50	141	30	48	58	79	215
7:00	54	74	106	176	410	127	234	252	183	796
8:00	112	110	108	113	443	200	166	166	255	787
9:00	91	101	93	113	398	174	164	160	174	672
10:00	79	99	86	116	380	129	135	131	144	539
11:00	88	113	117	137	455	127	129	159	136	551
12:00	143	144	136	130	553	134	143	121	138	536
13:00	123	128	109	136	496	122	114	108	133	477
14:00	123	127	151	154	555	116	119	142	136	513
15:00	180	199	181	184	744	132	185	139	147	603
16:00	207	208	216	229	860	143	149	114	102	508
17:00	233	228	206	183	850	130	119	124	97	470
18:00	164	135	126	115	540	75	94	58	49	276
19:00	88	91	82	75	336	42	27	19	24	112
20:00	42	39	32	57	170	17	18	18	18	71
21:00	38	51	30	32	151	18	18	18	15	69
22:00	26	18	17	14	75	19	11	4	9	43
23:00	18	6	6	8	38	12	9	5	6	32

Tuesday, October 28, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	8	5	2	3	18	7	5	4	1	17
1:00	2	2	6	1	11	1	0	1	0	2
2:00	1	1	3	2	7	0	1	4	1	6
3:00	0	0	3	2	5	2	0	3	2	7
4:00	2	4	4	7	17	1	3	7	8	19
5:00	5	7	11	15	38	9	13	34	35	91
6:00	30	25	44	54	153	30	53	49	85	217
7:00	56	69	110	170	405	113	258	241	201	813
8:00	123	126	117	122	488	186	183	188	227	784
9:00	99	112	80	96	387	160	164	167	141	632
10:00	84	93	116	98	391	121	150	141	165	577
11:00	120	101	122	133	476	137	141	148	154	580
12:00	131	166	134	131	562	132	127	131	139	529
13:00	123	137	148	115	523	126	131	144	100	501
14:00	143	135	144	177	599	142	107	117	158	524
15:00	189	189	200	190	768	143	218	146	153	660
16:00	209	164	219	236	828	153	154	144	117	568
17:00	236	200	207	162	805	123	87	106	61	377
18:00	131	161	147	116	555	62	81	75	58	276
19:00	101	75	92	69	337	39	46	38	27	150
20:00	85	50	70	56	261	37	25	37	28	127
21:00	59	47	44	28	178	16	17	11	18	62
22:00	31	23	20	7	81	9	14	11	7	41
23:00	12	7	7	7	33	11	5	2	11	29

Wednesday, October 29, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	6	6	3	8	23	12	3	2	4	21
1:00	0	2	3	1	6	1	1	2	2	6
2:00	1	1	0	6	8	0	1	2	0	3
3:00	0	0	0	1	1	0	0	1	1	2
4:00	1	3	2	10	16	3	3	8	8	22
5:00	4	12	19	14	49	8	19	28	27	82
6:00	20	36	45	48	149	41	54	62	76	233
7:00	71	74	103	200	448	121	270	272	209	872
8:00	133	123	101	118	475	174	169	194	249	786
9:00	108	103	104	78	393	178	145	164	170	657
10:00	88	104	100	107	399	138	160	157	135	590
11:00	119	135	122	129	505	162	138	154	141	595
12:00	139	163	120	125	547	148	131	143	130	552
13:00	130	158	122	134	544	137	135	126	128	526
14:00	138	134	140	168	580	123	116	144	145	528
15:00	202	230	199	186	817	142	178	184	133	637
16:00	187	213	238	264	902	139	153	134	129	555
17:00	218	262	200	198	878	127	129	112	91	459
18:00	158	162	115	107	542	69	59	60	43	231
19:00	91	95	70	63	319	59	27	37	35	158
20:00	56	44	53	71	224	33	17	29	32	111
21:00	78	46	42	34	200	22	16	16	12	66
22:00	34	33	17	16	100	17	15	8	11	51
23:00	16	10	13	4	43	14	10	4	6	34

Thursday, October 30, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	6	2	3	2	13	5	5	1	2	13
1:00	3	2	3	1	9	0	1	0	0	1
2:00	1	1	1	1	4	0	1	4	0	5
3:00	2	6	0	3	11	0	4	4	2	10
4:00	4	1	2	6	13	2	2	6	8	18
5:00	5	9	11	14	39	11	8	30	26	75
6:00	24	22	47	39	132	28	48	73	80	229
7:00	59	69	96	173	397	107	253	231	212	803
8:00	130	134	118	132	514	210	183	187	241	821
9:00	102	124	84	103	413	161	160	157	160	638
10:00	102	110	100	103	415	135	159	146	143	583
11:00	116	111	131	134	492	150	120	167	126	563
12:00	113	141	123	151	528	136	133	140	146	555
13:00	141	132	125	122	520	138	131	142	118	529
14:00	128	173	175	189	665	165	145	149	141	600
15:00	189	229	190	174	782	160	185	186	145	676
16:00	199	198	222	213	832	136	121	143	157	557
17:00	234	198	208	186	826	123	108	100	108	439
18:00	182	165	143	125	615	98	91	76	67	332
19:00	101	95	87	88	371	46	49	33	37	165
20:00	62	80	71	46	259	27	40	21	29	117
21:00	53	67	40	41	201	28	27	18	18	91
22:00	48	34	21	17	120	20	14	13	6	53
23:00	16	9	7	13	45	14	13	9	5	41

Friday, October 31, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	6	4	5	2	17	5	7	4	2	18
1:00	2	4	5	2	13	1	2	0	2	5
2:00	1	3	1	3	8	2	1	2	3	8
3:00	3	1	1	4	9	0	1	2	0	3
4:00	1	3	2	7	13	2	3	5	4	14
5:00	4	8	16	9	37	10	14	27	20	71
6:00	18	21	34	41	114	38	38	49	76	201
7:00	45	79	115	164	403	96	248	217	166	727
8:00	146	141	81	145	513	150	166	200	229	745
9:00	99	90	82	104	375	169	172	172	175	688
10:00	106	125	125	123	479	158	156	143	143	600
11:00	113	116	151	116	496	153	150	136	165	604
12:00	152	155	148	155	610	154	176	151	136	617
13:00	136	150	120	151	557	151	125	113	124	513
14:00	150	140	130	177	597	120	127	158	133	538
15:00	212	183	188	204	787	133	164	136	117	550
16:00	214	200	173	142	729	116	113	100	87	416
17:00	153	143	147	157	600	101	95	93	88	377
18:00	129	117	127	78	451	81	66	58	50	255
19:00	70	59	73	80	282	39	40	45	40	164
20:00	67	70	50	52	239	37	36	35	33	141
21:00	48	52	61	42	203	34	37	21	32	124
22:00	45	41	40	32	158	26	30	22	27	105
23:00	30	15	24	20	89	26	15	25	13	79

Saturday, November 1, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	13	9	8	18	48	24	10	9	10	53
1:00	9	5	7	6	27	13	4	4	5	26
2:00	6	4	2	2	14	4	5	3	4	16
3:00	4	1	4	4	13	3	5	5	7	20
4:00	3	1	2	11	17	0	1	2	4	7
5:00	3	10	9	10	32	8	4	12	13	37
6:00	8	12	16	32	68	9	19	19	19	66
7:00	7	26	28	42	103	27	31	48	74	180
8:00	44	42	52	69	207	60	68	83	98	309
9:00	72	54	59	79	264	108	103	118	134	463
10:00	73	94	98	116	381	143	132	132	118	525
11:00	84	111	115	124	434	103	143	132	142	520
12:00	137	112	126	132	507	137	147	146	138	568
13:00	123	121	136	132	512	112	141	114	124	491
14:00	132	148	138	135	553	128	116	114	109	467
15:00	129	127	147	128	531	92	129	96	110	427
16:00	151	140	138	148	577	98	108	94	104	404
17:00	131	152	146	147	576	101	103	106	105	415
18:00	125	124	113	96	458	79	92	67	67	305
19:00	90	68	84	81	323	64	61	54	35	214
20:00	49	59	53	67	228	57	42	53	31	183
21:00	58	48	62	62	230	46	48	76	61	231
22:00	45	43	45	46	179	61	59	61	50	231
23:00	41	26	21	36	124	38	21	19	20	98

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Monterey County Resource Management Agency - Public Works

Carmel Valley Road Data Sheet

Segment 10 - Carmel Rancho Boulevard to SR 1
Count Location No.189 - East of Hwy 1
Dates: 10/27/2014 to 11/2/2014
Sheet 1 of 2

Sunday, November 2, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	38	28	32	25	123
1:00	13	17	12	14	56
2:00	9	11	7	9	36
3:00	6	11	11	11	39
4:00	5	6	7	17	35
5:00	14	20	28	34	96
6:00	39	48	81	70	238
7:00	73	102	113	155	443
8:00	153	169	213	257	792
9:00	305	238	279	314	1136
10:00	301	303	351	336	1291
11:00	309	313	305	346	1273
12:00	389	351	347	348	1435
13:00	368	356	349	353	1426
14:00	342	362	334	352	1390
15:00	321	358	339	341	1359
16:00	342	307	329	311	1289
17:00	350	333	306	289	1278
18:00	259	271	235	209	974
19:00	214	160	168	164	706
20:00	154	139	137	135	565
21:00	113	158	187	137	595
22:00	123	127	118	152	520
23:00	94	74	58	66	292
				ADT =	17387

Monday, October 27, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	21	11	13	9	54
1:00	6	4	6	2	18
2:00	5	4	7	3	19
3:00	5	10	5	3	23
4:00	7	2	25	23	57
5:00	26	40	67	63	196
6:00	86	97	149	196	528
7:00	240	444	604	487	1775
8:00	388	397	418	444	1647
9:00	397	321	371	397	1486
10:00	362	342	299	359	1362
11:00	367	389	382	400	1538
12:00	392	329	375	384	1480
13:00	399	412	359	395	1565
14:00	376	365	396	440	1577
15:00	480	451	447	489	1867
16:00	472	435	436	446	1789
17:00	485	448	408	376	1717
18:00	341	283	260	259	1143
19:00	208	166	163	108	645
20:00	108	87	122	119	436
21:00	81	84	65	67	297
22:00	54	52	32	37	175
23:00	38	25	27	21	111
				ADT =	21505

Tuesday, October 28, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	20	12	12	6	50
1:00	2	6	8	1	17
2:00	2	7	9	3	21
3:00	1	5	4	7	17
4:00	4	10	16	19	49
5:00	23	37	55	58	173
6:00	86	102	150	202	540
7:00	249	445	636	470	1800
8:00	433	454	456	473	1816
9:00	390	364	358	413	1525
10:00	349	400	351	436	1536
11:00	387	349	392	402	1530
12:00	391	385	366	404	1546
13:00	387	388	347	381	1503
14:00	435	411	412	451	1709
15:00	475	494	501	404	1874
16:00	514	416	476	415	1821
17:00	492	405	378	366	1641
18:00	294	331	295	280	1200
19:00	223	166	174	135	698
20:00	135	110	136	128	509
21:00	96	96	83	72	347
22:00	48	53	34	24	159
23:00	43	26	26	25	120
				ADT =	22201

Wednesday, October 29, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	25	9	17	5	56
1:00	1	4	6	8	19
2:00	1	2	7	6	16
3:00	2	1	7	10	20
4:00	7	7	13	24	51
5:00	24	40	58	69	191
6:00	78	108	140	219	545
7:00	255	451	646	485	1837
8:00	416	385	448	528	1777
9:00	428	336	349	361	1474
10:00	319	344	332	379	1374
11:00	374	401	394	415	1584
12:00	396	380	388	403	1567
13:00	457	413	448	390	1708
14:00	389	387	461	460	1697
15:00	518	515	515	437	1985
16:00	464	417	500	458	1839
17:00	495	499	450	418	1862
18:00	371	315	240	242	1168
19:00	207	185	149	144	685
20:00	116	102	135	159	512
21:00	122	110	80	74	386
22:00	63	59	39	41	202
23:00	43	28	22	18	111
				ADT =	22666

VPD Summary		CVMP
Date	VPD	Threshold
11/2/2014	17387	27839
10/27/2014	21505	27839
10/28/2014	22201	27839
10/29/2014	22666	27839
10/30/2014	22967	27839
10/31/2014	20951	27839
11/1/2014	17387	27839

ADT (3 Day) = 22611
ADT (5 Day) = 22058
ADT (7 Day) = 20723

Peak Hour Summary				
Date	AM PH Volume	AM PHF	PM PH Volume	PM PHF
11/2/2014	1309	0.93	1435	0.92
10/27/2014	1923	0.80	1867	0.95
10/28/2014	1816	0.96	1921	0.96
10/29/2014	1998	0.77	1985	0.96
10/30/2014	2025	0.83	1911	0.97
10/31/2014	1595	0.96	1834	0.89
11/1/2014	1291	0.92	1435	0.92

Thursday, October 30, 2014

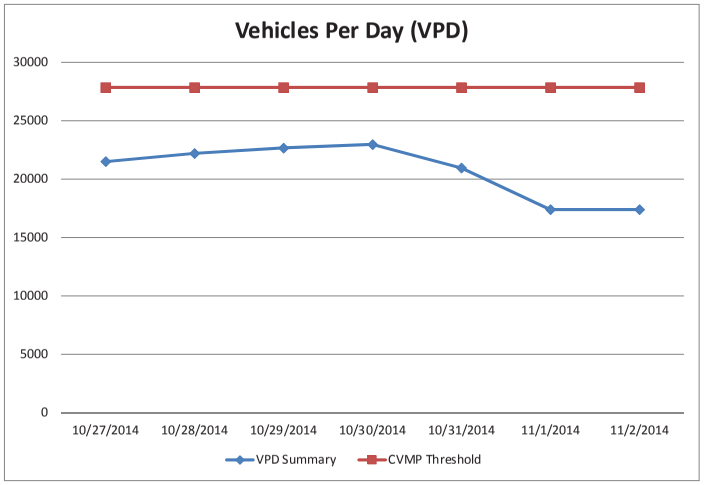
Hour	00-15	15-30	30-45	45-00	Total
0:00	19	11	4	6	40
1:00	7	4	3	1	15
2:00	5	0	5	3	13
3:00	5	10	10	12	37
4:00	11	10	12	23	56
5:00	25	32	53	67	177
6:00	76	100	131	206	513
7:00	248	419	613	512	1792
8:00	448	452	440	464	1804
9:00	431	420	331	393	1575
10:00	359	361	388	418	1526
11:00	408	382	434	368	1592
12:00	382	436	397	402	1617
13:00	398	377	390	408	1573
14:00	458	474	441	454	1827
15:00	477	495	487	452	1911
16:00	472	423	458	451	1804
17:00	424	446	374	401	1645
18:00	406	343	324	296	1369
19:00	208	185	164	179	736
20:00	146	192	121	95	554
21:00	120	86	80	115	401
22:00	81	68	56	48	253
23:00	45	31	33	28	137
				ADT =	22967

Friday, October 31, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	21	20	9	15	65
1:00	4	9	7	9	29
2:00	4	4	5	6	19
3:00	4	5	4	5	18
4:00	6	9	10	19	44
5:00	25	40	54	67	186
6:00	85	88	128	156	457
7:00	226	434	568	460	1688
8:00	416	372	419	442	1649
9:00	350	343	347	385	1425
10:00	401	416	366	412	1595
11:00	365	362	363	419	1509
12:00	395	444	420	377	1636
13:00	394	389	353	371	1507
14:00	408	387	411	469	1675
15:00	513	418	434	410	1775
16:00	424	373	302	326	1425
17:00	299	304	306	297	1206
18:00	271	253	218	159	901
19:00	161	178	130	153	622
20:00	157	123	123	118	521
21:00	112	110	110	95	427
22:00	104	85	86	75	350
23:00	60	54	63	45	222
				ADT =	20951

Saturday, November 1, 2014

Hour	00-15	15-30	30-45	45-00	Total
0:00	38	28	32	25	123
1:00	13	17	12	14	56
2:00	9	11	7	9	36
3:00	6	11	11	11	39
4:00	5	6	7	17	35
5:00	14	20	28	34	96
6:00	39	48	81	70	238
7:00	73	102	113	155	443
8:00	153	169	213	257	792
9:00	305	238	279	314	1136
10:00	301	303	351	336	1291
11:00	309	313	305	346	1273
12:00	389	351	347	348	1435
13:00	368	356	349	353	1426
14:00	342	362	334	352	1390
15:00	321	358	339	341	1359
16:00	342	307	329	311	1289
17:00	350	333	306	289	1278
18:00	259	271	235	209	974
19:00	214	160	168	164	706
20:00	154	139	137	135	565
21:00	113	158	187	137	595
22:00	123	127	118	152	520
23:00	94	74	58	66	292
				ADT =	17387



Carmel Valley Road
Segment 10 - Carmel Rancho Boulevard to SR 1
Count Location No.189 - East of Hwy 1
Dates: 10/27/2014 to 11/2/2014
Sheet 2 of 2

Sunday, November 2, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	10	16	21	14	61	28	12	11	11	62
1:00	3	9	9	9	30	10	8	3	5	26
2:00	5	6	3	6	20	4	5	4	3	16
3:00	4	7	9	2	22	2	4	2	9	17
4:00	4	4	3	13	24	1	2	4	4	11
5:00	11	12	15	22	60	3	8	13	12	36
6:00	26	30	58	47	161	13	18	23	23	77
7:00	37	58	68	101	264	36	44	45	54	179
8:00	89	87	121	145	442	64	82	92	112	350
9:00	165	129	139	150	583	140	109	140	164	553
10:00	152	155	178	165	650	149	148	173	171	641
11:00	140	147	149	180	616	169	166	156	166	657
12:00	178	178	177	170	703	211	173	170	178	732
13:00	188	181	190	185	744	180	175	159	168	682
14:00	182	197	170	190	739	160	165	164	162	651
15:00	164	196	207	200	767	157	162	132	141	592
16:00	190	166	172	183	711	152	141	157	128	578
17:00	188	189	156	131	664	162	144	150	158	614
18:00	117	146	127	116	506	142	125	108	93	468
19:00	107	81	90	82	360	107	79	78	82	346
20:00	65	64	58	73	260	89	75	79	62	305
21:00	45	73	86	49	253	68	85	101	88	342
22:00	51	49	57	74	231	72	78	61	78	289
23:00	49	32	29	31	141	45	42	29	35	151

Monday, October 27, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	4	4	5	4	17	17	7	8	5	37
1:00	4	3	4	1	12	2	1	2	1	6
2:00	3	4	6	1	14	2	0	1	2	5
3:00	2	6	2	1	11	3	4	3	2	12
4:00	5	1	14	14	34	2	1	11	9	23
5:00	17	25	43	38	123	9	15	24	25	73
6:00	54	62	90	118	324	32	35	59	78	204
7:00	137	229	272	272	910	103	215	332	215	865
8:00	219	249	245	234	947	169	148	173	210	700
9:00	200	169	164	206	739	197	152	207	191	747
10:00	165	176	139	165	645	197	166	160	194	717
11:00	180	170	190	183	723	187	219	192	217	815
12:00	194	176	193	199	762	198	153	182	185	718
13:00	206	202	175	197	780	193	210	184	198	785
14:00	180	192	208	202	782	196	173	188	238	795
15:00	251	208	217	243	919	229	243	230	246	948
16:00	219	222	214	258	913	253	213	222	188	876
17:00	231	233	207	179	850	254	215	201	197	867
18:00	178	150	136	137	601	163	133	124	122	542
19:00	105	96	97	69	367	103	70	66	39	278
20:00	56	56	69	72	253	52	31	53	47	183
21:00	45	56	36	41	178	36	28	29	26	119
22:00	28	29	20	21	98	26	23	12	16	77
23:00	19	5	12	15	51	19	20	15	6	60

Tuesday, October 28, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	10	5	4	4	23	10	7	8	2	27
1:00	2	5	5	1	13	0	1	3	0	4
2:00	1	4	5	3	13	1	3	4	0	8
3:00	0	3	1	4	8	1	2	3	3	9
4:00	4	3	7	14	28	0	7	9	5	21
5:00	15	21	35	35	106	8	16	20	23	67
6:00	59	61	92	119	331	27	41	58	83	209
7:00	143	212	309	239	903	106	233	327	231	897
8:00	256	262	251	246	1015	177	192	205	227	801
9:00	229	184	174	223	810	161	180	184	190	715
10:00	191	195	198	212	796	158	205	153	224	740
11:00	176	161	215	212	764	211	188	177	190	766
12:00	205	220	189	199	813	186	165	177	205	733
13:00	197	197	161	201	756	190	191	186	180	747
14:00	223	224	216	211	874	212	187	196	240	835
15:00	215	233	222	183	853	260	261	279	221	1021
16:00	233	216	245	230	924	281	200	231	185	897
17:00	233	206	201	205	845	259	199	177	161	796
18:00	155	186	148	140	629	139	145	147	140	571
19:00	119	95	99	80	393	104	71	75	55	305
20:00	77	60	82	83	302	58	50	54	45	207
21:00	57	63	50	35	205	39	33	33	37	142
22:00	29	31	18	13	91	19	22	16	11	68
23:00	23	12	16	15	66	20	14	10	10	54

Wednesday, October 29, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	8	4	10	1	23	17	5	7	4	33
1:00	0	2	4	5	11	1	2	2	3	8
2:00	1	1	5	4	11	0	1	2	2	5
3:00	1	1	5	4	11	1	0	2	6	9
4:00	5	3	5	17	30	2	4	8	7	21
5:00	18	24	39	43	124	6	16	19	26	67
6:00	45	69	90	137	341	33	39	50	82	204
7:00	142	217	283	249	891	113	234	363	236	946
8:00	245	240	254	279	1018	171	145	194	249	759
9:00	237	185	156	213	791	191	151	193	148	683
10:00	163	163	156	182	664	156	181	176	197	710
11:00	178	195	192	205	770	196	206	202	210	814
12:00	202	202	174	210	788	194	178	214	193	779
13:00	232	213	230	216	891	225	200	218	174	817
14:00	198	225	219	223	865	191	162	242	237	832
15:00	245	267	263	248	1023	273	248	252	189	962
16:00	242	227	276	235	980	222	190	224	223	859
17:00	236	232	210	213	891	259	267	240	205	971
18:00	201	157	128	114	600	170	158	112	128	568
19:00	115	99	92	86	392	92	86	57	58	293
20:00	58	55	71	100	284	58	47	64	59	228
21:00	73	60	55	40	228	49	50	25	34	158
22:00	35	32	21	26	114	28	27	18	15	88
23:00	16	11	12	12	51	27	17	10	6	60

Thursday, October 30, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	8	4	3	5	20	11	7	1	1	20
1:00	7	3	3	1	14	0	1	0	0	1
2:00	4	0	2	2	8	1	0	3	1	5
3:00	4	8	4	8	24	1	2	6	4	13
4:00	6	5	5	17	33	5	5	7	6	23
5:00	17	22	32	39	110	8	10	21	28	67
6:00	47	63	72	131	313	29	37	59	75	200
7:00	149	220	287	278	934	99	199	326	234	858
8:00	239	245	257	247	988	209	207	183	217	816
9:00	227	227	156	181	791	204	193	175	212	784
10:00	179	174	178	215	746	180	187	210	203	780
11:00	219	180	220	190	809	189	202	214	178	783
12:00	188	238	191	206	823	194	198	206	196	794
13:00	177	190	183	211	761	221	187	207	197	812
14:00	231	216	230	241	918	227	258	211	213	909
15:00	243	248	222	224	937	234	247	265	228	974
16:00	214	238	215	229	896	258	185	243	222	908
17:00	188	259	210	214	871	236	187	164	187	774
18:00	221	165	160	143	689	185	178	164	153	680
19:00	115	105	95	100	415	93	80	69	79	321
20:00	73	112	78	54	317	73	80	43	41	237
21:00	73	53	38	68	232	47	33	42	47	169
22:00	53	46	35	29	163	28	22	21	19	90
23:00	23	11	16	22	72	22	20	17	6	65

Friday, October 31, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	9	7	3	6	25	12	13	6	9	40
1:00	2	7	6	3	18	2	2	1	6	11
2:00	2	3	2	4	11	2	1	3	2	8
3:00	2	3	3	3	11	2	2	1	2	7
4:00	3	6	4	15	28	3	3	6	4	16
5:00	13	27	35	42	117	12	13	19	25	69
6:00	54	49	84	98	285	31	39	44	58	172
7:00	129	220	239	264	852	97	214	329	196	836
8:00	246	229	239	237	951	170	143	180	205	698
9:00	170	177	156	172	675	180	166	191	213	750
10:00	189	205	192	206	792	212	211	174	206	803
11:00	176	181	170	198	725	189	181	193	221	784
12:00	195	211	188	168	762	200	233	232	209	874
13:00	197	193	182	208	780	197	196	171	163	727
14:00	196	213	199	222	830	212	174	212	247	845
15:00	220	221	220	236	897	293	197	214	174	878
16:00	218	194	130	172	714	206	179	172	154	711
17:00	155	150	183	169	657	144	154	123	128	549
18:00	132	142	121	86	481	139	111	97	73	420
19:00	74	90	78	81	323	87	88	52	72	299
20:00	96	76	63	75	310	61	47	60	43	211
21:00	53	60	61	54	228	59	50	49	41	199
22:00	54	48	47	43	192	50	37	39	32	158
23:00	26	23	33	26	108	34	31	30	19	114

Saturday, November 1, 2014

	East Bound					West Bound				
Hour	00-15	15-30	30-45	45-00	Total	00-15	15-30	30-45	45-00	Total
0:00	10	16	21	14	61	28	12	11	11	62
1:00	3	9	9	9	30	10	8	3	5	26
2:00	5	6	3	6	20	4	5	4	3	16
3:00	4	7	9	2	22	2	4	2	9	17
4:00	4	4	3	13	24	1	2	4	4	11
5:00	11	12	15	22	60	3	8	13	12	36
6:00	26	30	58	47	161	13	18	23	23	77
7:00	37	58	68	101	264	36	44	45	54	179
8:00	89	87	121	145	442	64	82	92	112	350
9:00	165	129	139	150	583	140	109	140	164	553
10:00	152	155	178	165	650	149	148	173	171	641
11:00	140	147	149	180	616	169	166	156	166	657
12:00	178	178	177	170	703	211	173	170	178	732
13:00	188	181	190	185	744	180	175	159	168	682
14:00	182	197	170	190	739	160	165	164	162	651
15:00	164	196	207	200	767	157	162	132	141	592
16:00	190	166	172	183	711	152	141	157	128	578
17:00	188	189	156	131	664	162	144	150	158	614
18:00	117	146	127	116	506	142	125	108	93	468
19:00	107	81	90	82	360	107	79	78	82	346
20:00	65	64	58	73	260	89	75	79	62	305
21:00	45	73	86	49	253	68	85	101	88	342
22:00	51	49	57	74	231	72	78	61	78	289
23:00	49	32	29	31	141	45	42	29	35	151

List of Acronyms
ADT = Average Daily Traffic
PH = Peak Hour
VPD = Vehicles per Day
CVMP = Carmel Valley Master Plan

Key

AM Count Data
AM Peak Hour
PM Count Data
PM Peak Hour

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Tuesday, August 19, 2014 & Wednesday, August 20, 2014 **City:** Carmel **Project #** 14-1256-013

Location : Highway 1 btwn. Carmel Valley Rd. & Ocean Ave.

2-DAY AVERAGE

AM Period	NB		SB		EB		WB			PM Period	NB		SB		EB		WB		
00:00	35		23		0		0			12:00	348		376		0		0		
00:15	26		16		0		0			12:15	415		384		0		0		
00:30	21		18		0		0			12:30	386		330		0		0		
00:45	15	96	13	69	0	0	0	0	165	12:45	373	1522	379	1468	0	0	0	0	2990
01:00	10		5		0		0			13:00	353		386		0		0		
01:15	8		7		0		0			13:15	353		379		0		0		
01:30	6		8		0		0			13:30	362		390		0		0		
01:45	6	30	6	25	0	0	0	0	54	13:45	362	1429	387	1541	0	0	0	0	2970
02:00	4		6		0		0			14:00	371		395		0		0		
02:15	5		7		0		0			14:15	384		371		0		0		
02:30	4		4		0		0			14:30	379		354		0		0		
02:45	5	18	7	23	0	0	0	0	41	14:45	413	1547	363	1483	0	0	0	0	3029
03:00	5		6		0		0			15:00	406		377		0		0		
03:15	7		5		0		0			15:15	385		346		0		0		
03:30	4		7		0		0			15:30	405		350		0		0		
03:45	7	23	6	23	0	0	0	0	46	15:45	372	1567	370	1442	0	0	0	0	3009
04:00	5		14		0		0			16:00	411		348		0		0		
04:15	10		12		0		0			16:15	391		327		0		0		
04:30	12		20		0		0			16:30	355		344		0		0		
04:45	17	44	24	70	0	0	0	0	113	16:45	328	1484	341	1359	0	0	0	0	2843
05:00	19		25		0		0			17:00	341		337		0		0		
05:15	27		47		0		0			17:15	325		354		0		0		
05:30	29		34		0		0			17:30	360		337		0		0		
05:45	32	106	62	167	0	0	0	0	273	17:45	393	1418	325	1352	0	0	0	0	2770
06:00	35		78		0		0			18:00	336		299		0		0		
06:15	52		115		0		0			18:15	313		313		0		0		
06:30	82		192		0		0			18:30	281		246		0		0		
06:45	124	292	228	613	0	0	0	0	904	18:45	297	1226	247	1104	0	0	0	0	2329
07:00	145		261		0		0			19:00	267		239		0		0		
07:15	170		312		0		0			19:15	213		203		0		0		
07:30	322		348		0		0			19:30	191		177		0		0		
07:45	272	908	411	1332	0	0	0	0	2240	19:45	192	862	146	764	0	0	0	0	1626
08:00	276		427		0		0			20:00	184		139		0		0		
08:15	296		396		0		0			20:15	186		151		0		0		
08:30	294		355		0		0			20:30	168		152		0		0		
08:45	323	1189	375	1553	0	0	0	0	2742	20:45	146	683	117	558	0	0	0	0	1240
09:00	284		333		0		0			21:00	135		121		0		0		
09:15	284		340		0		0			21:15	132		116		0		0		
09:30	271		360		0		0			21:30	111		90		0		0		
09:45	304	1142	391	1423	0	0	0	0	2565	21:45	86	463	82	408	0	0	0	0	871
10:00	320		366		0		0			22:00	89		81		0		0		
10:15	349		380		0		0			22:15	76		66		0		0		
10:30	347		416		0		0			22:30	78		61		0		0		
10:45	352	1367	395	1556	0	0	0	0	2923	22:45	77	320	57	264	0	0	0	0	584
11:00	370		390		0		0			23:00	57		50		0		0		
11:15	383		423		0		0			23:15	53		49		0		0		
11:30	380		382		0		0			23:30	58		46		0		0		
11:45	427	1560	412	1607	0	0	0	0	3166	23:45	31	199	35	180	0	0	0	0	378
Total Vol.		6771		8459					**15229**			12717		11920					**24637**

GPS Coordinates: 36.550993 N, -121.910336 W

Daily Totals

NB	SB	Combined
19488	20378	**39866**

	AM			PM		
Split %	44.5%	55.5%	**38.2%**	51.6%	48.4%	**61.8%**
Peak Hour	11:45	10:30	**11:00**	14:45	13:15	**14:15**
Volume	1576	1623	**3166**	1609	1550	**3046**
P.H.F.	0.92	0.96	**0.94**	0.97	0.98	**0.97**

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Tuesday, August 19, 2014 & Wednesday, August 20, 2014 **City:** Carmel **Project#** 14-1256-007

Location : Carmel Valley Rd. btwn. Schulte Rd. & Rancho San Carlos Rd.

2-DAY AVERAGE

AM Period	NB		SB		EB		WB			PM Period	NB		SB		EB		WB		
00:00	0		0		6		8			12:00	0		0		195		205		
00:15	0		0		3		5			12:15	0		0		186		221		
00:30	0		0		5		3			12:30	0		0		202		238		
00:45	0	0	0	0	2	15	7	23	38	12:45	0	0	0	0	224	806	233	896	1702
01:00	0		0		5		5			13:00	0		0		232		236		
01:15	0		0		3		8			13:15	0		0		250		268		
01:30	0		0		2		9			13:30	0		0		243		243		
01:45	0	0	0	0	5	13	7	28	41	13:45	0	0	0	0	250	973	214	960	1933
02:00	0		0		5		5			14:00	0		0		274		185		
02:15	0		0		5		5			14:15	0		0		251		214		
02:30	0		0		3		7			14:30	0		0		214		209		
02:45	0	0	0	0	6	19	7	23	42	14:45	0	0	0	0	251	990	215	823	1813
03:00	0		0		10		12			15:00	0		0		242		261		
03:15	0		0		8		12			15:15	0		0		252		229		
03:30	0		0		9		14			15:30	0		0		228		198		
03:45	0	0	0	0	9	35	17	54	89	15:45	0	0	0	0	252	973	159	846	1819
04:00	0		0		10		13			16:00	0		0		198		148		
04:15	0		0		18		17			16:15	0		0		177		147		
04:30	0		0		22		22			16:30	0		0		214		157		
04:45	0	0	0	0	26	76	31	82	158	16:45	0	0	0	0	247	835	148	599	1434
05:00	0		0		33		32			17:00	0		0		221		138		
05:15	0		0		43		37			17:15	0		0		238		131		
05:30	0		0		48		38			17:30	0		0		241		121		
05:45	0	0	0	0	47	170	52	158	328	17:45	0	0	0	0	259	958	95	484	1442
06:00	0		0		62		50			18:00	0		0		214		91		
06:15	0		0		50		53			18:15	0		0		209		93		
06:30	0		0		69		75			18:30	0		0		190		97		
06:45	0	0	0	0	62	243	83	261	503	18:45	0	0	0	0	170	783	94	374	1156
07:00	0		0		60		93			19:00	0		0		155		102		
07:15	0		0		122		214			19:15	0		0		128		97		
07:30	0		0		211		242			19:30	0		0		125		73		
07:45	0	0	0	0	174	567	226	774	1341	19:45	0	0	0	0	113	521	57	328	849
08:00	0		0		161		204			20:00	0		0		106		57		
08:15	0		0		141		170			20:15	0		0		85		48		
08:30	0		0		145		214			20:30	0		0		63		42		
08:45	0	0	0	0	146	592	210	798	1390	20:45	0	0	0	0	63	317	36	182	498
09:00	0		0		164		230			21:00	0		0		58		31		
09:15	0		0		154		229			21:15	0		0		54		27		
09:30	0		0		151		247			21:30	0		0		41		23		
09:45	0	0	0	0	142	611	251	957	1567	21:45	0	0	0	0	42	195	18	98	293
10:00	0		0		146		241			22:00	0		0		35		17		
10:15	0		0		132		238			22:15	0		0		25		15		
10:30	0		0		129		228			22:30	0		0		19		11		
10:45	0	0	0	0	125	531	213	919	1450	22:45	0	0	0	0	15	93	10	51	144
11:00	0		0		148		229			23:00	0		0		10		11		
11:15	0		0		187		222			23:15	0		0		15		11		
11:30	0		0		193		236			23:30	0		0		15		11		
11:45	0	0	0	0	178	705	203	890	1595	23:45	0	0	0	0	13	53	10	42	94
Total Vol.						3574		4964	**8538**							7494		5681	**13174**

GPS Coordinates: 36.540126 N, -121.867651 W

	NB	SB	Combined
Daily Totals	11067	10645	**21712**

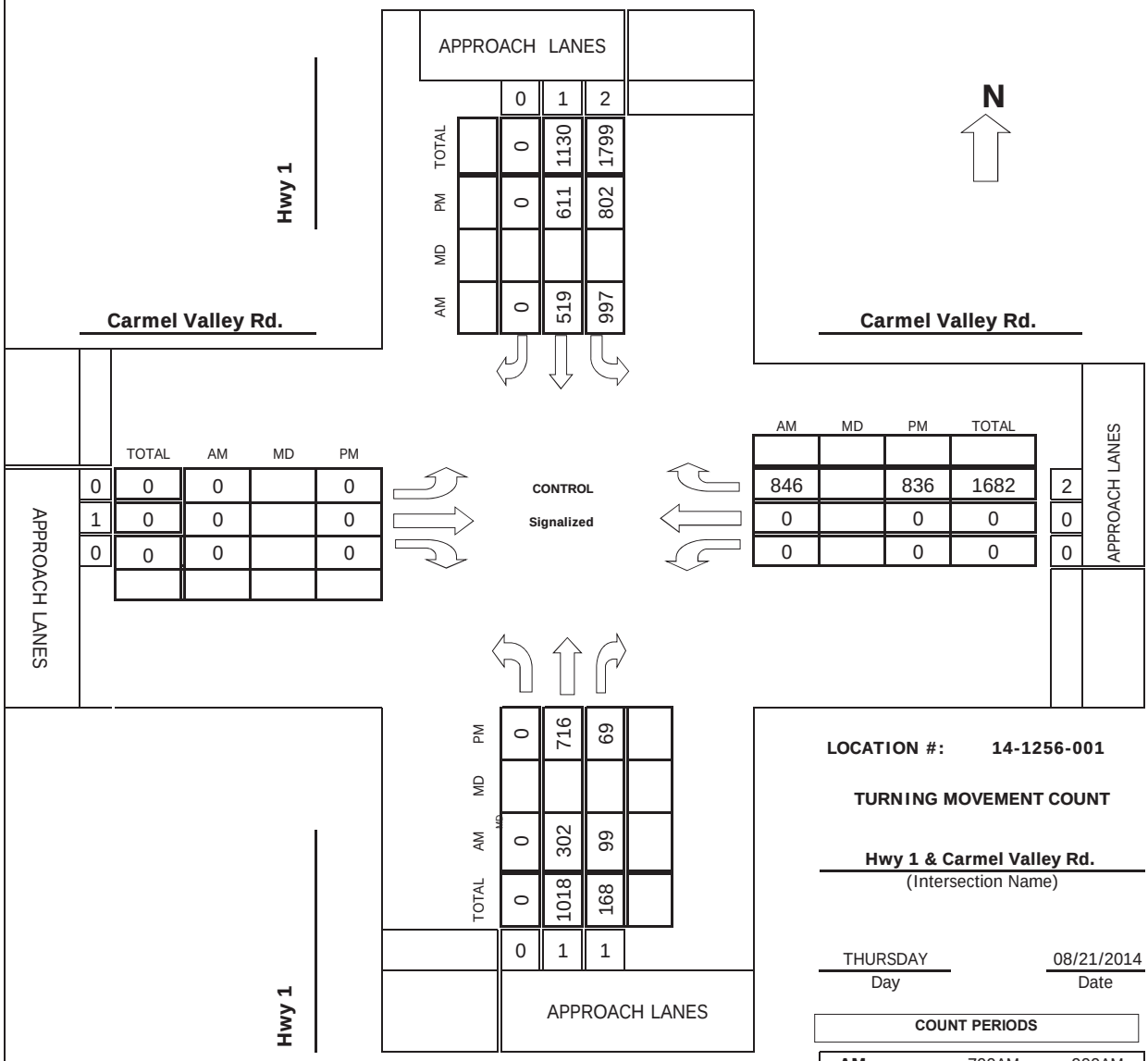
	AM			PM		
Split %	41.9%	58.1%	**39.3%**	56.9%	43.1%	**60.7%**
Peak Hour	11:45	09:30	**11:45**	13:30	12:45	**13:00**
Volume	760	977	**1626**	1017	979	**1933**
P.H.F.	0.94	0.97	**0.93**	0.93	0.91	**0.93**

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 14-1256-001

TMC SUMMARY OF Hwy 1 & Carmel Valley Rd.



LOCATION #: 14-1256-001

TURNING MOVEMENT COUNT

Hwy 1 & Carmel Valley Rd.
(Intersection Name)

THURSDAY — Day
08/21/2014 — Date

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR: 715 AM

NOON PEAK HOUR:

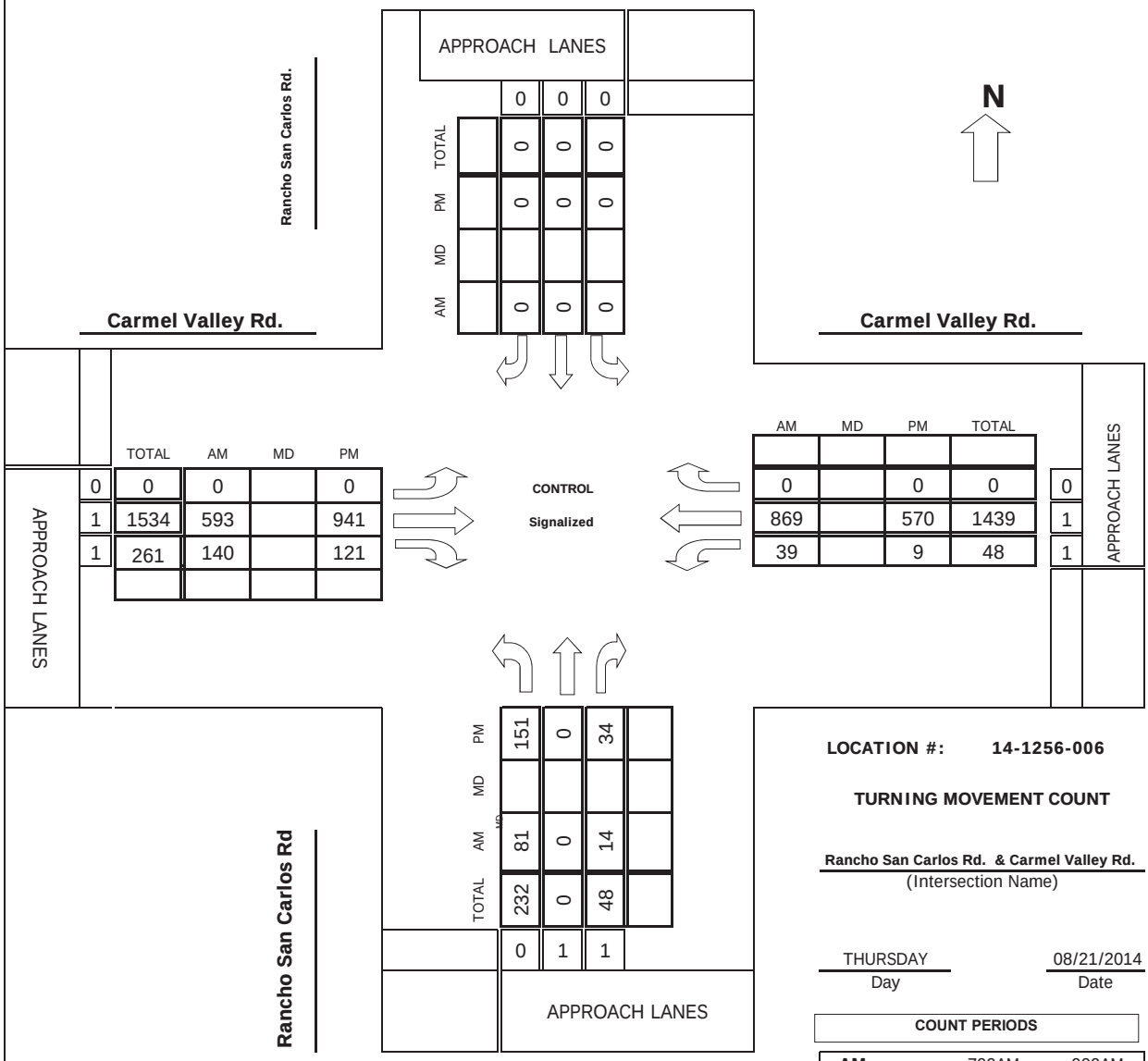
PM PEAK HOUR: 400 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 14-1256-006

TMC SUMMARY OF Rancho San Carlos Rd. & Carmel Valley Rd.



	TOTAL	AM	MD	PM
APPROACH LANES	0	0	0	0
	1	1534	593	941
	1	261	140	121

	AM	MD	PM	TOTAL	
	0		0	0	0
	869		570	1439	1
	39		9	48	1

	TOTAL	AM	MD	PM
APPROACH LANES	0	0	0	0
	0	0	0	0
	0	0	0	0

	TOTAL	AM	MD	PM
	232	81		151
	0	0		0
	48	14		34
APPROACH LANES	0	1	1	

LOCATION #: 14-1256-006

TURNING MOVEMENT COUNT

Rancho San Carlos Rd. & Carmel Valley Rd.
(Intersection Name)

THURSDAY — Day
08/21/2014 — Date

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR: 715 AM

NOON PEAK HOUR:

PM PEAK HOUR: 430 PM

Traffic Data Service

Campbell, CA
(408) 377-2988
tdsbay@cs.com

File Name : 1MID FINAL
Site Code : 00000001
Start Date : 11/16/2014
Page No : 1

Groups Printed- Vehicles

	HIGHWAY 1 Southbound					CARMEL VALLEY RD Westbound					HIGHWAY 1 Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	0	157	131	0	288	145	0	0	0	145	13	147	0	0	160	0	0	0	0	0	593
11:15 AM	0	164	152	0	316	121	0	0	0	121	13	139	0	0	152	0	0	0	0	0	589
11:30 AM	0	168	150	0	318	164	0	0	0	164	10	132	0	0	142	0	0	0	0	0	624
11:45 AM	0	180	143	0	323	163	0	0	0	163	24	168	0	0	192	0	0	0	0	0	678
Total	0	669	576	0	1245	593	0	0	0	593	60	586	0	0	646	0	0	0	0	0	2484
12:00 PM	0	150	126	0	276	144	0	0	0	144	16	159	0	0	175	0	0	0	0	0	595
12:15 PM	0	165	163	0	328	168	0	0	0	168	20	147	0	0	167	0	0	0	0	0	663
12:30 PM	0	155	152	0	307	173	0	0	0	173	18	158	0	0	176	0	0	0	0	0	656
12:45 PM	0	143	191	0	334	164	0	0	0	164	19	170	0	0	189	0	0	0	0	0	687
Total	0	613	632	0	1245	649	0	0	0	649	73	634	0	0	707	0	0	0	0	0	2601
Grand Total	0	1282	1208	0	2490	1242	0	0	0	1242	133	1220	0	0	1353	0	0	0	0	0	5085
Apprch %	0	51.5	48.5	0		100	0	0	0		9.8	90.2	0	0		0	0	0	0		
Total %	0	25.2	23.8	0	49	24.4	0	0	0	24.4	2.6	24	0	0	26.6	0	0	0	0	0	

	HIGHWAY 1 Southbound				CARMEL VALLEY RD Westbound				HIGHWAY 1 Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	0	150	126	276	144	0	0	144	16	159	0	175	0	0	0	0	595
12:15 PM	0	**165**	163	328	168	0	0	168	**20**	147	0	167	0	0	0	0	663
12:30 PM	0	155	152	307	**173**	0	0	**173**	18	158	0	176	0	0	0	0	656
12:45 PM	0	143	**191**	**334**	164	0	0	164	19	**170**	0	**189**	0	0	0	0	**687**
Total Volume	0	613	632	1245	649	0	0	649	73	634	0	707	0	0	0	0	2601
% App. Total	0	49.2	50.8		100	0	0		10.3	89.7	0		0	0	0		
PHF	.000	.929	.827	.932	.938	.000	.000	.938	.913	.932	.000	.935	.000	.000	.000	.000	.947

Traffic Data Service

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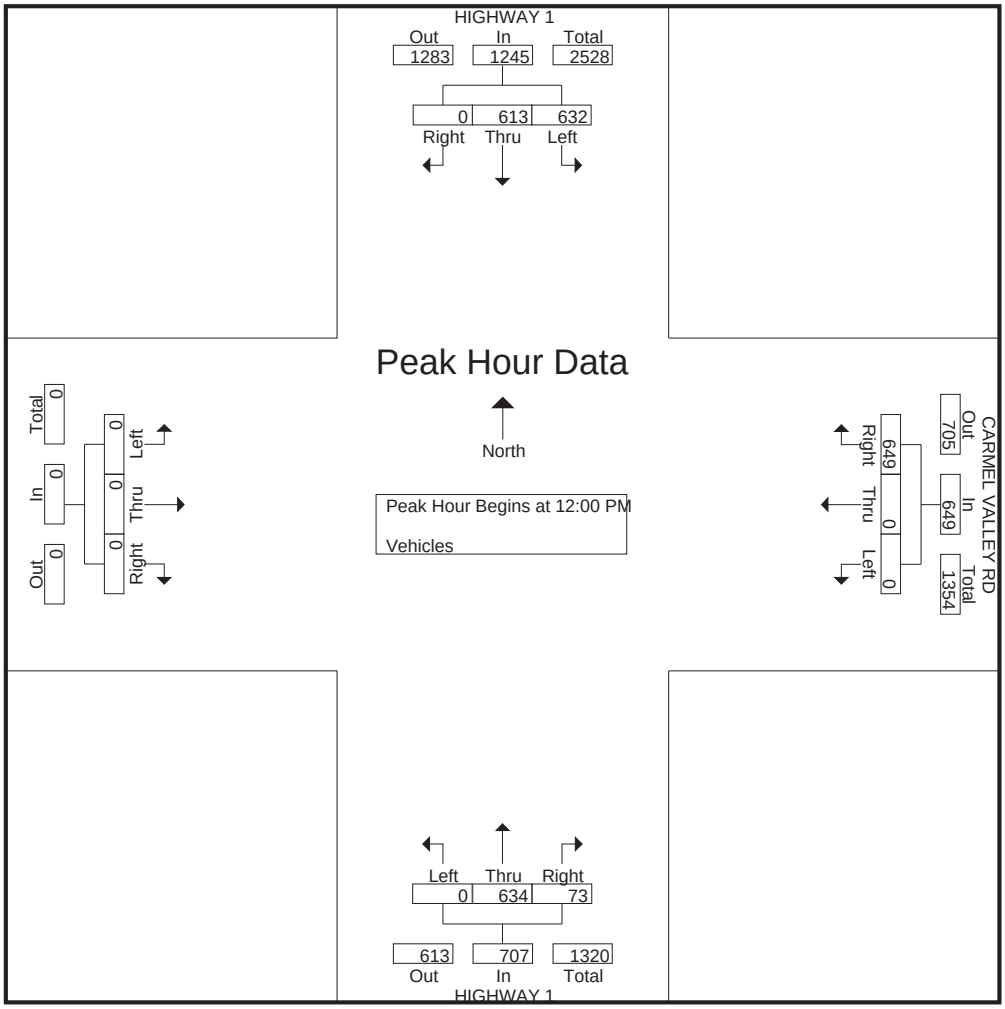

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File Name : 1MID FINAL
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Groups Printed- Bikes

	HIGHWAY 1 Southbound					CARMEL VALLEY RD Westbound					HIGHWAY 1 Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Grand Total	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Apprch %	0	100	0	0		0	0	0	0		0	100	0	0		0	0	0	0		
Total %	0	66.7	0	0	66.7	0	0	0	0	0	0	33.3	0	0	33.3	0	0	0	0	0	

	HIGHWAY 1 Southbound				CARMEL VALLEY RD Westbound				HIGHWAY 1 Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	**2**
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
Total Volume	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.375

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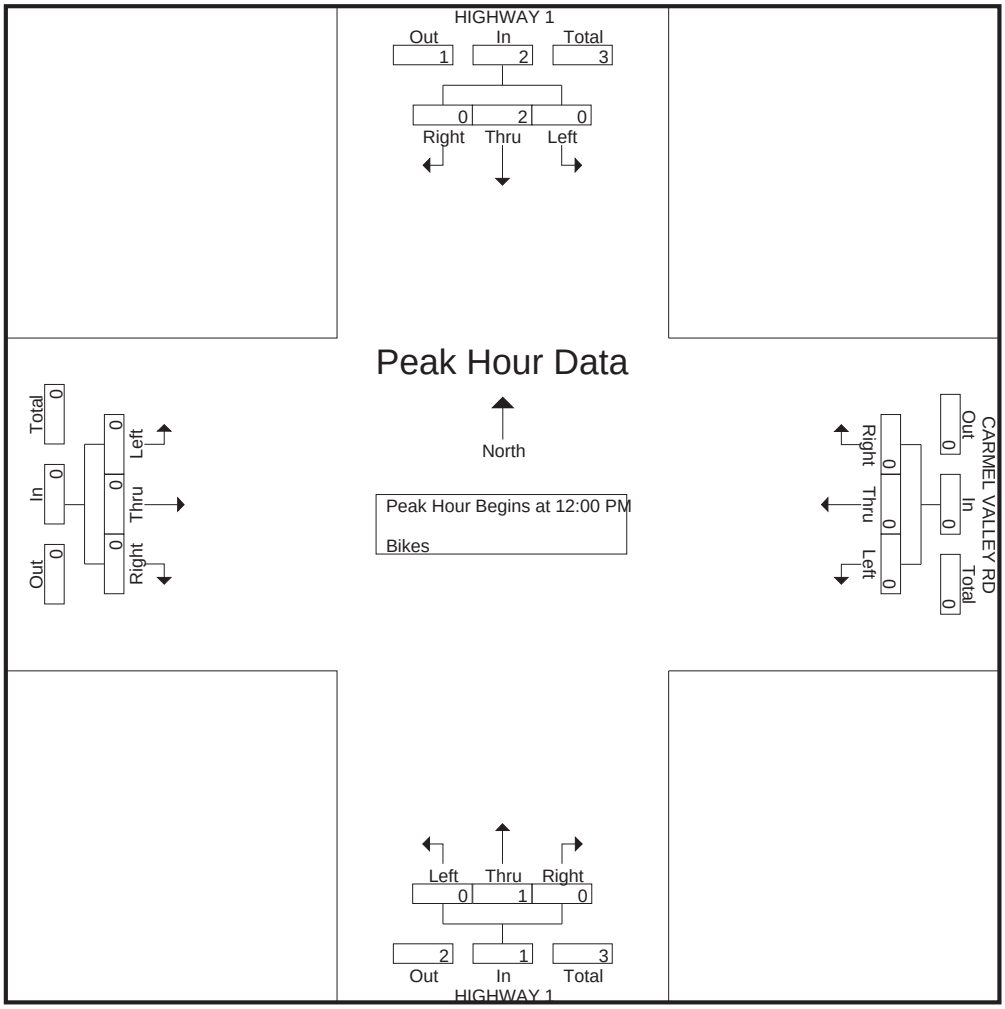

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File Name : 1PM FINAL
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Groups Printed- Vehicles

	HIGHWAY 1 Southbound					CARMEL VALLEY RD Westbound					HIGHWAY 1 Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	129	196	0	325	241	0	0	0	241	11	204	0	0	215	0	0	0	0	0	781
04:15 PM	0	140	236	0	376	253	0	0	0	253	17	181	0	0	198	0	0	0	0	0	827
04:30 PM	0	129	219	0	348	203	0	0	0	203	17	200	0	0	217	0	0	0	0	0	768
04:45 PM	0	120	211	0	331	229	0	0	0	229	13	155	0	0	168	0	0	0	0	0	728
Total	0	518	862	0	1380	926	0	0	0	926	58	740	0	0	798	0	0	0	0	0	3104
05:00 PM	0	134	178	0	312	228	0	0	0	228	13	183	0	0	196	0	0	0	0	0	736
05:15 PM	0	117	213	0	330	246	0	0	0	246	17	156	0	0	173	0	0	0	0	0	749
05:30 PM	0	136	207	0	343	168	0	0	0	168	16	149	0	0	165	0	0	0	0	0	676
05:45 PM	0	96	176	0	272	203	0	0	0	203	19	177	0	0	196	0	0	0	0	0	671
Total	0	483	774	0	1257	845	0	0	0	845	65	665	0	0	730	0	0	0	0	0	2832
Grand Total	0	1001	1636	0	2637	1771	0	0	0	1771	123	1405	0	0	1528	0	0	0	0	0	5936
Apprch %	0	38	62	0		100	0	0	0		8	92	0	0		0	0	0	0		
Total %	0	16.9	27.6	0	44.4	29.8	0	0	0	29.8	2.1	23.7	0	0	25.7	0	0	0	0	0	

	HIGHWAY 1 Southbound				CARMEL VALLEY RD Westbound				HIGHWAY 1 Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	129	196	325	241	0	0	241	11	**204**	0	215	0	0	0	0	781
04:15 PM	0	**140**	**236**	**376**	**253**	0	0	**253**	**17**	181	0	198	0	0	0	0	**827**
04:30 PM	0	129	219	348	203	0	0	203	17	200	0	**217**	0	0	0	0	768
04:45 PM	0	120	211	331	229	0	0	229	13	155	0	168	0	0	0	0	728
Total Volume	0	518	862	1380	926	0	0	926	58	740	0	798	0	0	0	0	3104
% App. Total	0	37.5	62.5		100	0	0		7.3	92.7	0		0	0	0		
PHF	.000	.925	.913	.918	.915	.000	.000	.915	.853	.907	.000	.919	.000	.000	.000	.000	.938

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File Name : 1PM FINAL
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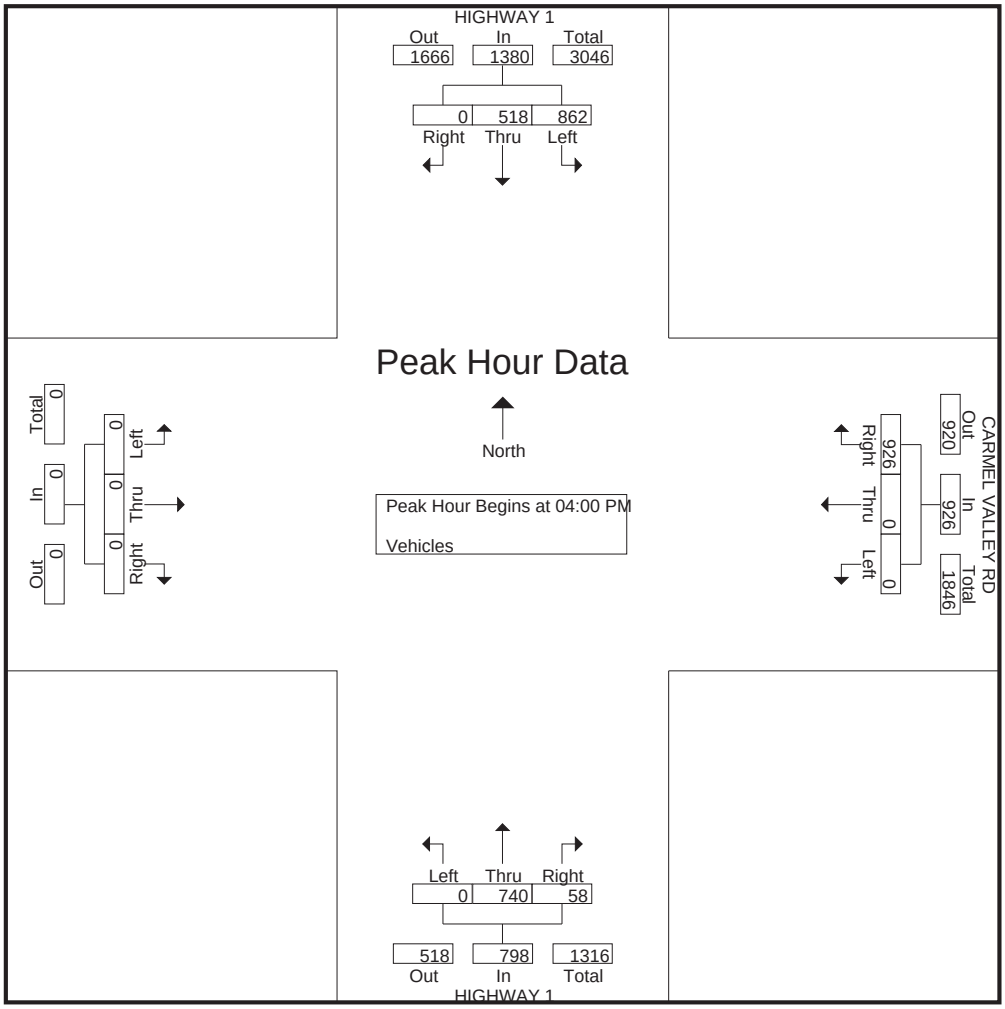

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File Name : 1PM FINAL
Site Code : 00000001
Start Date : 11/14/2014
Page No : 1

Groups Printed- Bikes

	HIGHWAY 1 Southbound					CARMEL VALLEY RD Westbound					HIGHWAY 1 Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Grand Total	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
Apprch %	0	100	0	0		0	0	0	0		0	100	0	0		0	0	0	0		
Total %	0	83.3	0	0	83.3	0	0	0	0	0	0	16.7	0	0	16.7	0	0	0	0	0	

	HIGHWAY 1 Southbound				CARMEL VALLEY RD Westbound				HIGHWAY 1 Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	**3**	0	**3**	0	0	0	0	0	0	0	0	0	0	0	0	**3**
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.417	.000	.417	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.417

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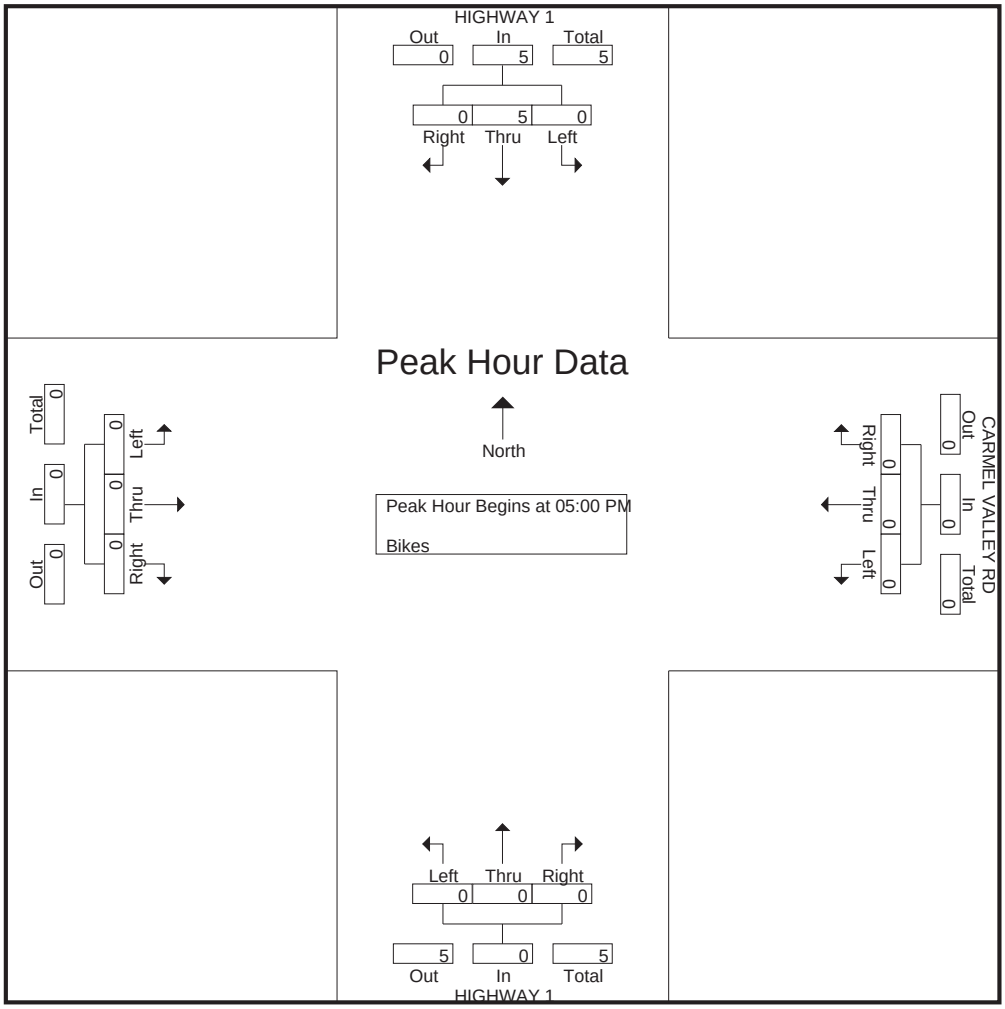

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File Name : 2MID FINAL
Site Code : 00000002
Start Date : 11/16/2014
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Groups Printed- Vehicles

	Southbound					CARMEL VALLEY RD Westbound					RANCHO SAN CARLOS RD Northbound					CARMEL VALLEY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	0	0	0	0	0	0	115	1	0	116	0	0	21	0	21	17	122	0	0	139	276
11:15 AM	0	0	0	0	0	0	105	5	0	110	5	0	23	0	28	18	128	0	0	146	284
11:30 AM	0	0	0	0	0	0	138	2	0	140	0	0	17	0	17	28	116	0	0	144	301
11:45 AM	0	0	0	0	0	0	140	6	0	146	0	0	18	0	18	19	143	0	0	162	326
Total	0	0	0	0	0	0	498	14	0	512	5	0	79	0	84	82	509	0	0	591	1187
12:00 PM	0	0	0	0	0	0	141	1	0	142	0	0	20	0	20	16	113	0	0	129	291
12:15 PM	0	0	0	0	0	0	172	1	0	173	1	0	28	0	29	17	147	0	0	164	366
12:30 PM	0	0	0	0	0	0	152	5	0	157	5	0	23	0	28	26	154	0	0	180	365
12:45 PM	0	0	0	0	0	0	151	1	0	152	2	0	14	0	16	18	152	0	0	170	338
Total	0	0	0	0	0	0	616	8	0	624	8	0	85	0	93	77	566	0	0	643	1360
Grand Total	0	0	0	0	0	0	1114	22	0	1136	13	0	164	0	177	159	1075	0	0	1234	2547
Apprch %	0	0	0	0		0	98.1	1.9	0		7.3	0	92.7	0		12.9	87.1	0	0		
Total %	0	0	0	0	0	0	43.7	0.9	0	44.6	0.5	0	6.4	0	6.9	6.2	42.2	0	0	48.4	

	Southbound				CARMEL VALLEY RD Westbound				RANCHO SAN CARLOS RD Northbound				CARMEL VALLEY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	0	0	0	0	0	141	1	142	0	0	20	20	16	113	0	129	291
12:15 PM	0	0	0	0	0	**172**	1	**173**	1	0	**28**	**29**	17	147	0	164	**366**
12:30 PM	0	0	0	0	0	152	**5**	157	**5**	0	23	28	**26**	**154**	0	**180**	365
12:45 PM	0	0	0	0	0	151	1	152	2	0	14	16	18	152	0	170	338
Total Volume	0	0	0	0	0	616	8	624	8	0	85	93	77	566	0	643	1360
% App. Total	0	0	0		0	98.7	1.3		8.6	0	91.4		12	88	0		
PHF	.000	.000	.000	.000	.000	.895	.400	.902	.400	.000	.759	.802	.740	.919	.000	.893	.929

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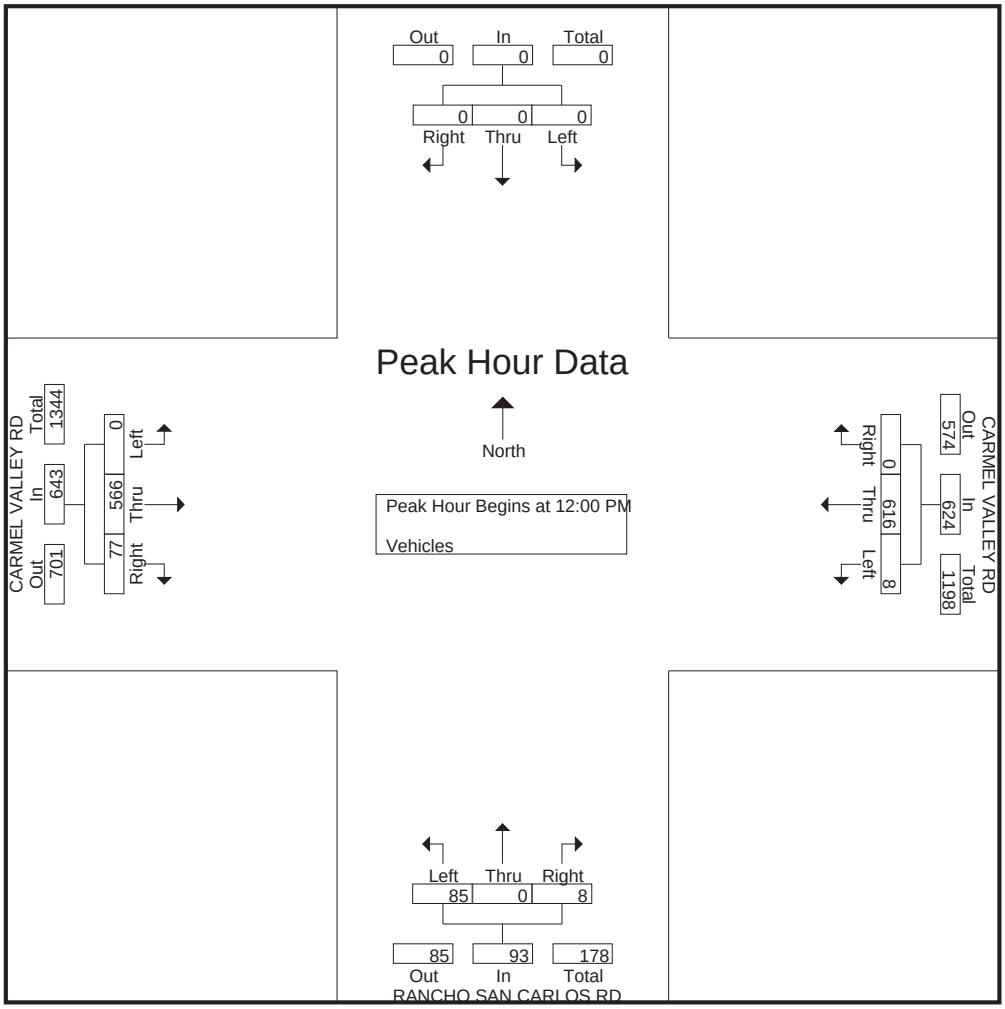

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File Name : 2MID FINAL
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Groups Printed- Bikes

	Southbound					CARMEL VALLEY RD Westbound					RANCHO SAN CARLOS RD Northbound					CARMEL VALLEY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	2	0	0	0	2	7
11:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	3
11:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	3
Total	0	0	0	0	0	0	2	0	0	2	0	0	6	0	6	3	2	0	0	5	13
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
Grand Total	0	0	0	0	0	0	3	0	0	3	0	0	6	0	6	3	4	0	0	7	16
Apprch %	0	0	0	0		0	100	0	0		0	0	100	0		42.9	57.1	0	0		
Total %	0	0	0	0	0	0	18.8	0	0	18.8	0	0	37.5	0	37.5	18.8	25	0	0	43.8	

	Southbound				CARMEL VALLEY RD Westbound				RANCHO SAN CARLOS RD Northbound				CARMEL VALLEY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	**5**	**5**	**2**	0	0	**2**	**7**
11:30 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1	**1**	0	2	3
11:45 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	1	0	1	3
Total Volume	0	0	0	0	0	2	0	2	0	0	6	6	3	2	0	5	13
% App. Total	0	0	0		0	100	0		0	0	100		60	40	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.300	.300	.375	.500	.000	.625	.464

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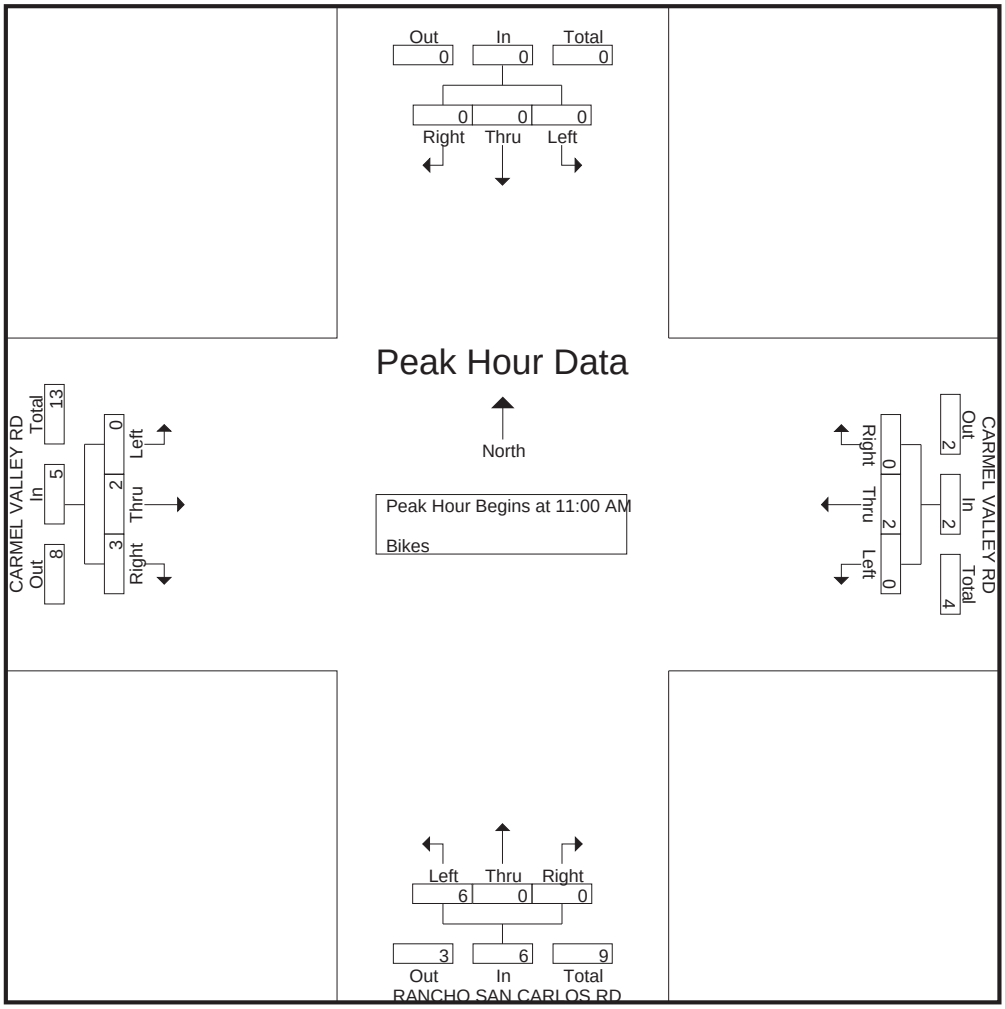

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Groups Printed- Vehicles

	Southbound					CARMEL VALLEY RD Westbound					RANCHO SAN CARLOS RD Northbound					CARMEL VALLEY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	159	2	0	161	13	0	46	0	59	25	220	0	0	245	465
04:15 PM	0	0	0	0	0	0	143	6	0	149	9	0	55	0	64	29	210	0	0	239	452
04:30 PM	0	0	0	0	0	0	150	5	0	155	11	0	38	0	49	28	208	0	0	236	440
04:45 PM	0	0	0	0	0	0	135	3	0	138	10	0	34	0	44	25	233	0	0	258	440
Total	0	0	0	0	0	0	587	16	0	603	43	0	173	0	216	107	871	0	0	978	1797
05:00 PM	0	0	0	0	0	0	142	5	0	147	5	0	39	0	44	35	203	0	0	238	429
05:15 PM	0	0	0	0	0	0	129	5	0	134	6	0	33	0	39	24	231	0	0	255	428
05:30 PM	0	0	0	0	0	0	121	2	0	123	5	0	25	0	30	33	195	0	0	228	381
05:45 PM	0	0	0	0	0	0	124	6	0	130	7	0	25	0	32	23	173	0	0	196	358
Total	0	0	0	0	0	0	516	18	0	534	23	0	122	0	145	115	802	0	0	917	1596
Grand Total	0	0	0	0	0	0	1103	34	0	1137	66	0	295	0	361	222	1673	0	0	1895	3393
Apprch %	0	0	0	0		0	97	3	0		18.3	0	81.7	0		11.7	88.3	0	0		
Total %	0	0	0	0	0	0	32.5	1	0	33.5	1.9	0	8.7	0	10.6	6.5	49.3	0	0	55.9	

	Southbound				CARMEL VALLEY RD Westbound				RANCHO SAN CARLOS RD Northbound				CARMEL VALLEY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	**159**	2	**161**	**13**	0	46	59	25	220	0	245	**465**
04:15 PM	0	0	0	0	0	143	**6**	149	9	0	**55**	**64**	**29**	210	0	239	452
04:30 PM	0	0	0	0	0	150	5	155	11	0	38	49	28	208	0	236	440
04:45 PM	0	0	0	0	0	135	3	138	10	0	34	44	25	**233**	0	**258**	440
Total Volume	0	0	0	0	0	587	16	603	43	0	173	216	107	871	0	978	1797
% App. Total	0	0	0		0	97.3	2.7		19.9	0	80.1		10.9	89.1	0		
PHF	.000	.000	.000	.000	.000	.923	.667	.936	.827	.000	.786	.844	.922	.935	.000	.948	.966

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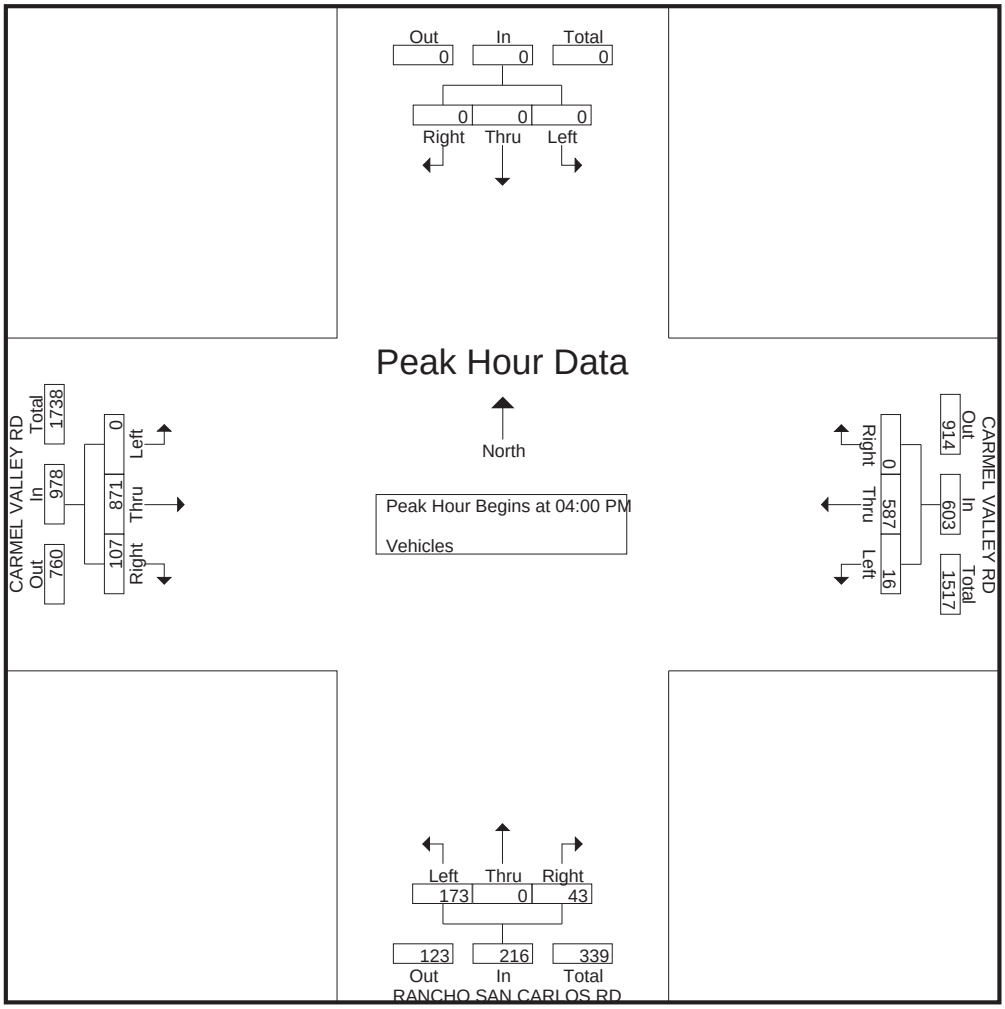

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Groups Printed- Bikes

	Southbound					CARMEL VALLEY RD Westbound					RANCHO SAN CARLOS RD Northbound					CARMEL VALLEY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

	Southbound				CARMEL VALLEY RD Westbound				RANCHO SAN CARLOS RD Northbound				CARMEL VALLEY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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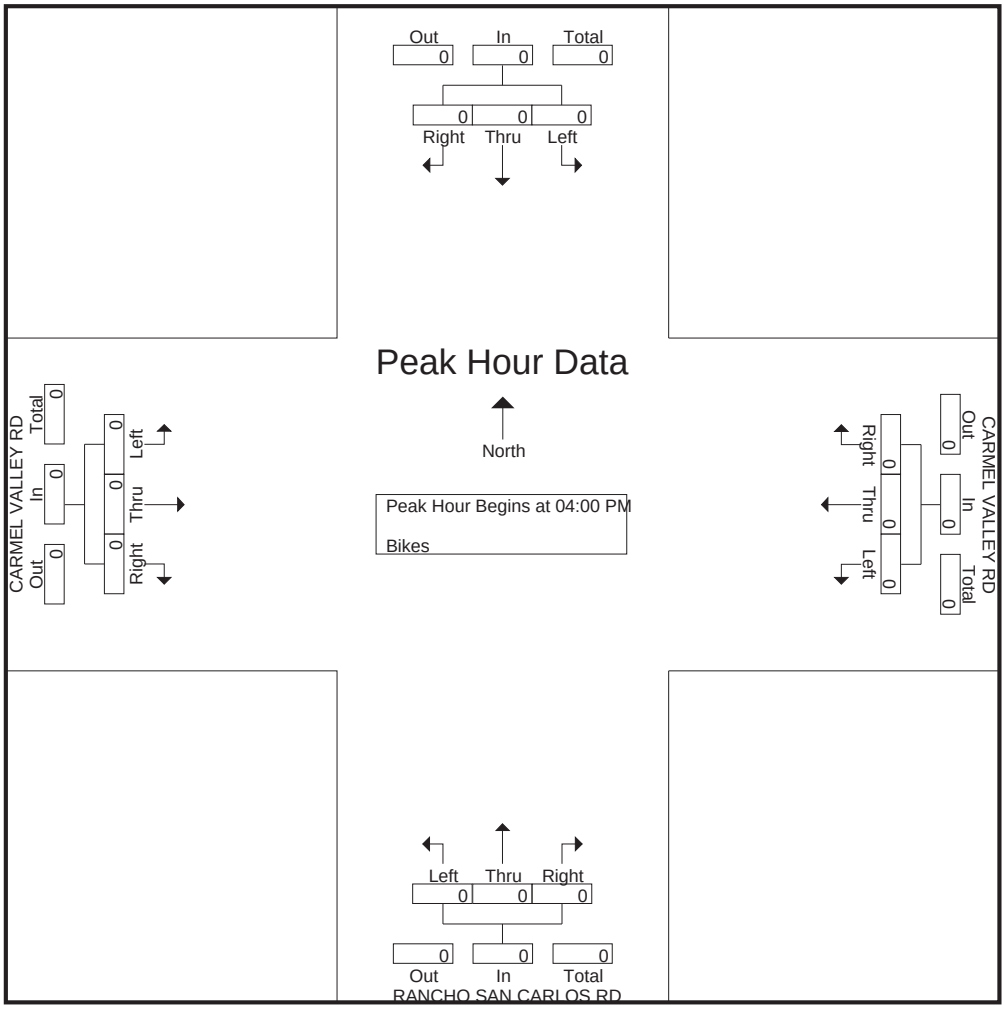

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File Name : 3MID FINAL
Site Code : 00000003
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Groups Printed- Vehicles

	TEHAMA Southbound					CARMEL VALLEY RD Westbound					VALLEY GREENS DR Northbound					CARMEL VALLEY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	0	0	0	0	0	2	105	3	0	110	2	0	1	0	3	6	115	1	0	122	235
11:15 AM	0	0	0	0	0	0	96	3	0	99	5	0	8	0	13	3	124	0	0	127	239
11:30 AM	0	0	1	0	1	1	141	3	0	145	2	1	5	0	8	8	103	2	0	113	267
11:45 AM	2	0	1	0	3	0	136	6	0	142	5	0	3	0	8	3	147	1	0	151	304
Total	2	0	2	0	4	3	478	15	0	496	14	1	17	0	32	20	489	4	0	513	1045
12:00 PM	1	0	0	0	1	0	128	6	0	134	6	0	4	0	10	4	109	0	0	113	258
12:15 PM	0	0	0	0	0	1	175	11	0	187	9	0	5	0	14	3	131	0	0	134	335
12:30 PM	4	0	0	0	4	2	137	2	0	141	6	0	6	0	12	7	146	3	0	156	313
12:45 PM	0	0	1	0	1	0	146	2	0	148	5	0	3	0	8	6	165	1	0	172	329
Total	5	0	1	0	6	3	586	21	0	610	26	0	18	0	44	20	551	4	0	575	1235
Grand Total	7	0	3	0	10	6	1064	36	0	1106	40	1	35	0	76	40	1040	8	0	1088	2280
Apprch %	70	0	30	0		0.5	96.2	3.3	0		52.6	1.3	46.1	0		3.7	95.6	0.7	0		
Total %	0.3	0	0.1	0	0.4	0.3	46.7	1.6	0	48.5	1.8	0	1.5	0	3.3	1.8	45.6	0.4	0	47.7	

	TEHAMA Southbound				CARMEL VALLEY RD Westbound				VALLEY GREENS DR Northbound				CARMEL VALLEY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	1	0	0	1	0	128	6	134	6	0	4	10	4	109	0	113	258
12:15 PM	0	0	0	0	1	**175**	**11**	**187**	**9**	0	5	**14**	3	131	0	134	**335**
12:30 PM	**4**	0	0	**4**	**2**	137	2	141	6	0	**6**	12	**7**	146	**3**	156	313
12:45 PM	0	0	**1**	1	0	146	2	148	5	0	3	8	6	**165**	1	**172**	329
Total Volume	5	0	1	6	3	586	21	610	26	0	18	44	20	551	4	575	1235
% App. Total	83.3	0	16.7		0.5	96.1	3.4		59.1	0	40.9		3.5	95.8	0.7		
PHF	.313	.000	.250	.375	.375	.837	.477	.816	.722	.000	.750	.786	.714	.835	.333	.836	.922

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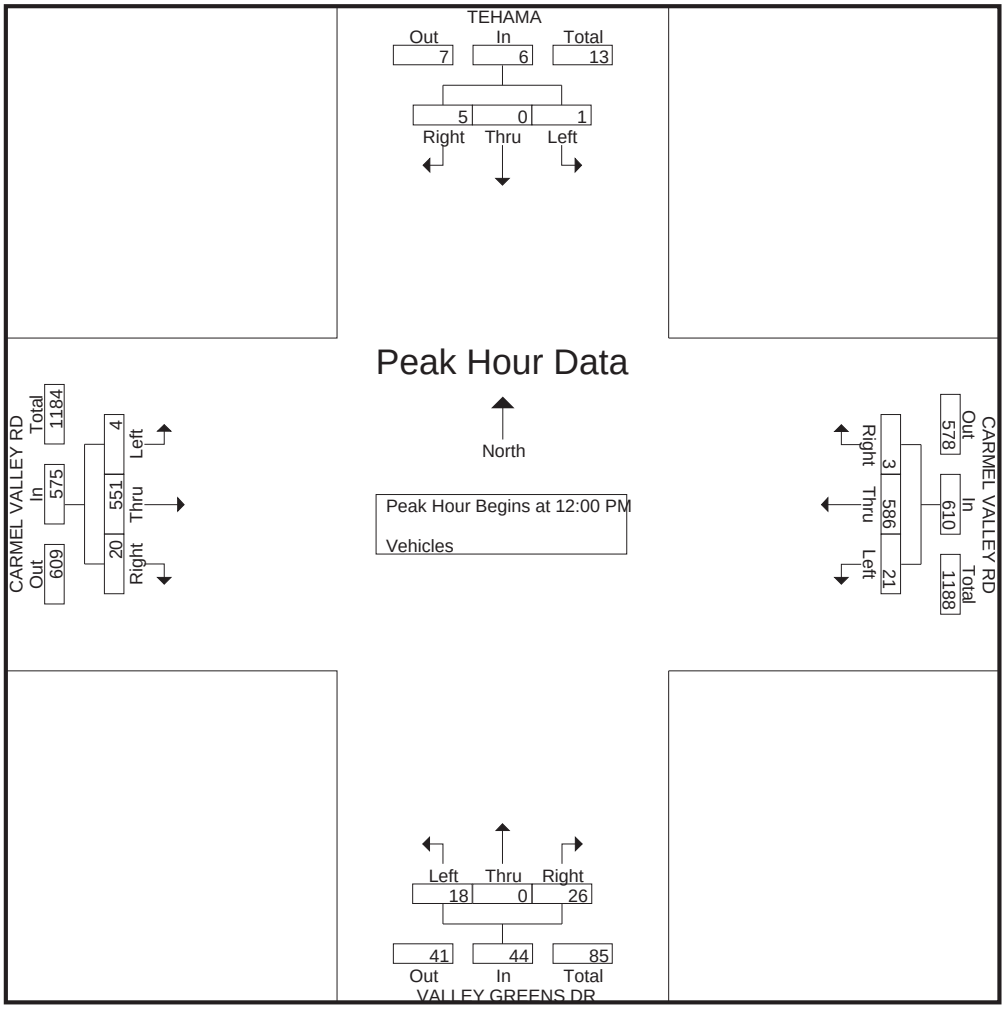

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Groups Printed- Bikes

	TEHAMA Southbound					CARMEL VALLEY RD Westbound					VALLEY GREENS DR Northbound					CARMEL VALLEY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	1	0	0	1	3
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	3
Grand Total	0	0	0	0	0	0	0	2	0	2	3	0	0	0	3	0	1	0	0	1	6
Apprch %	0	0	0	0		0	0	100	0		100	0	0	0		0	100	0	0		
Total %	0	0	0	0	0	0	0	33.3	0	33.3	50	0	0	0	50	0	16.7	0	0	16.7	

	TEHAMA Southbound				CARMEL VALLEY RD Westbound				VALLEY GREENS DR Northbound				CARMEL VALLEY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:30 AM																	
11:30 AM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	**1**	0	**1**	**2**
11:45 AM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0	2
Total Volume	0	0	0	0	0	0	2	2	2	0	0	2	0	1	0	1	5
% App. Total	0	0	0		0	0	100		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.500	.500	.000	.000	.500	.000	.250	.000	.250	.625

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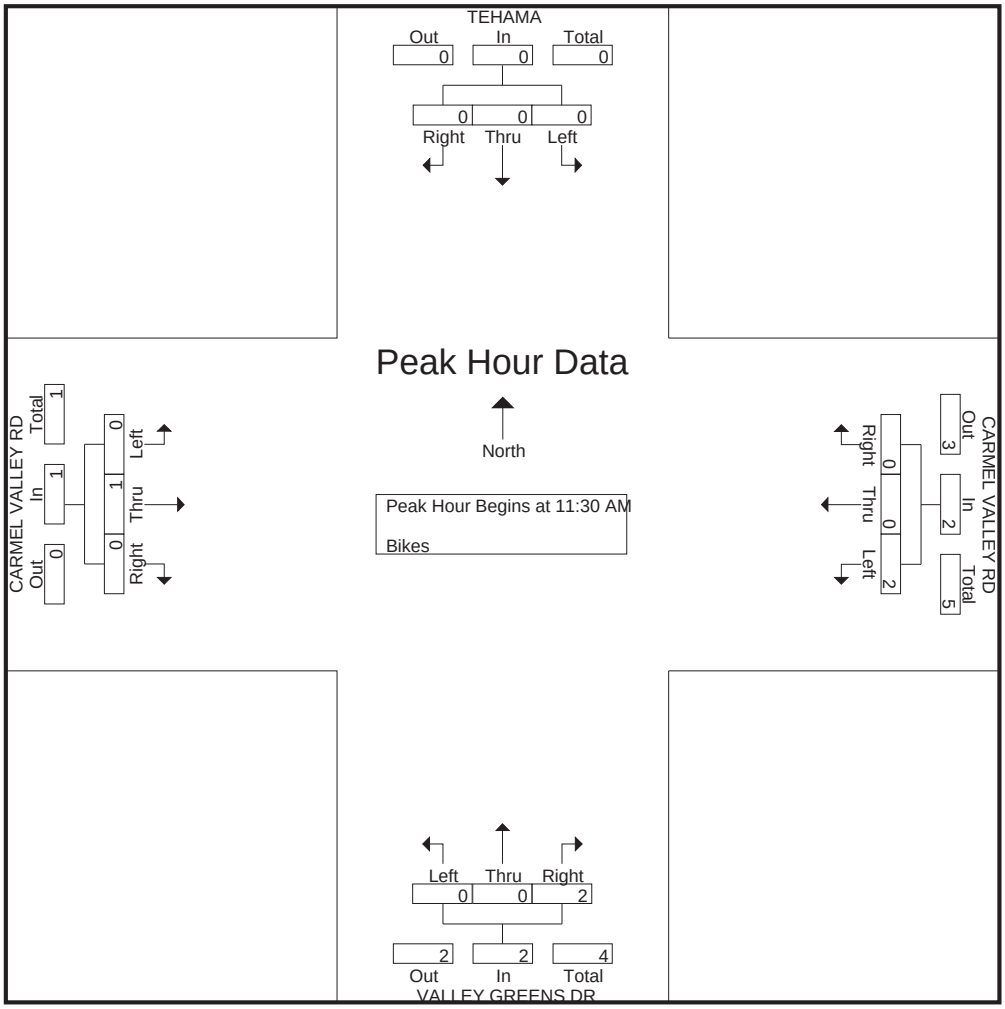

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Groups Printed- Vehicles

	TEHAMA Southbound					CARMEL VALLEY RD Westbound					VALLEY GREENS DR Northbound					CARMEL VALLEY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	3	0	4	0	7	0	147	6	0	153	7	0	8	0	15	4	217	2	0	223	398
04:15 PM	3	0	2	0	5	2	124	4	0	130	8	0	3	0	11	6	209	0	0	215	361
04:30 PM	4	1	2	0	7	0	148	6	0	154	6	0	11	0	17	9	206	2	0	217	395
04:45 PM	4	0	3	0	7	0	116	3	0	119	10	0	1	0	11	10	224	0	0	234	371
Total	14	1	11	0	26	2	535	19	0	556	31	0	23	0	54	29	856	4	0	889	1525
05:00 PM	4	1	3	0	8	3	138	7	0	148	4	1	11	0	16	7	193	0	0	200	372
05:15 PM	1	0	1	0	2	0	122	4	0	126	5	0	3	0	8	6	223	1	0	230	366
05:30 PM	1	0	0	0	1	0	119	4	0	123	9	1	12	0	22	7	182	1	0	190	336
05:45 PM	0	0	1	0	1	1	107	6	0	114	8	0	5	0	13	11	179	1	0	191	319
Total	6	1	5	0	12	4	486	21	0	511	26	2	31	0	59	31	777	3	0	811	1393
Grand Total	20	2	16	0	38	6	1021	40	0	1067	57	2	54	0	113	60	1633	7	0	1700	2918
Apprch %	52.6	5.3	42.1	0		0.6	95.7	3.7	0		50.4	1.8	47.8	0		3.5	96.1	0.4	0		
Total %	0.7	0.1	0.5	0	1.3	0.2	35	1.4	0	36.6	2	0.1	1.9	0	3.9	2.1	56	0.2	0	58.3	

	TEHAMA Southbound				CARMEL VALLEY RD Westbound				VALLEY GREENS DR Northbound				CARMEL VALLEY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	3	0	**4**	**7**	0	147	**6**	153	7	0	8	15	4	217	**2**	223	**398**
04:15 PM	3	0	2	5	**2**	124	4	130	8	0	3	11	6	209	0	215	361
04:30 PM	**4**	**1**	2	7	0	**148**	6	**154**	6	0	**11**	**17**	9	206	2	217	395
04:45 PM	4	0	3	7	0	116	3	119	**10**	0	1	11	**10**	**224**	0	**234**	371
Total Volume	14	1	11	26	2	535	19	556	31	0	23	54	29	856	4	889	1525
% App. Total	53.8	3.8	42.3		0.4	96.2	3.4		57.4	0	42.6		3.3	96.3	0.4		
PHF	.875	.250	.688	.929	.250	.904	.792	.903	.775	.000	.523	.794	.725	.955	.500	.950	.958

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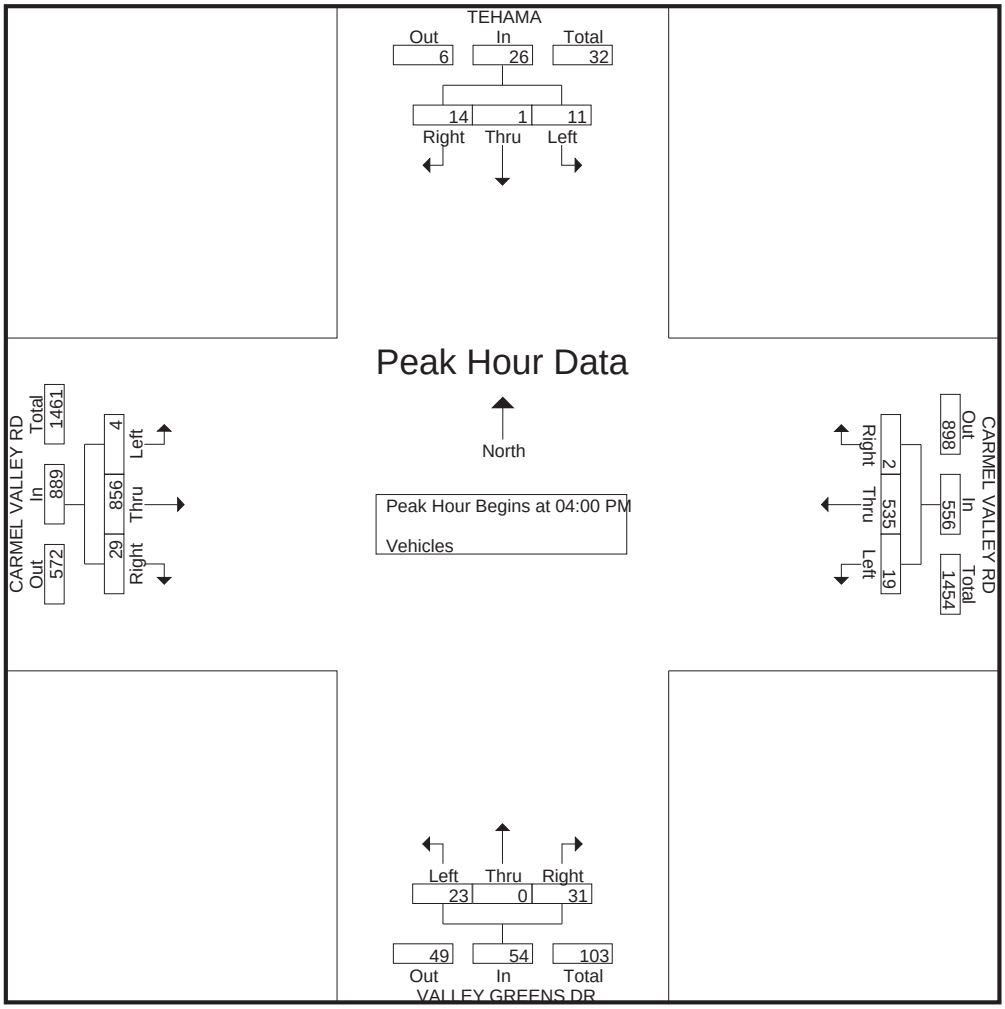

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Groups Printed- Bikes

	TEHAMA Southbound					CARMEL VALLEY RD Westbound					VALLEY GREENS DR Northbound					CARMEL VALLEY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	0		0	0	100	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	0	0	

	TEHAMA Southbound				CARMEL VALLEY RD Westbound				VALLEY GREENS DR Northbound				CARMEL VALLEY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	**1**
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

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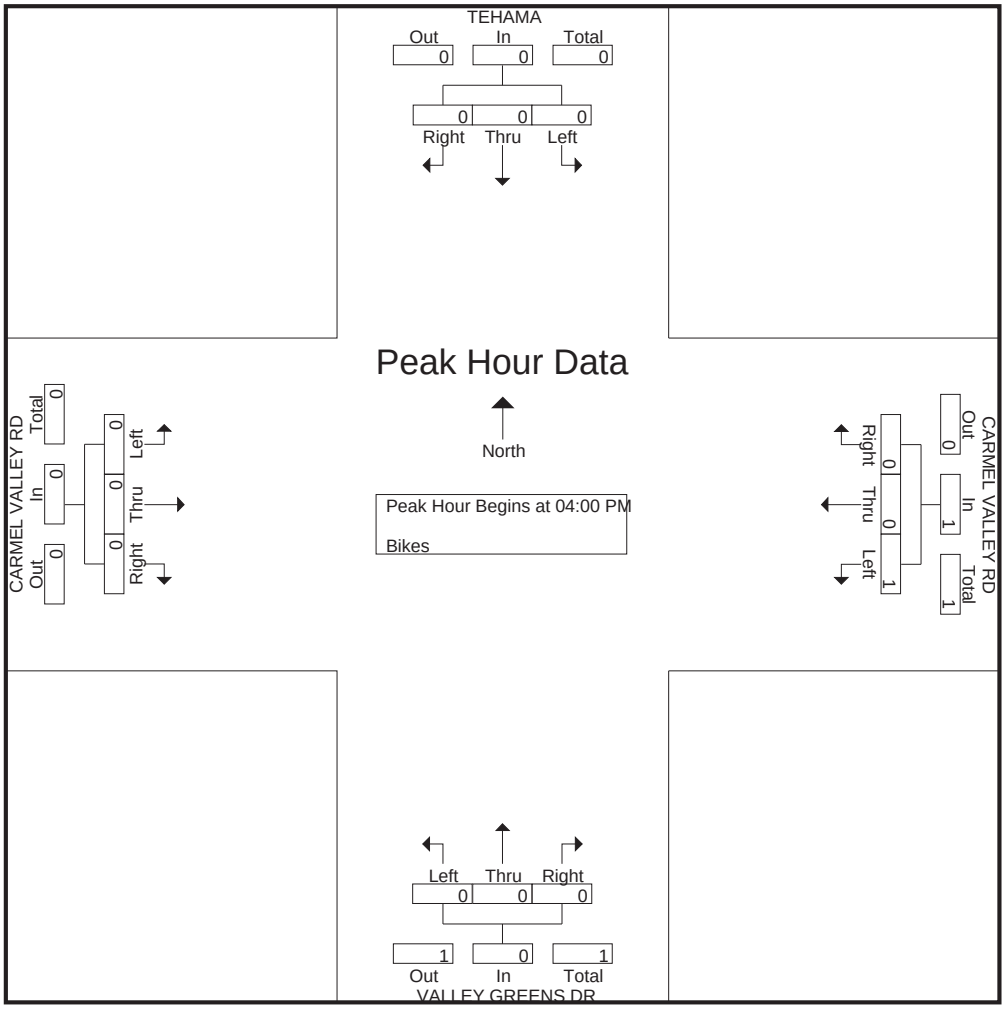


Appendix B: LOS Calculation Sheets

Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1044	373	122	1231	641
v/c Ratio	0.74	0.70	0.25	0.72	0.37
Control Delay	15.2	26.7	12.3	13.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	26.7	12.3	13.9	0.6
Queue Length 50th (ft)	147	122	20	155	0
Queue Length 95th (ft)	217	188	49	220	0
Internal Link Dist (ft)		1614			2081
Turn Bay Length (ft)			110	370	
Base Capacity (vph)	1795	763	674	2178	1745
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.58	0.49	0.18	0.57	0.37

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	846	302	99	997	519
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0	5.0	4.0	4.0
Lane Util. Factor		0.88	1.00	1.00	0.97	1.00
Frt		0.85	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		2651	1736	1475	3216	1745
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		2651	1736	1475	3216	1745
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	1044	373	122	1231	641
RTOR Reduction (vph)	0	0	0	33	0	0
Lane Group Flow (vph)	0	1044	373	89	1231	641
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases				2		
Actuated Green, G (s)		30.5	17.7	17.7	30.5	57.2
Effective Green, g (s)		30.5	17.7	17.7	30.5	57.2
Actuated g/C Ratio		0.53	0.31	0.31	0.53	1.00
Clearance Time (s)		4.0	5.0	5.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1413	537	456	1714	1745
v/s Ratio Prot		c0.39	c0.21		0.38	0.37
v/s Ratio Perm				0.06		
v/c Ratio		0.74	0.69	0.19	0.72	0.37
Uniform Delay, d1		10.3	17.4	14.5	10.1	0.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.1	3.9	0.2	1.5	0.6
Delay (s)		12.3	21.3	14.7	11.6	0.6
Level of Service		B	C	B	B	A
Approach Delay (s)	12.3		19.6			7.8
Approach LOS	B		B			A

Intersection Summary

HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	57.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	732	173	48	1073	100	17
v/c Ratio	0.60	0.16	0.53	0.79	0.47	0.08
Control Delay	11.6	1.6	56.6	13.4	35.9	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	1.6	56.6	13.4	35.9	13.1
Queue Length 50th (ft)	186	0	21	257	41	0
Queue Length 95th (ft)	284	17	#57	426	74	13
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1217	1088	90	1363	640	582
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.16	0.53	0.79	0.16	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	593	140	39	869	81	14
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	732	173	48	1073	100	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1107	941	64	1298	127	113
Arrive On Green	0.63	0.63	0.04	0.74	0.08	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	732	173	48	1073	100	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	14.2	2.6	1.5	21.9	3.4	0.0
Cycle Q Clear(g_c), s	14.2	2.6	1.5	21.9	3.4	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1107	941	64	1298	127	113
V/C Ratio(X)	0.66	0.18	0.76	0.83	0.79	0.00
Avail Cap(c_a), veh/h	1395	1186	124	1649	877	783
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.3	4.2	25.5	4.6	24.2	0.0
Incr Delay (d2), s/veh	0.8	0.1	16.5	2.9	10.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	1.1	1.0	11.2	1.8	0.0
LnGrp Delay(d),s/veh	7.1	4.3	42.0	7.5	34.5	0.0
LnGrp LOS	A	A	D	A	C	
Approach Vol, veh/h	905			1121	100	
Approach Delay, s/veh	6.6			9.0	34.5	
Approach LOS	A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		8.3	6.0	39.2				45.3
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	42.5				50.5
Max Q Clear Time (g_c+I1), s		5.4	3.5	16.2				23.9
Green Ext Time (p_c), s		0.2	0.0	15.7				15.8

Intersection Summary	
HCM 2010 Ctrl Delay	9.2
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	3	388	26	32	626	10	8	0	22	3	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	3	417	28	34	673	11	9	0	24	3	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	684	0	0	417	0	0	1173	1177	417	1182	1171	678
Stage 1	-	-	-	-	-	-	424	424	-	747	747	-
Stage 2	-	-	-	-	-	-	749	753	-	435	424	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	882	-	-	1110	-	-	104	118	575	152	176	434
Stage 1	-	-	-	-	-	-	506	489	-	380	395	-
Stage 2	-	-	-	-	-	-	295	305	-	574	563	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	882	-	-	1110	-	-	98	114	575	142	170	434
Mov Cap-2 Maneuver	-	-	-	-	-	-	98	114	-	142	170	-
Stage 1	-	-	-	-	-	-	504	487	-	379	383	-
Stage 2	-	-	-	-	-	-	279	296	-	549	561	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	21.5	21.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	250	882	-	-	1110	-	-	157	434
HCM Lane V/C Ratio	0.129	0.004	-	-	0.031	-	-	0.048	0.015
HCM Control Delay (s)	21.5	9.1	-	-	8.3	-	-	29.1	13.4
HCM Lane LOS	C	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.1	0

Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	899	770	74	862	657
v/c Ratio	0.87	0.90	0.10	0.68	0.38
Control Delay	34.2	34.6	6.4	24.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	34.6	6.4	24.7	0.6
Queue Length 50th (ft)	263	365	9	206	0
Queue Length 95th (ft)	#390	#609	30	273	0
Internal Link Dist (ft)		1614			2081
Turn Bay Length (ft)			110	370	
Base Capacity (vph)	1179	1015	879	1430	1745
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.76	0.76	0.08	0.60	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	836	716	69	802	611
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0	5.0	4.0	4.0
Lane Util. Factor		0.88	1.00	1.00	0.97	1.00
Frt		0.85	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		2651	1736	1475	3216	1745
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		2651	1736	1475	3216	1745
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	899	770	74	862	657
RTOR Reduction (vph)	0	0	0	21	0	0
Lane Group Flow (vph)	0	899	770	53	862	657
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases				2		
Actuated Green, G (s)		31.9	40.1	40.1	31.9	81.0
Effective Green, g (s)		31.9	40.1	40.1	31.9	81.0
Actuated g/C Ratio		0.39	0.50	0.50	0.39	1.00
Clearance Time (s)		4.0	5.0	5.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1044	859	730	1266	1745
v/s Ratio Prot		c0.34	c0.44		0.27	0.38
v/s Ratio Perm				0.04		
v/c Ratio		0.86	0.90	0.07	0.68	0.38
Uniform Delay, d1		22.5	18.6	10.7	20.3	0.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		7.4	11.9	0.0	1.5	0.6
Delay (s)		29.9	30.5	10.8	21.9	0.6
Level of Service		C	C	B	C	A
Approach Delay (s)	29.9		28.7			12.7
Approach LOS	C		C			B

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	970	125	9	588	156	35
v/c Ratio	0.82	0.12	0.10	0.48	0.58	0.13
Control Delay	18.5	1.9	35.1	7.3	35.8	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	1.9	35.1	7.3	35.8	10.1
Queue Length 50th (ft)	232	0	4	95	60	0
Queue Length 95th (ft)	#723	22	19	205	120	22
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1188	1050	92	1276	653	604
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.12	0.10	0.46	0.24	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	941	121	9	570	151	34
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	970	125	9	588	156	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1114	947	16	1244	199	177
Arrive On Green	0.63	0.63	0.01	0.71	0.13	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	970	125	9	588	156	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	26.4	2.0	0.3	8.6	5.7	0.0
Cycle Q Clear(g_c), s	26.4	2.0	0.3	8.6	5.7	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1114	947	16	1244	199	177
V/C Ratio(X)	0.87	0.13	0.58	0.47	0.78	0.00
Avail Cap(c_a), veh/h	1276	1085	114	1509	802	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.8	4.3	28.9	3.7	24.8	0.0
Incr Delay (d2), s/veh	6.1	0.1	29.9	0.3	6.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.3	0.8	0.3	4.2	2.8	0.0
LnGrp Delay(d),s/veh	14.9	4.4	58.8	4.0	31.5	0.0
LnGrp LOS	B	A	E	A	C	
Approach Vol, veh/h	1095			597	156	
Approach Delay, s/veh	13.7			4.8	31.5	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.4	4.5	42.6				47.2
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	42.5				50.5
Max Q Clear Time (g_c+I1), s		7.7	2.3	28.4				10.6
Green Ext Time (p_c), s		0.4	0.0	8.7				15.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	745	28	21	506	8	20	2	55	8	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	6	784	29	22	533	8	21	2	58	8	3	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	541	0	0	784	0	0	1380	1382	784	1408	1378	537
Stage 1	-	-	-	-	-	-	797	797	-	581	581	-
Stage 2	-	-	-	-	-	-	583	585	-	827	797	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	998	-	-	808	-	-	69	82	330	104	130	525
Stage 1	-	-	-	-	-	-	272	286	-	474	475	-
Stage 2	-	-	-	-	-	-	389	389	-	341	373	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	998	-	-	808	-	-	65	79	330	82	126	525
Mov Cap-2 Maneuver	-	-	-	-	-	-	65	79	-	82	126	-
Stage 1	-	-	-	-	-	-	270	284	-	471	462	-
Stage 2	-	-	-	-	-	-	371	378	-	277	371	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	51.8	36.7
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	154	998	-	-	808	-	-	91	525
HCM Lane V/C Ratio	0.526	0.006	-	-	0.027	-	-	0.127	0.012
HCM Control Delay (s)	51.8	8.6	-	-	9.6	-	-	50.2	11.9
HCM Lane LOS	F	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	2.6	0	-	-	0.1	-	-	0.4	0

Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	985	787	62	917	551
v/c Ratio	0.90	0.93	0.08	0.69	0.32
Control Delay	38.9	41.4	8.1	26.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	41.4	8.1	26.4	0.5
Queue Length 50th (ft)	327	440	10	243	0
Queue Length 95th (ft)	#472	#699	31	314	0
Internal Link Dist (ft)		1614			2081
Turn Bay Length (ft)			110	370	
Base Capacity (vph)	1180	942	815	1431	1745
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.83	0.84	0.08	0.64	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	926	740	58	862	518
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0	5.0	4.0	4.0
Lane Util. Factor		0.88	1.00	1.00	0.97	1.00
Frt		0.85	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		2651	1736	1475	3216	1745
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		2651	1736	1475	3216	1745
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	985	787	62	917	551
RTOR Reduction (vph)	0	0	0	16	0	0
Lane Group Flow (vph)	0	985	787	46	917	551
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases				2		
Actuated Green, G (s)		38.7	45.8	45.8	38.7	93.5
Effective Green, g (s)		38.7	45.8	45.8	38.7	93.5
Actuated g/C Ratio		0.41	0.49	0.49	0.41	1.00
Clearance Time (s)		4.0	5.0	5.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1097	850	722	1331	1745
v/s Ratio Prot		c0.37	c0.45		0.29	0.32
v/s Ratio Perm				0.03		
v/c Ratio		0.90	0.93	0.06	0.69	0.32
Uniform Delay, d1		25.6	22.3	12.6	22.5	0.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		9.8	15.7	0.0	1.5	0.5
Delay (s)		35.4	38.0	12.6	24.0	0.5
Level of Service		D	D	B	C	A
Approach Delay (s)	35.4		36.1			15.2
Approach LOS	D		D			B

Intersection Summary

HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	93.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	898	110	16	605	178	44
v/c Ratio	0.80	0.11	0.18	0.52	0.56	0.14
Control Delay	19.0	1.9	52.2	8.7	39.6	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	1.9	52.2	8.7	39.6	18.0
Queue Length 50th (ft)	240	0	6	121	65	5
Queue Length 95th (ft)	670	20	36	258	191	40
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1532	1316	90	1576	638	588
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.08	0.18	0.38	0.28	0.07

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	871	107	16	587	173	43
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	898	110	16	605	178	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1114	947	26	1244	223	199
Arrive On Green	0.63	0.63	0.02	0.71	0.14	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	898	110	16	605	178	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	24.7	1.9	0.6	9.9	7.1	0.0
Cycle Q Clear(g_c), s	24.7	1.9	0.6	9.9	7.1	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1114	947	26	1244	223	199
V/C Ratio(X)	0.81	0.12	0.62	0.49	0.80	0.00
Avail Cap(c_a), veh/h	1973	1677	103	2180	727	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.9	4.7	31.6	4.1	26.8	0.0
Incr Delay (d2), s/veh	1.4	0.1	21.9	0.3	6.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	0.8	0.4	4.8	3.5	0.0
LnGrp Delay(d),s/veh	10.3	4.7	53.6	4.4	33.3	0.0
LnGrp LOS	B	A	D	A	C	
Approach Vol, veh/h	1008			621	178	
Approach Delay, s/veh	9.7			5.7	33.3	
Approach LOS	A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		13.2	5.0	46.4				51.4
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	72.5				80.5
Max Q Clear Time (g_c+I1), s		9.1	2.6	26.7				11.9
Green Ext Time (p_c), s		0.5	0.0	14.2				15.2

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	856	29	19	535	2	23	0	31	11	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	4	892	30	20	557	2	24	0	32	11	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	559	0	0	892	0	0	1498	1499	892	1514	1498	558
Stage 1	-	-	-	-	-	-	900	900	-	598	598	-
Stage 2	-	-	-	-	-	-	598	599	-	916	900	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	983	-	-	736	-	-	54	66	279	87	109	510
Stage 1	-	-	-	-	-	-	229	246	-	463	466	-
Stage 2	-	-	-	-	-	-	379	381	-	303	332	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	983	-	-	736	-	-	51	64	279	75	106	510
Mov Cap-2 Maneuver	-	-	-	-	-	-	51	64	-	75	106	-
Stage 1	-	-	-	-	-	-	228	245	-	461	453	-
Stage 2	-	-	-	-	-	-	357	371	-	267	331	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	85.6	34.6
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	96	983	-	-	736	-	-	77	510
HCM Lane V/C Ratio	0.586	0.004	-	-	0.027	-	-	0.162	0.029
HCM Control Delay (s)	85.6	8.7	-	-	10	-	-	60.6	12.3
HCM Lane LOS	F	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	2.7	0	-	-	0.1	-	-	0.5	0.1

Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	683	667	77	665	645
v/c Ratio	0.73	0.81	0.10	0.58	0.37
Control Delay	22.8	21.5	3.3	18.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	21.5	3.3	18.6	0.6
Queue Length 50th (ft)	114	192	2	94	0
Queue Length 95th (ft)	212	332	19	171	0
Internal Link Dist (ft)		1614			2081
Turn Bay Length (ft)			110	370	
Base Capacity (vph)	1193	1194	1035	1447	1745
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.57	0.56	0.07	0.46	0.37

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	649	634	73	632	613
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0	5.0	4.0	4.0
Lane Util. Factor		0.88	1.00	1.00	0.97	1.00
Frt		0.85	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		2651	1736	1475	3216	1745
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		2651	1736	1475	3216	1745
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	683	667	77	665	645
RTOR Reduction (vph)	0	0	0	35	0	0
Lane Group Flow (vph)	0	683	667	42	665	645
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases				2		
Actuated Green, G (s)		20.1	27.1	27.1	20.1	56.2
Effective Green, g (s)		20.1	27.1	27.1	20.1	56.2
Actuated g/C Ratio		0.36	0.48	0.48	0.36	1.00
Clearance Time (s)		4.0	5.0	5.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		948	837	711	1150	1745
v/s Ratio Prot		c0.26	c0.38		0.21	0.37
v/s Ratio Perm				0.03		
v/c Ratio		0.72	0.80	0.06	0.58	0.37
Uniform Delay, d1		15.6	12.2	7.8	14.6	0.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.7	5.3	0.0	0.7	0.6
Delay (s)		18.3	17.5	7.8	15.3	0.6
Level of Service		B	B	A	B	A
Approach Delay (s)	18.3		16.5			8.1
Approach LOS	B		B			A

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	609	83	9	662	91	9
v/c Ratio	0.50	0.08	0.06	0.53	0.31	0.03
Control Delay	8.6	2.1	27.4	7.3	23.5	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.6	2.1	27.4	7.3	23.5	12.5
Queue Length 50th (ft)	82	0	3	94	25	0
Queue Length 95th (ft)	259	17	17	201	70	11
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1462	1257	144	1647	1009	906
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.07	0.06	0.40	0.09	0.01

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	566	77	8	616	85	8
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	609	83	9	662	91	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	969	824	16	1172	112	100
Arrive On Green	0.55	0.55	0.01	0.67	0.07	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	609	83	9	662	91	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	8.7	1.0	0.2	7.4	2.1	0.0
Cycle Q Clear(g_c), s	8.7	1.0	0.2	7.4	2.1	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	969	824	16	1172	112	100
V/C Ratio(X)	0.63	0.10	0.56	0.56	0.82	0.00
Avail Cap(c_a), veh/h	2039	1733	182	2411	1282	1144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	5.7	3.9	18.1	3.2	16.8	0.0
Incr Delay (d2), s/veh	0.7	0.1	27.8	0.4	13.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.4	0.2	3.6	1.3	0.0
LnGrp Delay(d),s/veh	6.3	4.0	45.9	3.6	30.0	0.0
LnGrp LOS	A	A	D	A	C	
Approach Vol, veh/h	692			671	91	
Approach Delay, s/veh	6.0			4.2	30.0	
Approach LOS	A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		6.6	4.4	25.7				30.1
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	42.5				50.5
Max Q Clear Time (g_c+I1), s		4.1	2.2	10.7				9.4
Green Ext Time (p_c), s		0.2	0.0	9.5				10.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.7
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	551	20	21	586	3	18	0	26	1	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	4	599	22	23	637	3	20	0	28	1	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	640	0	0	599	0	0	1292	1294	599	1306	1292	639
Stage 1	-	-	-	-	-	-	608	608	-	684	684	-
Stage 2	-	-	-	-	-	-	684	686	-	622	608	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	916	-	-	949	-	-	82	96	437	124	148	457
Stage 1	-	-	-	-	-	-	373	376	-	413	423	-
Stage 2	-	-	-	-	-	-	329	336	-	449	461	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	916	-	-	949	-	-	79	93	437	113	144	457
Mov Cap-2 Maneuver	-	-	-	-	-	-	79	93	-	113	144	-
Stage 1	-	-	-	-	-	-	371	374	-	411	413	-
Stage 2	-	-	-	-	-	-	317	328	-	418	459	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	38.9	17
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	153	916	-	-	949	-	-	113	457
HCM Lane V/C Ratio	0.313	0.005	-	-	0.024	-	-	0.01	0.012
HCM Control Delay (s)	38.9	8.9	-	-	8.9	-	-	37.2	13
HCM Lane LOS	E	A	-	-	A	-	-	E	B
HCM 95th %tile Q(veh)	1.2	0	-	-	0.1	-	-	0	0

Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1069	373	125	1259	641
v/c Ratio	0.75	0.71	0.26	0.73	0.37
Control Delay	15.4	27.3	13.1	14.1	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.4	27.3	13.1	14.1	0.6
Queue Length 50th (ft)	153	128	23	160	0
Queue Length 95th (ft)	226	188	51	227	0
Internal Link Dist (ft)		1614			2081
Turn Bay Length (ft)			110	370	
Base Capacity (vph)	1759	747	660	2133	1745
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	0.50	0.19	0.59	0.37

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	866	302	101	1020	519
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0	5.0	4.0	4.0
Lane Util. Factor		0.88	1.00	1.00	0.97	1.00
Frt		0.85	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		2651	1736	1475	3216	1745
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		2651	1736	1475	3216	1745
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	1069	373	125	1259	641
RTOR Reduction (vph)	0	0	0	31	0	0
Lane Group Flow (vph)	0	1069	373	94	1259	641
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases				2		
Actuated Green, G (s)		31.4	17.8	17.8	31.4	58.2
Effective Green, g (s)		31.4	17.8	17.8	31.4	58.2
Actuated g/C Ratio		0.54	0.31	0.31	0.54	1.00
Clearance Time (s)		4.0	5.0	5.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1430	530	451	1735	1745
v/s Ratio Prot		c0.40	c0.21		0.39	0.37
v/s Ratio Perm				0.06		
v/c Ratio		0.75	0.70	0.21	0.73	0.37
Uniform Delay, d1		10.3	17.9	15.0	10.1	0.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.2	4.2	0.2	1.5	0.6
Delay (s)		12.5	22.1	15.2	11.7	0.6
Level of Service		B	C	B	B	A
Approach Delay (s)	12.5		20.4			7.9
Approach LOS	B		C			A

Intersection Summary

HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	58.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	765	173	48	1101	100	17
v/c Ratio	0.63	0.16	0.53	0.81	0.47	0.08
Control Delay	12.2	1.6	56.6	14.4	35.9	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	1.6	56.6	14.4	35.9	13.1
Queue Length 50th (ft)	201	0	21	275	41	0
Queue Length 95th (ft)	305	17	#57	#457	74	13
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1217	1088	90	1363	640	582
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.16	0.53	0.81	0.16	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	620	140	39	892	81	14
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	765	173	48	1101	100	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1123	954	63	1309	127	113
Arrive On Green	0.64	0.64	0.04	0.75	0.08	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	765	173	48	1101	100	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	15.5	2.6	1.6	23.7	3.5	0.0
Cycle Q Clear(g_c), s	15.5	2.6	1.6	23.7	3.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1123	954	63	1309	127	113
V/C Ratio(X)	0.68	0.18	0.76	0.84	0.79	0.00
Avail Cap(c_a), veh/h	1346	1144	120	1591	846	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.4	4.1	26.5	4.8	25.1	0.0
Incr Delay (d2), s/veh	1.1	0.1	17.3	3.6	10.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	1.1	1.0	12.3	1.9	0.0
LnGrp Delay(d),s/veh	7.5	4.2	43.8	8.3	35.3	0.0
LnGrp LOS	A	A	D	A	D	
Approach Vol, veh/h	938			1149	100	
Approach Delay, s/veh	6.9			9.8	35.3	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		8.5	6.1	41.0				47.1
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	42.5				50.5
Max Q Clear Time (g_c+I1), s		5.5	3.6	17.5				25.7
Green Ext Time (p_c), s		0.2	0.0	15.9				15.8

Intersection Summary	
HCM 2010 Ctrl Delay	9.7
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	3	388	53	42	626	10	31	0	30	3	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	3	417	57	45	673	11	33	0	32	3	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	684	0	0	417	0	0	1195	1198	417	1209	1193	678
Stage 1	-	-	-	-	-	-	424	424	-	769	769	-
Stage 2	-	-	-	-	-	-	771	774	-	440	424	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	882	-	-	1110	-	-	100	113	575	145	170	434
Stage 1	-	-	-	-	-	-	506	489	-	369	385	-
Stage 2	-	-	-	-	-	-	284	296	-	570	563	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	882	-	-	1110	-	-	93	108	575	132	163	434
Mov Cap-2 Maneuver	-	-	-	-	-	-	93	108	-	132	163	-
Stage 1	-	-	-	-	-	-	504	487	-	368	369	-
Stage 2	-	-	-	-	-	-	265	284	-	536	561	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	43.1	22.7
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	158	882	-	-	1110	-	-	148	434
HCM Lane V/C Ratio	0.415	0.004	-	-	0.041	-	-	0.051	0.015
HCM Control Delay (s)	43.1	9.1	-	-	8.4	-	-	30.6	13.4
HCM Lane LOS	E	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	1.8	0	-	-	0.1	-	-	0.2	0

Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	924	770	76	884	657
v/c Ratio	0.88	0.91	0.10	0.69	0.38
Control Delay	35.1	35.6	6.3	24.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.1	35.6	6.3	24.9	0.6
Queue Length 50th (ft)	274	365	9	213	0
Queue Length 95th (ft)	#407	#609	30	282	0
Internal Link Dist (ft)		1614			2081
Turn Bay Length (ft)			110	370	
Base Capacity (vph)	1153	993	862	1400	1745
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.80	0.78	0.09	0.63	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	859	716	71	822	611
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0	5.0	4.0	4.0
Lane Util. Factor		0.88	1.00	1.00	0.97	1.00
Frt		0.85	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		2651	1736	1475	3216	1745
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		2651	1736	1475	3216	1745
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	924	770	76	884	657
RTOR Reduction (vph)	0	0	0	22	0	0
Lane Group Flow (vph)	0	924	770	54	884	657
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases				2		
Actuated Green, G (s)		32.8	40.4	40.4	32.8	82.2
Effective Green, g (s)		32.8	40.4	40.4	32.8	82.2
Actuated g/C Ratio		0.40	0.49	0.49	0.40	1.00
Clearance Time (s)		4.0	5.0	5.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1057	853	724	1283	1745
v/s Ratio Prot		c0.35	c0.44		0.27	0.38
v/s Ratio Perm				0.04		
v/c Ratio		0.87	0.90	0.07	0.69	0.38
Uniform Delay, d1		22.8	19.1	11.0	20.5	0.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		8.2	12.7	0.0	1.6	0.6
Delay (s)		31.0	31.8	11.1	22.0	0.6
Level of Service		C	C	B	C	A
Approach Delay (s)	31.0		30.0			12.9
Approach LOS	C		C			B

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	82.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	994	125	9	615	156	35
v/c Ratio	0.84	0.12	0.10	0.50	0.58	0.13
Control Delay	19.6	1.9	35.1	7.5	35.8	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	1.9	35.1	7.5	35.8	10.1
Queue Length 50th (ft)	245	0	4	101	60	0
Queue Length 95th (ft)	#749	22	19	219	120	22
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1188	1050	92	1276	653	604
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.12	0.10	0.48	0.24	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	964	121	9	597	151	34
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	994	125	9	615	156	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1124	955	15	1251	198	177
Arrive On Green	0.64	0.64	0.01	0.71	0.13	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	994	125	9	615	156	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	28.1	2.0	0.3	9.3	5.8	0.0
Cycle Q Clear(g_c), s	28.1	2.0	0.3	9.3	5.8	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1124	955	15	1251	198	177
V/C Ratio(X)	0.88	0.13	0.58	0.49	0.79	0.00
Avail Cap(c_a), veh/h	1247	1060	111	1474	784	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.0	4.3	29.6	3.8	25.4	0.0
Incr Delay (d2), s/veh	7.3	0.1	30.1	0.3	6.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	0.8	0.3	4.4	2.9	0.0
LnGrp Delay(d),s/veh	16.3	4.3	59.7	4.1	32.1	0.0
LnGrp LOS	B	A	E	A	C	
Approach Vol, veh/h	1119			624	156	
Approach Delay, s/veh	15.0			4.9	32.1	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.6	4.6	43.8				48.4
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	42.5				50.5
Max Q Clear Time (g_c+I1), s		7.8	2.3	30.1				11.3
Green Ext Time (p_c), s		0.4	0.0	8.2				15.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	12.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	745	51	29	506	8	47	2	65	8	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	6	784	54	31	533	8	49	2	68	8	3	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	541	0	0	784	0	0	1396	1399	784	1430	1395	537
Stage 1	-	-	-	-	-	-	797	797	-	598	598	-
Stage 2	-	-	-	-	-	-	599	602	-	832	797	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	998	-	-	808	-	-	67	79	330	101	127	525
Stage 1	-	-	-	-	-	-	272	286	-	463	466	-
Stage 2	-	-	-	-	-	-	379	379	-	339	373	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	998	-	-	808	-	-	63	76	330	76	121	525
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	76	-	76	121	-
Stage 1	-	-	-	-	-	-	270	284	-	460	448	-
Stage 2	-	-	-	-	-	-	358	364	-	265	371	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	157.5	39.1
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	118	998	-	-	808	-	-	85	525
HCM Lane V/C Ratio	1.017	0.006	-	-	0.038	-	-	0.136	0.012
HCM Control Delay (s)	157.5	8.6	-	-	9.6	-	-	53.9	11.9
HCM Lane LOS	F	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	6.8	0	-	-	0.1	-	-	0.5	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	745	51	29	506	8	47	2	65	8	3	6
Sign Control		Free			Free			Stop			Stop	
Grade		4%			2%			7%			1%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	784	54	31	533	8	49	2	68	8	3	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	541			838			1395	1399	784	1464	1448	537
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	541			838			1395	1399	784	1464	1448	537
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	99			96			54	98	82	90	97	99
cM capacity (veh/h)	998			771			107	130	383	81	121	532

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	6	784	54	31	541	52	68	18
Volume Left	6	0	0	31	0	49	0	8
Volume Right	0	0	54	0	8	0	68	6
cSH	998	1700	1700	771	1700	108	383	142
Volume to Capacity	0.01	0.46	0.03	0.04	0.32	0.48	0.18	0.13
Queue Length 95th (ft)	0	0	0	3	0	53	16	11
Control Delay (s)	8.6	0.0	0.0	9.9	0.0	65.8	16.4	36.4
Lane LOS	A			A		F	C	E
Approach Delay (s)	0.1			0.5		37.6		36.4
Approach LOS						E		E

Intersection Summary				
Average Delay		3.6		
Intersection Capacity Utilization		56.6%	ICU Level of Service	B
Analysis Period (min)		15		

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	745	51	29	506	8	47	2	65	8	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	100	-	0	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	6	784	54	31	533	8	49	2	68	8	3	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	541	0	0	784	0	0	1396	1399	784	1396	1395	537
Stage 1	-	-	-	-	-	-	797	797	-	598	598	-
Stage 2	-	-	-	-	-	-	599	602	-	798	797	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	998	-	-	808	-	-	67	79	330	106	127	525
Stage 1	-	-	-	-	-	-	272	286	-	463	466	-
Stage 2	-	-	-	-	-	-	379	379	-	355	373	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	998	-	-	808	-	-	63	76	330	79	121	525
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	76	-	79	121	-
Stage 1	-	-	-	-	-	-	270	284	-	460	448	-
Stage 2	-	-	-	-	-	-	358	364	-	278	371	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	84.6	38.2
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	63	330	998	-	-	808	-	-	87	525
HCM Lane V/C Ratio	0.819	0.207	0.006	-	-	0.038	-	-	0.133	0.012
HCM Control Delay (s)	172.1	18.7	8.6	-	-	9.6	-	-	52.6	11.9
HCM Lane LOS	F	C	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	3.7	0.8	0	-	-	0.1	-	-	0.4	0

Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1031	787	64	940	551
v/c Ratio	0.93	0.93	0.09	0.70	0.32
Control Delay	43.2	42.2	8.1	26.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	42.2	8.1	26.8	0.5
Queue Length 50th (ft)	352	440	10	252	0
Queue Length 95th (ft)	#507	#699	32	325	0
Internal Link Dist (ft)		1614			2081
Turn Bay Length (ft)			110	370	
Base Capacity (vph)	1156	924	800	1403	1745
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.89	0.85	0.08	0.67	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	969	740	60	884	518
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0	5.0	4.0	4.0
Lane Util. Factor		0.88	1.00	1.00	0.97	1.00
Frt		0.85	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		2651	1736	1475	3216	1745
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		2651	1736	1475	3216	1745
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1031	787	64	940	551
RTOR Reduction (vph)	0	0	0	16	0	0
Lane Group Flow (vph)	0	1031	787	48	940	551
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases				2		
Actuated Green, G (s)		39.5	46.2	46.2	39.5	94.7
Effective Green, g (s)		39.5	46.2	46.2	39.5	94.7
Actuated g/C Ratio		0.42	0.49	0.49	0.42	1.00
Clearance Time (s)		4.0	5.0	5.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1105	846	719	1341	1745
v/s Ratio Prot		c0.39	c0.45		0.29	0.32
v/s Ratio Perm				0.03		
v/c Ratio		0.93	0.93	0.07	0.70	0.32
Uniform Delay, d1		26.3	22.7	12.8	22.7	0.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		13.8	16.5	0.0	1.7	0.5
Delay (s)		40.2	39.3	12.9	24.4	0.5
Level of Service		D	D	B	C	A
Approach Delay (s)	40.2		37.3			15.6
Approach LOS	D		D			B

Intersection Summary

HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	94.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	924	110	16	657	178	44
v/c Ratio	0.81	0.11	0.18	0.56	0.57	0.15
Control Delay	19.6	1.9	53.7	9.2	41.1	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	1.9	53.7	9.2	41.1	18.3
Queue Length 50th (ft)	261	0	7	141	69	5
Queue Length 95th (ft)	715	20	36	293	191	40
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1521	1307	87	1564	615	568
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.08	0.18	0.42	0.29	0.08

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	896	107	16	637	173	43
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	924	110	16	657	178	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1136	966	26	1260	221	198
Arrive On Green	0.65	0.65	0.02	0.72	0.14	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	924	110	16	657	178	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	26.8	1.9	0.7	11.5	7.5	0.0
Cycle Q Clear(g_c), s	26.8	1.9	0.7	11.5	7.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1136	966	26	1260	221	198
V/C Ratio(X)	0.81	0.11	0.63	0.52	0.80	0.00
Avail Cap(c_a), veh/h	1865	1585	98	2061	687	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.0	4.6	33.5	4.3	28.4	0.0
Incr Delay (d2), s/veh	1.5	0.1	22.5	0.3	6.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.3	0.8	0.5	5.6	3.7	0.0
LnGrp Delay(d),s/veh	10.5	4.7	55.9	4.6	35.1	0.0
LnGrp LOS	B	A	E	A	D	
Approach Vol, veh/h	1034			673	178	
Approach Delay, s/veh	9.9			5.9	35.1	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		13.7	5.0	49.7				54.7
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	72.5				80.5
Max Q Clear Time (g_c+I1), s		9.5	2.7	28.8				13.5
Green Ext Time (p_c), s		0.5	0.0	15.4				16.8

Intersection Summary

HCM 2010 Ctrl Delay	10.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	37.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	856	54	28	535	2	73	0	49	11	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	4	892	56	29	557	2	76	0	51	11	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	559	0	0	892	0	0	1517	1518	892	1543	1517	558
Stage 1	-	-	-	-	-	-	900	900	-	617	617	-
Stage 2	-	-	-	-	-	-	617	618	-	926	900	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	983	-	-	736	-	-	~ 52	64	279	83	106	510
Stage 1	-	-	-	-	-	-	229	246	-	452	456	-
Stage 2	-	-	-	-	-	-	368	371	-	299	332	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	983	-	-	736	-	-	~ 48	61	279	66	101	510
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 48	61	-	66	101	-
Stage 1	-	-	-	-	-	-	228	245	-	450	438	-
Stage 2	-	-	-	-	-	-	343	356	-	243	331	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	$ 490.5	38.7
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	72	983	-	-	736	-	-	68	510
HCM Lane V/C Ratio	1.765	0.004	-	-	0.04	-	-	0.184	0.029
HCM Control Delay (s)	$ 490.5	8.7	-	-	10.1	-	-	69.5	12.3
HCM Lane LOS	F	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	11.2	0	-	-	0.1	-	-	0.6	0.1

Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	924	110	16	581	254	44
v/c Ratio	0.85	0.11	0.20	0.52	0.68	0.13
Control Delay	24.5	2.2	58.2	10.4	44.3	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	2.2	58.2	10.4	44.3	21.6
Queue Length 50th (ft)	328	0	8	147	113	9
Queue Length 95th (ft)	#833	22	37	284	271	45
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1450	1252	82	1524	581	533
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.09	0.20	0.38	0.44	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	896	107	16	564	246	43
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	924	110	16	581	254	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1093	929	25	1204	298	266
Arrive On Green	0.62	0.62	0.02	0.69	0.19	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	924	110	16	581	254	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	32.6	2.3	0.7	12.1	12.2	0.0
Cycle Q Clear(g_c), s	32.6	2.3	0.7	12.1	12.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1093	929	25	1204	298	266
V/C Ratio(X)	0.85	0.12	0.64	0.48	0.85	0.00
Avail Cap(c_a), veh/h	1641	1394	86	1812	604	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.8	6.0	38.1	5.7	30.4	0.0
Incr Delay (d2), s/veh	2.7	0.1	23.9	0.3	6.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	1.0	0.5	5.7	5.8	0.0
LnGrp Delay(d),s/veh	14.5	6.1	62.0	6.0	37.2	0.0
LnGrp LOS	B	A	E	A	D	
Approach Vol, veh/h	1034			597	254	
Approach Delay, s/veh	13.6			7.5	37.2	
Approach LOS	B			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.8	5.2	53.8				59.0
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	72.5				80.5
Max Q Clear Time (g_c+I1), s		14.2	2.7	34.6				14.1
Green Ext Time (p_c), s		0.7	0.0	13.7				15.4

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	856	54	28	535	2	0	0	49	11	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	100	-	0	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	4	892	56	29	557	2	0	0	51	11	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	559	0	0	892	0	0	1517	1518	892	1517	1517	558
Stage 1	-	-	-	-	-	-	900	900	-	617	617	-
Stage 2	-	-	-	-	-	-	617	618	-	900	900	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	983	-	-	736	-	-	52	64	279	87	106	510
Stage 1	-	-	-	-	-	-	229	246	-	452	456	-
Stage 2	-	-	-	-	-	-	368	371	-	309	332	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	983	-	-	736	-	-	48	61	279	69	101	510
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	61	-	69	101	-
Stage 1	-	-	-	-	-	-	228	245	-	450	438	-
Stage 2	-	-	-	-	-	-	343	356	-	251	331	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	20.8	37.2
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	279	983	-	-	736	-	-	71	510
HCM Lane V/C Ratio	-	0.183	0.004	-	-	0.04	-	-	0.176	0.029
HCM Control Delay (s)	0	20.8	8.7	-	-	10.1	-	-	66.2	12.3
HCM Lane LOS	A	C	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	-	0.7	0	-	-	0.1	-	-	0.6	0.1

Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	733	667	78	683	645
v/c Ratio	0.76	0.81	0.11	0.59	0.37
Control Delay	24.3	22.2	3.3	18.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	22.2	3.3	18.6	0.6
Queue Length 50th (ft)	126	203	2	97	0
Queue Length 95th (ft)	#256	332	19	176	0
Internal Link Dist (ft)		1614			2081
Turn Bay Length (ft)			110	370	
Base Capacity (vph)	1160	1171	1018	1408	1745
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.57	0.08	0.49	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	696	634	74	649	613
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0	5.0	4.0	4.0
Lane Util. Factor		0.88	1.00	1.00	0.97	1.00
Frt		0.85	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		2651	1736	1475	3216	1745
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		2651	1736	1475	3216	1745
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	733	667	78	683	645
RTOR Reduction (vph)	0	0	0	36	0	0
Lane Group Flow (vph)	0	733	667	42	683	645
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases				2		
Actuated Green, G (s)		20.9	27.4	27.4	20.9	57.3
Effective Green, g (s)		20.9	27.4	27.4	20.9	57.3
Actuated g/C Ratio		0.36	0.48	0.48	0.36	1.00
Clearance Time (s)		4.0	5.0	5.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		966	830	705	1173	1745
v/s Ratio Prot		c0.28	c0.38		0.21	0.37
v/s Ratio Perm				0.03		
v/c Ratio		0.76	0.80	0.06	0.58	0.37
Uniform Delay, d1		16.0	12.7	8.0	14.7	0.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		3.5	5.7	0.0	0.7	0.6
Delay (s)		19.5	18.3	8.1	15.4	0.6
Level of Service		B	B	A	B	A
Approach Delay (s)	19.5		17.3			8.2
Approach LOS	B		B			A

Intersection Summary

HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	630	83	9	722	91	9
v/c Ratio	0.51	0.08	0.06	0.57	0.32	0.03
Control Delay	8.5	2.0	28.6	7.8	24.8	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.5	2.0	28.6	7.8	24.8	13.1
Queue Length 50th (ft)	87	0	3	110	27	0
Queue Length 95th (ft)	271	16	17	232	72	11
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1415	1218	139	1602	979	879
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.07	0.06	0.45	0.09	0.01

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	586	77	8	671	85	8
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	630	83	9	722	91	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	996	846	16	1191	112	100
Arrive On Green	0.57	0.57	0.01	0.68	0.07	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	630	83	9	722	91	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	9.3	1.0	0.2	8.6	2.2	0.0
Cycle Q Clear(g_c), s	9.3	1.0	0.2	8.6	2.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	996	846	16	1191	112	100
V/C Ratio(X)	0.63	0.10	0.57	0.61	0.81	0.00
Avail Cap(c_a), veh/h	1955	1661	174	2311	1229	1097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	5.6	3.8	18.9	3.3	17.5	0.0
Incr Delay (d2), s/veh	0.7	0.0	27.9	0.5	13.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.4	0.2	4.2	1.3	0.0
LnGrp Delay(d),s/veh	6.3	3.9	46.8	3.8	30.5	0.0
LnGrp LOS	A	A	D	A	C	
Approach Vol, veh/h	713			731	91	
Approach Delay, s/veh	6.0			4.4	30.5	
Approach LOS	A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		6.7	4.4	27.2				31.5
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	42.5				50.5
Max Q Clear Time (g_c+I1), s		4.2	2.2	11.3				10.6
Green Ext Time (p_c), s		0.2	0.0	10.4				11.1

Intersection Summary	
HCM 2010 Ctrl Delay	6.7
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	18.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	551	40	28	586	3	73	0	46	1	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	4	599	43	30	637	3	79	0	50	1	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	640	0	0	599	0	0	1307	1309	599	1332	1307	639
Stage 1	-	-	-	-	-	-	608	608	-	699	699	-
Stage 2	-	-	-	-	-	-	699	701	-	633	608	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	916	-	-	949	-	-	80	93	437	118	144	457
Stage 1	-	-	-	-	-	-	373	376	-	405	416	-
Stage 2	-	-	-	-	-	-	321	329	-	442	461	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	916	-	-	949	-	-	~ 77	90	437	102	139	457
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 77	90	-	102	139	-
Stage 1	-	-	-	-	-	-	371	374	-	403	403	-
Stage 2	-	-	-	-	-	-	307	319	-	390	459	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	201.6	17.6
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	113	916	-	-	949	-	-	102	457
HCM Lane V/C Ratio	1.145	0.005	-	-	0.032	-	-	0.011	0.012
HCM Control Delay (s)	201.6	8.9	-	-	8.9	-	-	40.7	13
HCM Lane LOS	F	A	-	-	A	-	-	E	B
HCM 95th %tile Q(veh)	8.1	0	-	-	0.1	-	-	0	0

Notes

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

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1550	827	1383	598
v/c Ratio	0.94	0.91	0.69	0.34
Control Delay	28.5	44.5	13.4	0.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	28.5	44.5	13.4	0.5
Queue Length 50th (ft)	412	225	243	0
Queue Length 95th (ft)	#638	#338	317	0
Internal Link Dist (ft)		1614		2081
Turn Bay Length (ft)			370	
Base Capacity (vph)	1686	936	2046	1745
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.92	0.88	0.68	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1426	570	190	1272	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.88	0.95		0.97	1.00
Frt		0.85	0.96		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2651	3174		3216	1745
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2651	3174		3216	1745
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1550	620	207	1383	598
RTOR Reduction (vph)	0	0	36	0	0	0
Lane Group Flow (vph)	0	1550	791	0	1383	598
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		54.8	24.3		54.8	88.1
Effective Green, g (s)		54.8	24.3		54.8	88.1
Actuated g/C Ratio		0.62	0.28		0.62	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1648	875		2000	1745
v/s Ratio Prot		c0.58	c0.25		0.43	0.34
v/s Ratio Perm						
v/c Ratio		0.94	0.90		0.69	0.34
Uniform Delay, d1		15.2	30.8		11.0	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		11.1	12.6		1.0	0.5
Delay (s)		26.2	43.3		12.1	0.5
Level of Service		C	D		B	A
Approach Delay (s)	26.2		43.3			8.6
Approach LOS	C		D			A

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	88.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1003	163	43	1536	164	54
v/c Ratio	0.81	0.15	0.48	1.15	0.69	0.22
Control Delay	20.4	1.8	67.2	95.5	58.2	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	1.8	67.2	95.5	58.2	18.1
Queue Length 50th (ft)	481	1	28	~1219	104	8
Queue Length 95th (ft)	#933	27	#73	#1627	174	43
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1239	1100	91	1331	461	440
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.15	0.47	1.15	0.36	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	923	150	40	1413	151	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	1003	163	43	1536	164	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1247	1060	53	1366	196	175
Arrive On Green	0.71	0.71	0.03	0.78	0.13	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	1003	163	43	1536	164	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	38.8	3.6	2.6	78.5	10.3	0.0
Cycle Q Clear(g_c), s	38.8	3.6	2.6	78.5	10.3	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1247	1060	53	1366	196	175
V/C Ratio(X)	0.80	0.15	0.81	1.12	0.84	0.00
Avail Cap(c_a), veh/h	1247	1060	99	1366	498	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.9	4.8	48.4	11.0	43.0	0.0
Incr Delay (d2), s/veh	3.9	0.1	24.2	66.0	9.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.8	1.5	1.5	61.9	5.0	0.0
LnGrp Delay(d),s/veh	13.9	4.9	72.6	77.1	52.1	0.0
LnGrp LOS	B	A	E	F	D	
Approach Vol, veh/h	1166			1579	164	
Approach Delay, s/veh	12.6			77.0	52.1	
Approach LOS	B			E	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		16.6	7.2	76.8				84.0
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		32.0	6.0	68.5				78.5
Max Q Clear Time (g_c+I1), s		12.3	4.6	40.8				80.5
Green Ext Time (p_c), s		0.4	0.0	24.9				0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.8
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	750	30	40	1170	10	10	0	30	3	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	5	806	32	43	1258	11	11	0	32	3	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1269	0	0	806	0	0	2169	2172	806	2182	2166	1263
Stage 1	-	-	-	-	-	-	817	817	-	1349	1349	-
Stage 2	-	-	-	-	-	-	1352	1355	-	833	817	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	528	-	-	793	-	-	14	19	319	28	40	194
Stage 1	-	-	-	-	-	-	263	278	-	167	198	-
Stage 2	-	-	-	-	-	-	106	125	-	338	365	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	528	-	-	793	-	-	12	18	319	24	37	194
Mov Cap-2 Maneuver	-	-	-	-	-	-	12	18	-	24	37	-
Stage 1	-	-	-	-	-	-	261	275	-	165	187	-
Stage 2	-	-	-	-	-	-	95	118	-	301	362	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	282.9	98
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	43	528	-	-	793	-	-	30	194
HCM Lane V/C Ratio	1	0.01	-	-	0.054	-	-	0.251	0.033
HCM Control Delay (s)	282.9	11.9	-	-	9.8	-	-	161.3	24.2
HCM Lane LOS	F	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	4	0	-	-	0.2	-	-	0.8	0.1

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1086	1107	1129	710
v/c Ratio	0.85	0.84	0.73	0.41
Control Delay	26.7	28.9	20.5	0.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.7	28.9	20.5	0.7
Queue Length 50th (ft)	290	278	248	0
Queue Length 95th (ft)	394	366	325	0
Internal Link Dist (ft)		1614		2081
Turn Bay Length (ft)			370	
Base Capacity (vph)	1468	1512	1781	1745
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.74	0.73	0.63	0.41

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1010	830	200	1050	660
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.88	0.95		0.97	1.00
Frt		0.85	0.97		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2651	3202		3216	1745
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2651	3202		3216	1745
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	1086	892	215	1129	710
RTOR Reduction (vph)	0	0	24	0	0	0
Lane Group Flow (vph)	0	1086	1083	0	1129	710
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		39.5	32.9		39.5	81.4
Effective Green, g (s)		39.5	32.9		39.5	81.4
Actuated g/C Ratio		0.49	0.40		0.49	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1286	1294		1560	1745
v/s Ratio Prot		c0.41	c0.34		0.35	0.41
v/s Ratio Perm						
v/c Ratio		0.84	0.84		0.72	0.41
Uniform Delay, d1		18.3	21.8		16.6	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		5.3	4.9		1.7	0.7
Delay (s)		23.5	26.7		18.3	0.7
Level of Service		C	C		B	A
Approach Delay (s)	23.5		26.7			11.5
Approach LOS	C		C			B

Intersection Summary

HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	81.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1289	155	10	876	165	41
v/c Ratio	0.99	0.14	0.16	0.66	0.68	0.17
Control Delay	38.6	2.0	55.9	10.2	56.1	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	2.0	55.9	10.2	56.1	18.6
Queue Length 50th (ft)	647	4	6	236	101	6
Queue Length 95th (ft)	#1367	31	26	476	179	37
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1302	1140	63	1364	446	420
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.14	0.16	0.64	0.37	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1250	150	10	850	160	40
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	1289	155	10	876	165	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1282	1090	16	1363	197	176
Arrive On Green	0.73	0.73	0.01	0.78	0.13	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	1289	155	10	876	165	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	72.5	3.1	0.6	22.1	10.2	0.0
Cycle Q Clear(g_c), s	72.5	3.1	0.6	22.1	10.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1282	1090	16	1363	197	176
V/C Ratio(X)	1.01	0.14	0.62	0.64	0.84	0.00
Avail Cap(c_a), veh/h	1282	1090	67	1416	472	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.5	4.1	49.1	4.9	42.5	0.0
Incr Delay (d2), s/veh	26.4	0.1	32.7	0.9	9.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	43.6	1.3	0.4	10.8	4.9	0.0
LnGrp Delay(d),s/veh	39.9	4.1	81.7	5.8	51.5	0.0
LnGrp LOS	F	A	F	A	D	
Approach Vol, veh/h	1444			886	165	
Approach Delay, s/veh	36.1			6.7	51.5	
Approach LOS	D			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		16.5	5.0	78.0				83.0
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	72.5				80.5
Max Q Clear Time (g_c+I1), s		12.2	2.6	74.5				24.1
Green Ext Time (p_c), s		0.4	0.0	0.0				33.8

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	30.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	1190	30	21	760	10	20	2	60	8	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	11	1253	32	22	800	11	21	2	63	8	3	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	811	0	0	1253	0	0	2125	2129	1253	2155	2123	805
Stage 1	-	-	-	-	-	-	1274	1274	-	849	849	-
Stage 2	-	-	-	-	-	-	851	855	-	1306	1274	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	789	-	-	535	-	-	~ 15	21	160	29	43	365
Stage 1	-	-	-	-	-	-	121	141	-	331	352	-
Stage 2	-	-	-	-	-	-	249	263	-	178	216	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	789	-	-	535	-	-	~ 13	20	160	15	41	365
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 13	20	-	15	41	-
Stage 1	-	-	-	-	-	-	119	139	-	326	338	-
Stage 2	-	-	-	-	-	-	232	252	-	105	213	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	$ 722.3	250.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	41	789	-	-	535	-	-	18	365
HCM Lane V/C Ratio	2.105	0.013	-	-	0.041	-	-	0.643	0.017
HCM Control Delay (s)	$ 722.3	9.6	-	-	12	-	-	$ 378.4	15
HCM Lane LOS	F	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	9.2	0	-	-	0.1	-	-	1.7	0.1

Notes

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

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1181	1101	1191	600
v/c Ratio	0.88	0.88	0.73	0.34
Control Delay	28.1	33.5	19.9	0.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	28.1	33.5	19.9	0.5
Queue Length 50th (ft)	319	290	257	0
Queue Length 95th (ft)	#455	#413	336	0
Internal Link Dist (ft)		1614		2081
Turn Bay Length (ft)			370	
Base Capacity (vph)	1459	1364	1771	1745
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.81	0.81	0.67	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1110	856	179	1120	564
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.88	0.95		0.97	1.00
Frt		0.85	0.97		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2651	3212		3216	1745
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2651	3212		3216	1745
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1181	911	190	1191	600
RTOR Reduction (vph)	0	0	20	0	0	0
Lane Group Flow (vph)	0	1181	1081	0	1191	600
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		43.1	32.7		43.1	84.8
Effective Green, g (s)		43.1	32.7		43.1	84.8
Actuated g/C Ratio		0.51	0.39		0.51	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1347	1238		1634	1745
v/s Ratio Prot		c0.45	c0.34		0.37	0.34
v/s Ratio Perm						
v/c Ratio		0.88	0.87		0.73	0.34
Uniform Delay, d1		18.5	24.1		16.3	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		6.7	7.1		1.7	0.5
Delay (s)		25.2	31.2		17.9	0.5
Level of Service		C	C		B	A
Approach Delay (s)	25.2		31.2			12.1
Approach LOS	C		C			B

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	84.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1205	139	19	898	189	52
v/c Ratio	0.96	0.13	0.31	0.69	0.72	0.20
Control Delay	34.5	2.2	65.4	11.9	57.6	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.5	2.2	65.4	11.9	57.6	20.2
Queue Length 50th (ft)	554	3	12	267	115	10
Queue Length 95th (ft)	#1282	28	40	548	203	45
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1257	1103	62	1334	436	414
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.13	0.31	0.67	0.43	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1169	135	18	871	183	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	1205	139	19	898	189	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1247	1060	27	1339	222	198
Arrive On Green	0.71	0.71	0.02	0.76	0.14	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	1205	139	19	898	189	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	64.1	3.0	1.1	25.1	11.9	0.0
Cycle Q Clear(g_c), s	64.1	3.0	1.1	25.1	11.9	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1247	1060	27	1339	222	198
V/C Ratio(X)	0.97	0.13	0.70	0.67	0.85	0.00
Avail Cap(c_a), veh/h	1260	1071	66	1392	464	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.6	4.7	49.5	5.8	42.4	0.0
Incr Delay (d2), s/veh	17.8	0.1	27.3	1.2	9.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	36.6	1.3	0.7	12.4	5.7	0.0
LnGrp Delay(d),s/veh	31.4	4.8	76.9	7.0	51.4	0.0
LnGrp LOS	C	A	E	A	D	
Approach Vol, veh/h	1344			917	189	
Approach Delay, s/veh	28.6			8.4	51.4	
Approach LOS	C			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.3	5.7	77.3				82.9
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	72.5				80.5
Max Q Clear Time (g_c+I1), s		13.9	3.1	66.1				27.1
Green Ext Time (p_c), s		0.5	0.0	5.7				30.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	23.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	1184	31	19	827	4	23	0	35	11	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	8	1233	32	20	861	4	24	0	36	11	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	866	0	0	1233	0	0	2154	2155	1233	2171	2153	864
Stage 1	-	-	-	-	-	-	1250	1250	-	903	903	-
Stage 2	-	-	-	-	-	-	904	905	-	1268	1250	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	752	-	-	545	-	-	~ 14	20	165	29	41	337
Stage 1	-	-	-	-	-	-	127	146	-	308	331	-
Stage 2	-	-	-	-	-	-	228	244	-	187	222	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	752	-	-	545	-	-	~ 13	19	165	22	39	337
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 13	19	-	22	39	-
Stage 1	-	-	-	-	-	-	126	144	-	305	319	-
Stage 2	-	-	-	-	-	-	209	235	-	144	220	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	$ 792.2	137.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	29	752	-	-	545	-	-	23	337
HCM Lane V/C Ratio	2.083	0.011	-	-	0.036	-	-	0.543	0.043
HCM Control Delay (s)	$ 792.2	9.8	-	-	11.9	-	-	279.8	16.2
HCM Lane LOS	F	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	7.1	0	-	-	0.1	-	-	1.6	0.1

Notes

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

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	846	1000	899	697
v/c Ratio	0.73	0.76	0.64	0.40
Control Delay	18.4	19.3	15.7	0.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.4	19.3	15.7	0.7
Queue Length 50th (ft)	142	155	129	0
Queue Length 95th (ft)	226	242	199	0
Internal Link Dist (ft)		1614		2081
Turn Bay Length (ft)			370	
Base Capacity (vph)	1513	1680	1836	1745
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.56	0.60	0.49	0.40

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	804	742	208	854	662
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.88	0.95		0.97	1.00
Frt		0.85	0.97		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2651	3189		3216	1745
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2651	3189		3216	1745
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	846	781	219	899	697
RTOR Reduction (vph)	0	0	38	0	0	0
Lane Group Flow (vph)	0	846	962	0	899	697
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		25.9	23.5		25.9	58.4
Effective Green, g (s)		25.9	23.5		25.9	58.4
Actuated g/C Ratio		0.44	0.40		0.44	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1175	1283		1426	1745
v/s Ratio Prot		c0.32	c0.30		0.28	0.40
v/s Ratio Perm						
v/c Ratio		0.72	0.75		0.63	0.40
Uniform Delay, d1		13.3	14.9		12.6	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		2.1	2.5		0.9	0.7
Delay (s)		15.4	17.4		13.5	0.7
Level of Service		B	B		B	A
Approach Delay (s)	15.4		17.4			7.9
Approach LOS	B		B			A

Intersection Summary

HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	875	109	10	976	99	13
v/c Ratio	0.65	0.09	0.11	0.71	0.47	0.07
Control Delay	10.9	1.6	37.2	10.3	37.5	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	1.6	37.2	10.3	37.5	14.5
Queue Length 50th (ft)	170	0	5	215	48	0
Queue Length 95th (ft)	#567	18	19	#459	82	14
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1345	1168	89	1376	631	572
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.09	0.11	0.71	0.16	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	814	101	9	908	92	12
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	875	109	10	976	99	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1147	975	17	1293	125	112
Arrive On Green	0.65	0.65	0.01	0.74	0.08	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	875	109	10	976	99	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	18.1	1.4	0.3	17.3	3.3	0.0
Cycle Q Clear(g_c), s	18.1	1.4	0.3	17.3	3.3	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1147	975	17	1293	125	112
V/C Ratio(X)	0.76	0.11	0.58	0.75	0.79	0.00
Avail Cap(c_a), veh/h	1426	1212	127	1686	896	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.3	3.4	25.8	4.0	23.7	0.0
Incr Delay (d2), s/veh	2.0	0.1	27.2	1.4	10.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	0.6	0.3	8.4	1.8	0.0
LnGrp Delay(d),s/veh	8.3	3.5	53.1	5.5	34.1	0.0
LnGrp LOS	A	A	D	A	C	
Approach Vol, veh/h	984			986	99	
Approach Delay, s/veh	7.7			6.0	34.1	
Approach LOS	A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		8.2	4.5	39.7				44.2
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	42.5				50.5
Max Q Clear Time (g_c+I1), s		5.3	2.3	20.1				19.3
Green Ext Time (p_c), s		0.2	0.0	14.1				17.3

Intersection Summary	
HCM 2010 Ctrl Delay	8.2
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	817	22	21	893	5	18	0	30	1	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	9	888	24	23	971	5	20	0	33	1	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	976	0	0	888	0	0	1924	1927	888	1941	1924	973
Stage 1	-	-	-	-	-	-	905	905	-	1019	1019	-
Stage 2	-	-	-	-	-	-	1019	1022	-	922	905	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	683	-	-	738	-	-	23	30	281	42	58	290
Stage 1	-	-	-	-	-	-	227	244	-	263	290	-
Stage 2	-	-	-	-	-	-	187	206	-	300	330	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	683	-	-	738	-	-	22	29	281	36	55	290
Mov Cap-2 Maneuver	-	-	-	-	-	-	22	29	-	36	55	-
Stage 1	-	-	-	-	-	-	224	241	-	260	281	-
Stage 2	-	-	-	-	-	-	178	200	-	262	326	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	251.8	32.8
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	52	683	-	-	738	-	-	36	290
HCM Lane V/C Ratio	1.003	0.013	-	-	0.031	-	-	0.03	0.019
HCM Control Delay (s)	251.8	10.3	-	-	10	-	-	108.1	17.7
HCM Lane LOS	F	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	4.4	0	-	-	0.1	-	-	0.1	0.1

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1572	829	1408	598
v/c Ratio	0.95	0.91	0.70	0.34
Control Delay	30.1	45.1	13.7	0.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.1	45.1	13.7	0.5
Queue Length 50th (ft)	427	225	251	0
Queue Length 95th (ft)	#652	#339	326	0
Internal Link Dist (ft)		1614		2081
Turn Bay Length (ft)			370	
Base Capacity (vph)	1671	929	2028	1745
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.94	0.89	0.69	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1446	570	192	1295	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.88	0.95		0.97	1.00
Frt		0.85	0.96		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2651	3173		3216	1745
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2651	3173		3216	1745
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1572	620	209	1408	598
RTOR Reduction (vph)	0	0	37	0	0	0
Lane Group Flow (vph)	0	1572	792	0	1408	598
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		55.4	24.4		55.4	88.8
Effective Green, g (s)		55.4	24.4		55.4	88.8
Actuated g/C Ratio		0.62	0.27		0.62	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1653	871		2006	1745
v/s Ratio Prot		c0.59	c0.25		0.44	0.34
v/s Ratio Perm						
v/c Ratio		0.95	0.91		0.70	0.34
Uniform Delay, d1		15.4	31.1		11.2	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		12.4	13.2		1.1	0.5
Delay (s)		27.9	44.3		12.3	0.5
Level of Service		C	D		B	A
Approach Delay (s)	27.9		44.3			8.8
Approach LOS	C		D			A

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	88.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1033	163	43	1561	164	54
v/c Ratio	0.83	0.15	0.48	1.17	0.69	0.22
Control Delay	21.9	1.9	67.2	103.4	58.2	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	1.9	67.2	103.4	58.2	18.1
Queue Length 50th (ft)	515	2	28	~1254	104	8
Queue Length 95th (ft)	#979	28	#73	#1664	174	43
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1239	1098	91	1331	461	440
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.15	0.47	1.17	0.36	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	950	150	40	1436	151	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	1033	163	43	1561	164	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1247	1060	53	1366	196	175
Arrive On Green	0.71	0.71	0.03	0.78	0.13	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	1033	163	43	1561	164	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	41.7	3.6	2.6	78.5	10.3	0.0
Cycle Q Clear(g_c), s	41.7	3.6	2.6	78.5	10.3	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1247	1060	53	1366	196	175
V/C Ratio(X)	0.83	0.15	0.81	1.14	0.84	0.00
Avail Cap(c_a), veh/h	1247	1060	99	1366	498	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.3	4.8	48.4	11.0	43.0	0.0
Incr Delay (d2), s/veh	4.8	0.1	24.2	73.4	9.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.5	1.5	1.5	64.7	5.0	0.0
LnGrp Delay(d),s/veh	15.1	4.9	72.6	84.5	52.1	0.0
LnGrp LOS	B	A	E	F	D	
Approach Vol, veh/h	1196			1604	164	
Approach Delay, s/veh	13.7			84.1	52.1	
Approach LOS	B			F	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		16.6	7.2	76.8				84.0
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		32.0	6.0	68.5				78.5
Max Q Clear Time (g_c+I1), s		12.3	4.6	43.7				80.5
Green Ext Time (p_c), s		0.4	0.0	22.9				0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.9
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	47.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	750	57	50	1170	10	33	0	38	3	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	5	806	61	54	1258	11	35	0	41	3	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1269	0	0	806	0	0	2190	2193	806	2209	2188	1263
Stage 1	-	-	-	-	-	-	817	817	-	1371	1371	-
Stage 2	-	-	-	-	-	-	1373	1376	-	838	817	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	528	-	-	793	-	-	~ 13	19	319	27	39	194
Stage 1	-	-	-	-	-	-	263	278	-	162	193	-
Stage 2	-	-	-	-	-	-	102	121	-	336	365	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	528	-	-	793	-	-	~ 11	18	319	22	36	194
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 11	18	-	22	36	-
Stage 1	-	-	-	-	-	-	261	275	-	160	180	-
Stage 2	-	-	-	-	-	-	90	113	-	290	362	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	$ 1394.8	105.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	23	528	-	-	793	-	-	28	194
HCM Lane V/C Ratio	3.319	0.01	-	-	0.068	-	-	0.269	0.033
HCM Control Delay (s)	$ 1394.8	11.9	-	-	9.9	-	-	175.5	24.2
HCM Lane LOS	F	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	9.6	0	-	-	0.2	-	-	0.8	0.1

Notes

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

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1111	1109	1151	710
v/c Ratio	0.86	0.85	0.73	0.41
Control Delay	27.7	29.4	20.8	0.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.7	29.4	20.8	0.7
Queue Length 50th (ft)	301	280	256	0
Queue Length 95th (ft)	#420	367	335	0
Internal Link Dist (ft)		1614		2081
Turn Bay Length (ft)			370	
Base Capacity (vph)	1441	1485	1749	1745
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.77	0.75	0.66	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1033	830	202	1070	660
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.88	0.95		0.97	1.00
Frt		0.85	0.97		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2651	3201		3216	1745
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2651	3201		3216	1745
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	1111	892	217	1151	710
RTOR Reduction (vph)	0	0	24	0	0	0
Lane Group Flow (vph)	0	1111	1085	0	1151	710
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		40.3	33.2		40.3	82.5
Effective Green, g (s)		40.3	33.2		40.3	82.5
Actuated g/C Ratio		0.49	0.40		0.49	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1294	1288		1570	1745
v/s Ratio Prot		c0.42	c0.34		0.36	0.41
v/s Ratio Perm						
v/c Ratio		0.86	0.84		0.73	0.41
Uniform Delay, d1		18.6	22.3		16.8	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		5.9	5.2		1.8	0.7
Delay (s)		24.5	27.5		18.6	0.7
Level of Service		C	C		B	A
Approach Delay (s)	24.5		27.5			11.8
Approach LOS	C		C			B

Intersection Summary

HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	82.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1312	155	10	904	165	41
v/c Ratio	1.01	0.14	0.16	0.68	0.68	0.17
Control Delay	43.1	2.0	55.9	10.8	56.1	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	2.0	55.9	10.8	56.1	18.6
Queue Length 50th (ft)	694	4	6	251	101	6
Queue Length 95th (ft)	#1402	31	26	511	179	37
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1302	1139	63	1364	446	420
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.14	0.16	0.66	0.37	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1273	150	10	877	160	40
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	1312	155	10	904	165	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1282	1090	16	1363	197	176
Arrive On Green	0.73	0.73	0.01	0.78	0.13	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	1312	155	10	904	165	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	72.5	3.1	0.6	23.5	10.2	0.0
Cycle Q Clear(g_c), s	72.5	3.1	0.6	23.5	10.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1282	1090	16	1363	197	176
V/C Ratio(X)	1.02	0.14	0.62	0.66	0.84	0.00
Avail Cap(c_a), veh/h	1282	1090	67	1416	472	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.5	4.1	49.1	5.0	42.5	0.0
Incr Delay (d2), s/veh	31.2	0.1	32.7	1.1	9.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	45.3	1.3	0.4	11.5	4.9	0.0
LnGrp Delay(d),s/veh	44.7	4.1	81.7	6.2	51.5	0.0
LnGrp LOS	F	A	F	A	D	
Approach Vol, veh/h	1467			914	165	
Approach Delay, s/veh	40.4			7.0	51.5	
Approach LOS	D			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		16.5	5.0	78.0				83.0
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	72.5				80.5
Max Q Clear Time (g_c+I1), s		12.2	2.6	74.5				25.5
Green Ext Time (p_c), s		0.4	0.0	0.0				34.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	76

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	1050	53	29	790	10	47	2	70	8	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	11	1105	56	31	832	11	49	2	74	8	3	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	842	0	0	1105	0	0	2025	2029	1105	2062	2024	837
Stage 1	-	-	-	-	-	-	1126	1126	-	898	898	-
Stage 2	-	-	-	-	-	-	899	903	-	1164	1126	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	768	-	-	610	-	-	~ 19	25	201	35	50	349
Stage 1	-	-	-	-	-	-	156	176	-	310	333	-
Stage 2	-	-	-	-	-	-	229	245	-	216	256	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	768	-	-	610	-	-	~ 17	23	201	20	47	349
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 17	23	-	20	47	-
Stage 1	-	-	-	-	-	-	154	173	-	306	316	-
Stage 2	-	-	-	-	-	-	211	233	-	133	252	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	$ 1299.6	169.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	37	768	-	-	610	-	-	24	349
HCM Lane V/C Ratio	3.385	0.014	-	-	0.05	-	-	0.482	0.018
HCM Control Delay (s)	$ 1299.6	9.8	-	-	11.2	-	-	253.3	15.5
HCM Lane LOS	F	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	14.3	0	-	-	0.2	-	-	1.4	0.1

Notes

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

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1227	1104	1215	600
v/c Ratio	0.91	0.88	0.74	0.34
Control Delay	30.8	34.1	20.2	0.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.8	34.1	20.2	0.5
Queue Length 50th (ft)	343	291	265	0
Queue Length 95th (ft)	#512	#415	345	0
Internal Link Dist (ft)		1614		2081
Turn Bay Length (ft)			370	
Base Capacity (vph)	1432	1339	1737	1745
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.86	0.82	0.70	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1153	856	181	1142	564
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.88	0.95		0.97	1.00
Frt		0.85	0.97		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2651	3211		3216	1745
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2651	3211		3216	1745
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1227	911	193	1215	600
RTOR Reduction (vph)	0	0	20	0	0	0
Lane Group Flow (vph)	0	1227	1084	0	1215	600
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		43.9	32.9		43.9	85.8
Effective Green, g (s)		43.9	32.9		43.9	85.8
Actuated g/C Ratio		0.51	0.38		0.51	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1356	1231		1645	1745
v/s Ratio Prot		c0.46	c0.34		0.38	0.34
v/s Ratio Perm						
v/c Ratio		0.90	0.88		0.74	0.34
Uniform Delay, d1		19.1	24.6		16.4	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		8.8	7.6		1.8	0.5
Delay (s)		27.8	32.2		18.2	0.5
Level of Service		C	C		B	A
Approach Delay (s)	27.8		32.2			12.4
Approach LOS	C		C			B

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1231	139	19	949	189	52
v/c Ratio	0.98	0.13	0.31	0.73	0.72	0.20
Control Delay	38.6	2.3	65.4	13.2	57.6	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	2.3	65.4	13.2	57.6	20.2
Queue Length 50th (ft)	593	3	12	300	115	10
Queue Length 95th (ft)	#1322	29	40	624	203	45
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1257	1102	62	1334	436	414
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.13	0.31	0.71	0.43	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1194	135	18	921	183	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	1231	139	19	949	189	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1249	1062	27	1340	221	198
Arrive On Green	0.71	0.71	0.02	0.77	0.14	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	1231	139	19	949	189	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	68.9	3.0	1.2	28.3	12.0	0.0
Cycle Q Clear(g_c), s	68.9	3.0	1.2	28.3	12.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1249	1062	27	1340	221	198
V/C Ratio(X)	0.99	0.13	0.70	0.71	0.85	0.00
Avail Cap(c_a), veh/h	1251	1063	65	1382	461	411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.3	4.7	49.9	6.1	42.8	0.0
Incr Delay (d2), s/veh	21.9	0.1	27.5	1.6	9.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	40.4	1.3	0.7	14.1	5.8	0.0
LnGrp Delay(d),s/veh	36.2	4.8	77.4	7.8	51.8	0.0
LnGrp LOS	D	A	E	A	D	
Approach Vol, veh/h	1370			968	189	
Approach Delay, s/veh	33.0			9.1	51.8	
Approach LOS	C			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.4	5.7	77.9				83.6
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	72.5				80.5
Max Q Clear Time (g_c+I1), s		14.0	3.2	70.9				30.3
Green Ext Time (p_c), s		0.5	0.0	1.5				31.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	163.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	1184	56	28	827	4	73	0	53	11	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	8	1233	58	29	861	4	76	0	55	11	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	866	0	0	1233	0	0	2172	2174	1233	2200	2172	864
Stage 1	-	-	-	-	-	-	1250	1250	-	922	922	-
Stage 2	-	-	-	-	-	-	922	924	-	1278	1250	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	752	-	-	545	-	-	~ 14	19	165	27	40	337
Stage 1	-	-	-	-	-	-	127	146	-	300	324	-
Stage 2	-	-	-	-	-	-	221	238	-	185	222	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	752	-	-	545	-	-	~ 12	18	165	17	37	337
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 12	18	-	17	37	-
Stage 1	-	-	-	-	-	-	126	144	-	297	307	-
Stage 2	-	-	-	-	-	-	200	225	-	122	220	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	$ 2885	191.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	20	752	-	-	545	-	-	18	337
HCM Lane V/C Ratio	6.563	0.011	-	-	0.054	-	-	0.694	0.043
HCM Control Delay (s)	$ 2885	9.8	-	-	12	-	-	$ 395.5	16.2
HCM Lane LOS	F	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	16.8	0	-	-	0.2	-	-	1.8	0.1

Notes

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

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	896	1001	917	697
v/c Ratio	0.76	0.77	0.64	0.40
Control Delay	19.5	19.8	15.8	0.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.5	19.8	15.8	0.7
Queue Length 50th (ft)	159	164	136	0
Queue Length 95th (ft)	246	243	204	0
Internal Link Dist (ft)		1614		2081
Turn Bay Length (ft)			370	
Base Capacity (vph)	1481	1646	1797	1745
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.60	0.61	0.51	0.40

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	851	742	209	871	662
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.88	0.95		0.97	1.00
Frt		0.85	0.97		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2651	3189		3216	1745
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2651	3189		3216	1745
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	896	781	220	917	697
RTOR Reduction (vph)	0	0	38	0	0	0
Lane Group Flow (vph)	0	896	963	0	917	697
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		26.7	23.8		26.7	59.5
Effective Green, g (s)		26.7	23.8		26.7	59.5
Actuated g/C Ratio		0.45	0.40		0.45	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1189	1275		1443	1745
v/s Ratio Prot		c0.34	c0.30		0.29	0.40
v/s Ratio Perm						
v/c Ratio		0.75	0.76		0.64	0.40
Uniform Delay, d1		13.7	15.3		12.6	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		2.8	2.6		0.9	0.7
Delay (s)		16.4	17.9		13.6	0.7
Level of Service		B	B		B	A
Approach Delay (s)	16.4		17.9			8.0
Approach LOS	B		B			A

Intersection Summary

HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	59.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	897	109	10	1035	99	13
v/c Ratio	0.66	0.09	0.12	0.75	0.48	0.07
Control Delay	11.3	1.6	37.6	11.7	38.7	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	1.6	37.6	11.7	38.7	14.4
Queue Length 50th (ft)	179	0	5	247	49	0
Queue Length 95th (ft)	#590	18	19	#643	82	14
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1351	1174	85	1382	605	549
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.09	0.12	0.75	0.16	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	834	101	9	963	92	12
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	897	109	10	1035	99	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1160	986	17	1302	126	112
Arrive On Green	0.66	0.66	0.01	0.74	0.08	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	897	109	10	1035	99	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	19.1	1.4	0.3	20.0	3.3	0.0
Cycle Q Clear(g_c), s	19.1	1.4	0.3	20.0	3.3	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1160	986	17	1302	126	112
V/C Ratio(X)	0.77	0.11	0.58	0.79	0.79	0.00
Avail Cap(c_a), veh/h	1386	1178	124	1638	871	777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.4	3.4	26.6	4.3	24.4	0.0
Incr Delay (d2), s/veh	2.3	0.0	27.4	2.2	10.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.6	0.3	10.0	1.8	0.0
LnGrp Delay(d),s/veh	8.7	3.4	54.0	6.5	34.8	0.0
LnGrp LOS	A	A	D	A	C	
Approach Vol, veh/h	1006			1045	99	
Approach Delay, s/veh	8.1			7.0	34.8	
Approach LOS	A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		8.3	4.6	41.1				45.6
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	42.5				50.5
Max Q Clear Time (g_c+I1), s		5.3	2.3	21.1				22.0
Green Ext Time (p_c), s		0.2	0.0	14.5				17.5

Intersection Summary	
HCM 2010 Ctrl Delay	8.8
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	100.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	817	42	28	893	5	73	0	50	1	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	9	888	46	30	971	5	79	0	54	1	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	976	0	0	888	0	0	1939	1942	888	1967	1939	973
Stage 1	-	-	-	-	-	-	905	905	-	1034	1034	-
Stage 2	-	-	-	-	-	-	1034	1037	-	933	905	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	683	-	-	738	-	-	~ 22	30	281	41	57	290
Stage 1	-	-	-	-	-	-	227	244	-	258	285	-
Stage 2	-	-	-	-	-	-	183	201	-	296	330	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	683	-	-	738	-	-	~ 21	28	281	32	54	290
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 21	28	-	32	54	-
Stage 1	-	-	-	-	-	-	224	241	-	255	273	-
Stage 2	-	-	-	-	-	-	172	193	-	236	326	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	$ 1559.7	35
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	34	683	-	-	738	-	-	32	290
HCM Lane V/C Ratio	3.932	0.013	-	-	0.041	-	-	0.034	0.019
HCM Control Delay (s)	$ 1559.7	10.3	-	-	10.1	-	-	121.4	17.7
HCM Lane LOS	F	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	15.7	0	-	-	0.1	-	-	0.1	0.1

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	745	51	29	506	8	47	2	65	8	3	6
Sign Control		Free			Free			Stop			Stop	
Grade		4%			2%			7%			1%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	784	54	31	533	8	49	2	68	8	3	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	541			838			1395	1399	784	1464	1448	537
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	541			838			1395	1399	784	1464	1448	537
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	99			96			54	98	82	90	97	99
cM capacity (veh/h)	998			771			107	130	383	81	121	532

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	6	784	54	31	541	52	68	18
Volume Left	6	0	0	31	0	49	0	8
Volume Right	0	0	54	0	8	0	68	6
cSH	998	1700	1700	771	1700	108	383	142
Volume to Capacity	0.01	0.46	0.03	0.04	0.32	0.48	0.18	0.13
Queue Length 95th (ft)	0	0	0	3	0	53	16	11
Control Delay (s)	8.6	0.0	0.0	9.9	0.0	65.8	16.4	36.4
Lane LOS	A			A		F	C	E
Approach Delay (s)	0.1			0.5		37.6		36.4
Approach LOS						E		E

Intersection Summary				
Average Delay		3.6		
Intersection Capacity Utilization		56.6%	ICU Level of Service	B
Analysis Period (min)		15		

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	745	51	29	506	8	47	2	65	8	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	100	-	0	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	6	784	54	31	533	8	49	2	68	8	3	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	541	0	0	784	0	0	1396	1399	784	1396	1395	537
Stage 1	-	-	-	-	-	-	797	797	-	598	598	-
Stage 2	-	-	-	-	-	-	599	602	-	798	797	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	998	-	-	808	-	-	67	79	330	106	127	525
Stage 1	-	-	-	-	-	-	272	286	-	463	466	-
Stage 2	-	-	-	-	-	-	379	379	-	355	373	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	998	-	-	808	-	-	63	76	330	79	121	525
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	76	-	79	121	-
Stage 1	-	-	-	-	-	-	270	284	-	460	448	-
Stage 2	-	-	-	-	-	-	358	364	-	278	371	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	84.6	38.2
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	63	330	998	-	-	808	-	-	87	525
HCM Lane V/C Ratio	0.819	0.207	0.006	-	-	0.038	-	-	0.133	0.012
HCM Control Delay (s)	172.1	18.7	8.6	-	-	9.6	-	-	52.6	11.9
HCM Lane LOS	F	C	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	3.7	0.8	0	-	-	0.1	-	-	0.4	0

Intersection	
Intersection Delay, s/veh	21.0
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	952	588	127	27
Demand Flow Rate, veh/h	1027	635	137	29
Vehicles Circulating, veh/h	44	86	979	715
Vehicles Exiting, veh/h	700	1030	32	6
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	27.4	12.5	15.1	7.7
Approach LOS	D	B	C	A

Lane	Left	Bypass	Left	Left	Left
Designated Moves	LT	R	LTR	LTR	LTR
Assumed Moves	LT	R	LTR	LTR	LTR
RT Channelized		Free			
Lane Util	1.000		1.000	1.000	1.000
Critical Headway, s	5.193		5.193	5.193	5.193
Entry Flow, veh/h	967	60	635	137	29
Cap Entry Lane, veh/h	1081	2052	1037	425	553
Entry HV Adj Factor	0.926	0.926	0.927	0.927	0.928
Flow Entry, veh/h	896	56	588	127	27
Cap Entry, veh/h	1002	1900	961	394	513
V/C Ratio	0.894	0.029	0.612	0.323	0.052
Control Delay, s/veh	29.1	0.0	12.5	15.1	7.7
LOS	D	A	B	C	A
95th %tile Queue, veh	13	0	4	1	0

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	646	670	129	6
Demand Flow Rate, veh/h	697	723	139	6
Vehicles Circulating, veh/h	33	89	652	805
Vehicles Exiting, veh/h	778	702	32	7
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.8	15.5	9.8	7.3
Approach LOS	B	C	A	A

Lane	Left	Bypass	Left	Left	Left
Designated Moves	LT	R	LTR	LTR	LTR
Assumed Moves	LT	R	LTR	LTR	LTR
RT Channelized		Free			
Lane Util	1.000		1.000	1.000	1.000
Critical Headway, s	5.193		5.193	5.193	5.193
Entry Flow, veh/h	651	46	723	139	6
Cap Entry Lane, veh/h	1093	2052	1034	589	505
Entry HV Adj Factor	0.926	0.926	0.927	0.928	1.000
Flow Entry, veh/h	603	43	670	129	6
Cap Entry, veh/h	1013	1900	958	546	505
V/C Ratio	0.595	0.023	0.699	0.236	0.012
Control Delay, s/veh	11.6	0.0	15.5	9.8	7.3
LOS	B	A	C	A	A
95th %tile Queue, veh	4	0	6	1	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	924	110	16	581	254	44
v/c Ratio	0.85	0.11	0.20	0.52	0.68	0.13
Control Delay	24.5	2.2	58.2	10.4	44.3	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	2.2	58.2	10.4	44.3	21.6
Queue Length 50th (ft)	328	0	8	147	113	9
Queue Length 95th (ft)	#833	22	37	284	271	45
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1450	1252	82	1524	581	533
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.09	0.20	0.38	0.44	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	896	107	16	564	246	43
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	924	110	16	581	254	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1093	929	25	1204	298	266
Arrive On Green	0.62	0.62	0.02	0.69	0.19	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	924	110	16	581	254	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	32.6	2.3	0.7	12.1	12.2	0.0
Cycle Q Clear(g_c), s	32.6	2.3	0.7	12.1	12.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1093	929	25	1204	298	266
V/C Ratio(X)	0.85	0.12	0.64	0.48	0.85	0.00
Avail Cap(c_a), veh/h	1641	1394	86	1812	604	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.8	6.0	38.1	5.7	30.4	0.0
Incr Delay (d2), s/veh	2.7	0.1	23.9	0.3	6.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	1.0	0.5	5.7	5.8	0.0
LnGrp Delay(d),s/veh	14.5	6.1	62.0	6.0	37.2	0.0
LnGrp LOS	B	A	E	A	D	
Approach Vol, veh/h	1034			597	254	
Approach Delay, s/veh	13.6			7.5	37.2	
Approach LOS	B			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.8	5.2	53.8				59.0
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	72.5				80.5
Max Q Clear Time (g_c+I1), s		14.2	2.7	34.6				14.1
Green Ext Time (p_c), s		0.7	0.0	13.7				15.4

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1299	894	131	27
Demand Flow Rate, veh/h	1404	965	141	29
Vehicles Circulating, veh/h	44	91	1353	1043
Vehicles Exiting, veh/h	1028	1403	32	13
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.6	9.0	14.6	7.8
Approach LOS	B	A	B	A

Lane	Left	Right	Bypass	Left	Right	Left	Left
Designated Moves	LT	TR	R	LT	TR	LTR	LTR
Assumed Moves	LT	TR	R	LT	TR	LTR	LTR
RT Channelized			Free				
Lane Util	0.470	0.530		0.470	0.530	1.000	1.000
Critical Headway, s	4.293	4.113		4.293	4.113	4.113	4.113
Entry Flow, veh/h	630	711	63	454	511	141	29
Cap Entry Lane, veh/h	1093	1096	2052	1055	1060	438	544
Entry HV Adj Factor	0.926	0.925	0.926	0.926	0.927	0.929	0.928
Flow Entry, veh/h	583	658	58	420	474	131	27
Cap Entry, veh/h	1012	1014	1900	977	983	407	506
V/C Ratio	0.576	0.649	0.031	0.430	0.482	0.322	0.053
Control Delay, s/veh	11.2	13.1	0.0	8.6	9.4	14.6	7.8
LOS	B	B	A	A	A	B	A
95th %tile Queue, veh	4	5	0	2	3	1	0

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	943	1006	133	6
Demand Flow Rate, veh/h	1019	1086	143	6
Vehicles Circulating, veh/h	33	95	970	1166
Vehicles Exiting, veh/h	1139	1018	32	15
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.1	10.2	10.2	7.4
Approach LOS	A	B	B	A

Lane	Left	Right	Bypass	Left	Right	Left	Left
Designated Moves	LT	TR	R	LT	TR	LTR	LTR
Assumed Moves	LT	TR	R	LT	TR	LTR	LTR
RT Channelized			Free				
Lane Util	0.470	0.530		0.470	0.530	1.000	1.000
Critical Headway, s	4.293	4.113		4.293	4.113	4.113	4.113
Entry Flow, veh/h	455	514	50	510	576	143	6
Cap Entry Lane, veh/h	1102	1104	2052	1052	1057	573	500
Entry HV Adj Factor	0.927	0.925	0.926	0.927	0.926	0.930	1.000
Flow Entry, veh/h	422	475	46	473	533	133	6
Cap Entry, veh/h	1021	1021	1900	976	979	533	500
V/C Ratio	0.413	0.466	0.024	0.485	0.545	0.250	0.012
Control Delay, s/veh	8.0	8.9	0.0	9.5	10.7	10.2	7.4
LOS	A	A	A	A	B	B	A
95th %tile Queue, veh	2	3	0	3	3	1	0

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	856	54	28	535	2	0	0	49	11	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	100	-	0	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	4	892	56	29	557	2	0	0	51	11	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	559	0	0	892	0	0	1517	1518	892	1517	1517	558
Stage 1	-	-	-	-	-	-	900	900	-	617	617	-
Stage 2	-	-	-	-	-	-	617	618	-	900	900	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	983	-	-	736	-	-	52	64	279	87	106	510
Stage 1	-	-	-	-	-	-	229	246	-	452	456	-
Stage 2	-	-	-	-	-	-	368	371	-	309	332	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	983	-	-	736	-	-	48	61	279	69	101	510
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	61	-	69	101	-
Stage 1	-	-	-	-	-	-	228	245	-	450	438	-
Stage 2	-	-	-	-	-	-	343	356	-	251	331	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	20.8	37.2
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	279	983	-	-	736	-	-	71	510
HCM Lane V/C Ratio	-	0.183	0.004	-	-	0.04	-	-	0.176	0.029
HCM Control Delay (s)	0	20.8	8.7	-	-	10.1	-	-	66.2	12.3
HCM Lane LOS	A	C	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	-	0.7	0	-	-	0.1	-	-	0.6	0.1

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	872	1323	76	13
Demand Flow Rate, veh/h	941	1429	82	13
Vehicles Circulating, veh/h	65	43	878	1455
Vehicles Exiting, veh/h	1403	917	62	17
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.5	13.4	8.0	9.5
Approach LOS	A	B	A	A

Lane	Left	Right	Bypass	Left	Right	Left	Left
Designated Moves	LT	TR	R	LT	TR	LTR	LTR
Assumed Moves	LT	TR	R	LT	TR	LTR	LTR
RT Channelized			Free				
Lane Util	0.470	0.530		0.470	0.530	1.000	1.000
Critical Headway, s	4.293	4.113		4.293	4.113	4.113	4.113
Entry Flow, veh/h	411	464	66	672	757	82	13
Cap Entry Lane, veh/h	1076	1080	2052	1094	1096	611	408
Entry HV Adj Factor	0.927	0.926	0.926	0.926	0.927	0.927	0.977
Flow Entry, veh/h	381	430	61	622	701	76	13
Cap Entry, veh/h	998	1000	1900	1013	1016	566	399
V/C Ratio	0.382	0.430	0.032	0.614	0.690	0.134	0.032
Control Delay, s/veh	7.7	8.4	0.0	12.1	14.5	8.0	9.5
LOS	A	A	A	B	B	A	A
95th %tile Queue, veh	2	2	0	4	6	0	0

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	872	1323	76	13
Demand Flow Rate, veh/h	941	1429	82	13
Vehicles Circulating, veh/h	65	43	878	1455
Vehicles Exiting, veh/h	1403	917	128	17
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.6	13.4	8.0	9.5
Approach LOS	A	B	A	A

Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	LT	TR	LTR	LTR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	1.000	1.000
Critical Headway, s	4.293	4.113	4.293	4.113	4.113	4.113
Entry Flow, veh/h	442	499	672	757	82	13
Cap Entry Lane, veh/h	1076	1080	1094	1096	611	408
Entry HV Adj Factor	0.927	0.926	0.926	0.927	0.927	0.977
Flow Entry, veh/h	410	462	622	701	76	13
Cap Entry, veh/h	997	999	1013	1016	566	399
V/C Ratio	0.411	0.462	0.614	0.690	0.134	0.032
Control Delay, s/veh	8.2	9.0	12.1	14.5	8.0	9.5
LOS	A	A	B	B	A	A
95th %tile Queue, veh	2	2	4	6	0	0

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1172	874	125	17
Demand Flow Rate, veh/h	1265	944	135	18
Vehicles Circulating, veh/h	45	67	1214	985
Vehicles Exiting, veh/h	958	1282	36	26
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.1	8.6	12.6	7.2
Approach LOS	B	A	B	A

Lane	Left	Right	Bypass	Left	Right	Left	Left
Designated Moves	LT	TR	R	LT	TR	LTR	LTR
Assumed Moves	LT	TR	R	LT	TR	LTR	LTR
RT Channelized			Free				
Lane Util	0.470	0.530		0.470	0.530	1.000	1.000
Critical Headway, s	4.293	4.113		4.293	4.113	4.113	4.113
Entry Flow, veh/h	566	639	60	444	500	135	18
Cap Entry Lane, veh/h	1092	1095	2052	1075	1078	483	567
Entry HV Adj Factor	0.926	0.925	0.926	0.926	0.927	0.925	0.932
Flow Entry, veh/h	524	591	56	411	463	125	17
Cap Entry, veh/h	1012	1013	1900	995	999	447	529
V/C Ratio	0.518	0.584	0.029	0.413	0.464	0.279	0.032
Control Delay, s/veh	9.9	11.3	0.0	8.2	9.0	12.6	7.2
LOS	A	B	A	A	A	B	A
95th %tile Queue, veh	3	4	0	2	3	1	0

Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1010	787	64	938	551
v/c Ratio	0.92	0.93	0.09	0.70	0.32
Control Delay	41.2	41.8	8.1	26.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	41.8	8.1	26.8	0.5
Queue Length 50th (ft)	341	440	10	251	0
Queue Length 95th (ft)	#491	#699	32	324	0
Internal Link Dist (ft)		1614			2081
Turn Bay Length (ft)			110	370	
Base Capacity (vph)	1169	934	808	1419	1745
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.86	0.84	0.08	0.66	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	949	740	60	882	518
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0	5.0	4.0	4.0
Lane Util. Factor		0.88	1.00	1.00	0.97	1.00
Frt		0.85	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		2651	1736	1475	3216	1745
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		2651	1736	1475	3216	1745
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1010	787	64	938	551
RTOR Reduction (vph)	0	0	0	16	0	0
Lane Group Flow (vph)	0	1010	787	48	938	551
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases				2		
Actuated Green, G (s)		39.1	46.0	46.0	39.1	94.1
Effective Green, g (s)		39.1	46.0	46.0	39.1	94.1
Actuated g/C Ratio		0.42	0.49	0.49	0.42	1.00
Clearance Time (s)		4.0	5.0	5.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1101	848	721	1336	1745
v/s Ratio Prot		c0.38	c0.45		0.29	0.32
v/s Ratio Perm				0.03		
v/c Ratio		0.92	0.93	0.07	0.70	0.32
Uniform Delay, d1		26.0	22.5	12.7	22.7	0.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		11.8	16.0	0.0	1.7	0.5
Delay (s)		37.8	38.5	12.7	24.4	0.5
Level of Service		D	D	B	C	A
Approach Delay (s)	37.8		36.6			15.5
Approach LOS	D		D			B

Intersection Summary

HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	94.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	922	110	16	633	178	44
v/c Ratio	0.81	0.11	0.18	0.54	0.57	0.15
Control Delay	19.6	1.9	53.6	8.9	41.0	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	1.9	53.6	8.9	41.0	18.3
Queue Length 50th (ft)	260	0	7	133	68	5
Queue Length 95th (ft)	711	20	36	277	191	40
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1521	1308	87	1565	616	569
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.08	0.18	0.40	0.29	0.08

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	894	107	16	614	173	43
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	922	110	16	633	178	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1132	963	26	1257	222	198
Arrive On Green	0.64	0.64	0.02	0.72	0.14	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	922	110	16	633	178	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	26.6	1.9	0.6	10.8	7.4	0.0
Cycle Q Clear(g_c), s	26.6	1.9	0.6	10.8	7.4	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1132	963	26	1257	222	198
V/C Ratio(X)	0.81	0.11	0.63	0.50	0.80	0.00
Avail Cap(c_a), veh/h	1885	1602	99	2082	695	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.0	4.6	33.1	4.2	28.1	0.0
Incr Delay (d2), s/veh	1.5	0.1	22.4	0.3	6.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	0.8	0.5	5.2	3.6	0.0
LnGrp Delay(d),s/veh	10.5	4.7	55.5	4.5	34.8	0.0
LnGrp LOS	B	A	E	A	C	
Approach Vol, veh/h	1032			649	178	
Approach Delay, s/veh	9.9			5.8	34.8	
Approach LOS	A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		13.6	5.0	49.1				54.1
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	72.5				80.5
Max Q Clear Time (g_c+I1), s		9.4	2.6	28.6				12.8
Green Ext Time (p_c), s		0.5	0.0	15.0				16.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	16

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	856	52	27	535	2	50	0	41	11	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	4	892	54	28	557	2	52	0	43	11	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	559	0	0	892	0	0	1515	1516	892	1536	1515	558
Stage 1	-	-	-	-	-	-	900	900	-	615	615	-
Stage 2	-	-	-	-	-	-	615	616	-	921	900	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	983	-	-	736	-	-	53	64	279	84	107	510
Stage 1	-	-	-	-	-	-	229	246	-	453	457	-
Stage 2	-	-	-	-	-	-	369	372	-	301	332	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	983	-	-	736	-	-	~ 49	61	279	69	103	510
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 49	61	-	69	103	-
Stage 1	-	-	-	-	-	-	228	245	-	451	440	-
Stage 2	-	-	-	-	-	-	344	358	-	254	331	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	265.7	37.2
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	78	983	-	-	736	-	-	71	510
HCM Lane V/C Ratio	1.215	0.004	-	-	0.038	-	-	0.176	0.029
HCM Control Delay (s)	265.7	8.7	-	-	10.1	-	-	66.2	12.3
HCM Lane LOS	F	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	7.1	0	-	-	0.1	-	-	0.6	0.1

Notes

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

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1205	1104	1213	600
v/c Ratio	0.89	0.88	0.74	0.34
Control Delay	29.4	33.9	20.2	0.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	29.4	33.9	20.2	0.5
Queue Length 50th (ft)	331	291	264	0
Queue Length 95th (ft)	#496	#415	345	0
Internal Link Dist (ft)		1614		2081
Turn Bay Length (ft)			370	
Base Capacity (vph)	1442	1349	1750	1745
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	0.82	0.69	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

1: Highway 1 & Carmel Valley Road

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1133	856	181	1140	564
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	6%		10%			9%
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.88	0.95		0.97	1.00
Frt		0.85	0.97		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2651	3211		3216	1745
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2651	3211		3216	1745
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1205	911	193	1213	600
RTOR Reduction (vph)	0	0	20	0	0	0
Lane Group Flow (vph)	0	1205	1084	0	1213	600
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		43.6	32.8		43.6	85.4
Effective Green, g (s)		43.6	32.8		43.6	85.4
Actuated g/C Ratio		0.51	0.38		0.51	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1353	1233		1641	1745
v/s Ratio Prot		c0.45	c0.34		0.38	0.34
v/s Ratio Perm						
v/c Ratio		0.89	0.88		0.74	0.34
Uniform Delay, d1		18.8	24.5		16.4	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		7.7	7.4		1.8	0.5
Delay (s)		26.5	31.8		18.2	0.5
Level of Service		C	C		B	A
Approach Delay (s)	26.5		31.8			12.4
Approach LOS	C		C			B

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	85.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

2: Rancho San Carlos Road & Carmel Valley Road

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1229	139	19	926	189	52
v/c Ratio	0.98	0.13	0.31	0.71	0.72	0.20
Control Delay	38.3	2.3	65.4	12.5	57.6	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	2.3	65.4	12.5	57.6	20.2
Queue Length 50th (ft)	590	3	12	285	115	10
Queue Length 95th (ft)	#1319	29	40	590	203	45
Internal Link Dist (ft)	3171			365	801	
Turn Bay Length (ft)		320	370			50
Base Capacity (vph)	1257	1102	62	1334	436	414
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.13	0.31	0.69	0.43	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1192	135	18	898	183	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1750	1750	1645	1645
Adj Flow Rate, veh/h	1229	139	19	926	189	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1249	1062	27	1340	221	198
Arrive On Green	0.71	0.71	0.02	0.77	0.14	0.00
Sat Flow, veh/h	1759	1495	1667	1750	1567	1398
Grp Volume(v), veh/h	1229	139	19	926	189	0
Grp Sat Flow(s),veh/h/ln	1759	1495	1667	1750	1567	1398
Q Serve(g_s), s	68.5	3.0	1.2	26.9	12.0	0.0
Cycle Q Clear(g_c), s	68.5	3.0	1.2	26.9	12.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1249	1062	27	1340	221	198
V/C Ratio(X)	0.98	0.13	0.70	0.69	0.85	0.00
Avail Cap(c_a), veh/h	1251	1063	65	1382	461	411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.2	4.7	49.9	6.0	42.7	0.0
Incr Delay (d2), s/veh	21.6	0.1	27.5	1.4	9.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	39.9	1.3	0.7	13.1	5.8	0.0
LnGrp Delay(d),s/veh	35.8	4.8	77.4	7.4	51.8	0.0
LnGrp LOS	D	A	E	A	D	
Approach Vol, veh/h	1368			945	189	
Approach Delay, s/veh	32.7			8.8	51.8	
Approach LOS	C			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.4	5.7	77.9				83.5
Change Period (Y+Rc), s		4.0	4.0	5.5				5.5
Max Green Setting (Gmax), s		30.0	4.0	72.5				80.5
Max Q Clear Time (g_c+I1), s		14.0	3.2	70.5				28.9
Green Ext Time (p_c), s		0.5	0.0	1.8				30.9

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	80.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	1184	54	27	827	4	50	0	45	11	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	70	210	-	-	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	4	-	-	2	-	-	7	-	-	1	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	8	1233	56	28	861	4	52	0	47	11	1	15

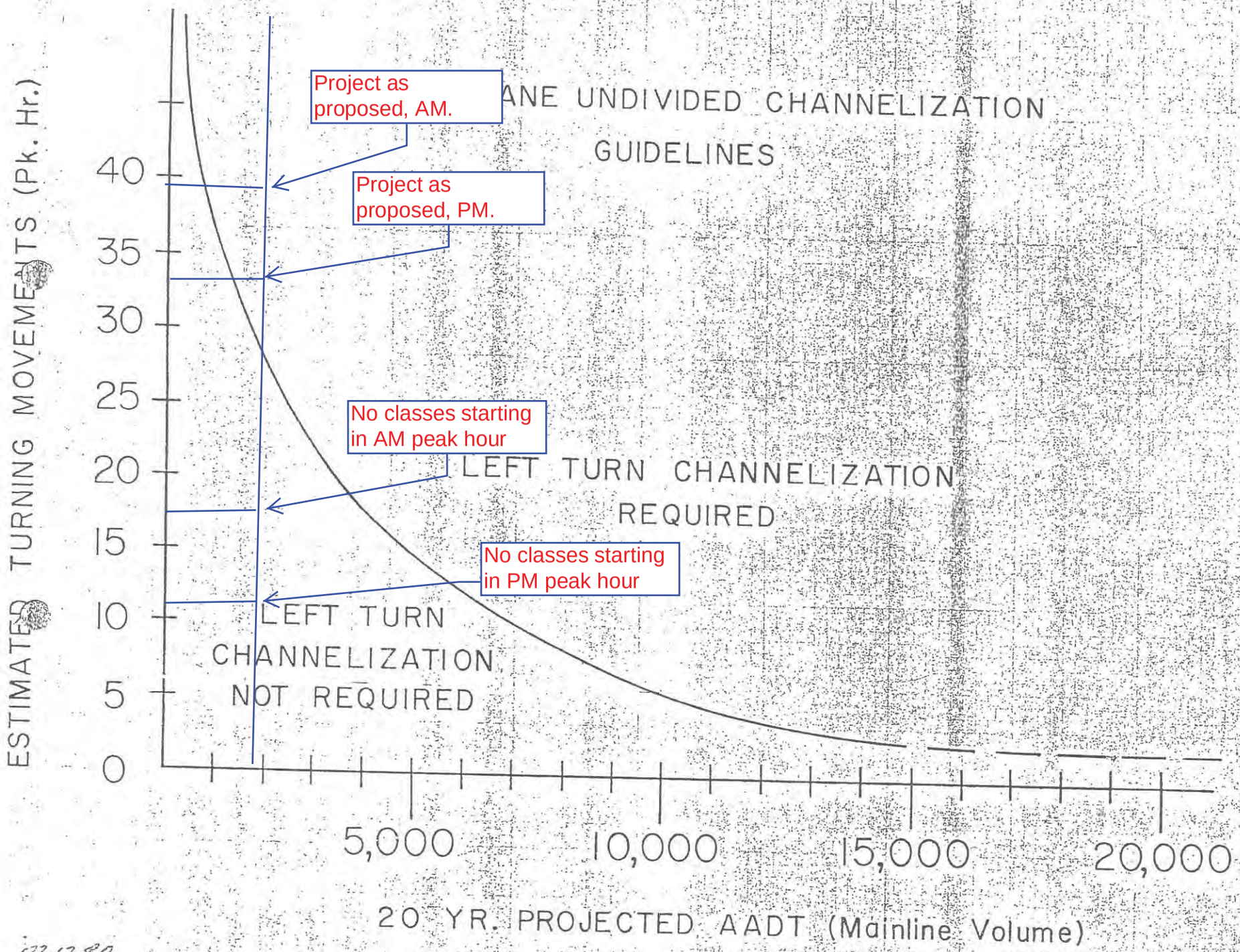
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	866	0	0	1233	0	0	2170	2172	1233	2193	2170	864
Stage 1	-	-	-	-	-	-	1250	1250	-	920	920	-
Stage 2	-	-	-	-	-	-	920	922	-	1273	1250	-
Critical Hdwy	4.18	-	-	4.18	-	-	8.58	7.98	6.98	7.38	6.78	6.38
Critical Hdwy Stg 1	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.58	6.98	-	6.38	5.78	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	752	-	-	545	-	-	~ 14	19	165	28	40	337
Stage 1	-	-	-	-	-	-	127	146	-	301	325	-
Stage 2	-	-	-	-	-	-	221	238	-	186	222	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	752	-	-	545	-	-	~ 13	18	165	19	38	337
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 13	18	-	19	38	-
Stage 1	-	-	-	-	-	-	126	144	-	298	308	-
Stage 2	-	-	-	-	-	-	200	226	-	132	220	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	$ 1829.4	166.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	23	752	-	-	545	-	-	20	337
HCM Lane V/C Ratio	4.303	0.011	-	-	0.052	-	-	0.625	0.043
HCM Control Delay (s)	$ 1829.4	9.8	-	-	12	-	-	$ 340.9	16.2
HCM Lane LOS	F	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	12.5	0	-	-	0.2	-	-	1.7	0.1

Notes

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


ANE UNDIVIDED CHANNELIZATION
GUIDELINES
Project as proposed, AM.
Project as proposed, PM.
No classes starting in AM peak hour
No classes starting in PM peak hour
LEFT TURN CHANNELIZATION REQUIRED
LEFT TURN CHANNELIZATION NOT REQUIRED
ESTIMATED TURNING MOVEMENTS (Pk. Hr.)
0
5
10
15
20
25
30
35
40
5,000
10,000
15,000
20,000
20 YR. PROJECTED AADT (Mainline Volume)

021230

Appendix C: Roadway Segment Analysis

2-Lane Segment Analysis			Existing				E+P				Cm				Cm+P			
CVR Segment	Time	Direction	Volume	2-Way	PTSF	LOS	Volume	2-Way	PTSF	LOS	Volume	2-Way	PTSF	LOS	Volume	2-Way	PTSF	LOS
	AM	EB	528	1361	69.9%	C	555	1411	71.2%	D	894	2272	85.9%	E	921	2322	86.4%	E
Carmel Valley-Schulte Road		WB	833		85.9%	E	856		86.8%	E	1378		94.6%	E	1401		94.8%	E
to Rancho San Carlos	PM	EB	859	1483	86.5%	E	882	1533	87.3%	E	1174	2079	91.9%	E	1197	2129	92.3%	E
		WB	624		75.2%	D	651		76.8%	D	905		86.2%	E	932		87.0%	E
	Friday	EB	914	1517	88.3%	E	939	1592	88.6%	E	1219	2108	93.0%	E	1244	2183	92.9%	E
		WB	603		74.3%	D	653		76.5%	D	889		85.7%	E	939		87.2%	E
	Sunday	EB	575	1199	74.9%	D	595	1274	75.6%	D	827	1744	84.1%	D	847	1819	84.4%	D
		WB	624		78.1%	D	679		80.0%	D	917		87.2%	E	972		88.3%	E

			Existing			E+P			Cm			Cm+P		
Multilane and 2-Lane		Direction	Volume	ısity or P	LOS	Volume	ısity or P	LOS	Volume	ısity or P	LOS	Volume	ısity or P	LOS
	AM	NB	1576	19.9	C	1596	20.2	C	2424	30.6	D	2444	30.9	D
Highway 1-Carmel Valley		SB	1623	96.7%	F	1646	96.9%	F	1929	99.4%	F	1952	96.7%	F
Road to Ocean Avenue	PM	NB	1609	19.7	C	1632	20.0	C	1897	23.2	C	1920	23.5	C
		SB	1550	96.0%	F	1570	96.2%	F	1847	98.4%	F	1867	98.5%	F
	Friday	NB	1666	20.4	C	1709	20.9	C	1966	24.1	C	2009	24.6	C
		SB	1380	94.5%	F	1402	94.8%	F	1684	97.6%	F	1706	97.8%	F
	Sunday	NB	1283	16.2	B	1330	16.8	B	1546	19.5	C	1593	20.1	C
		SB	1245	92.5%	E	1262	92.8%	E	1516	95.6%	F	1533	95.9%	F

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Existing AM
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1623 veh/h
Opposing direction volume, Vo 1576 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1754	pc/h	1704	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	15.1	mi/h
Percent Free Flow Speed, PFFS	35.4	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1727	pc/h	1677	pc/h
Base percent time-spent-following,(note-4) BPTSFd	93.5	%		
Adjustment for no-passing zones, fnp	6.4			
Percent time-spent-following, PTSFd	96.7	%		

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	1.02	
Peak 15-min vehicle-miles of travel, VMT15	1036	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3895	veh-mi
Peak 15-min total travel time, TT15	68.8	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	15.1	mi/h
Percent time-spent-following, PTSFd (from above)	96.7	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1726.6
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.95
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	12/9/2014
Analysis Period:	Existing AM
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1576	vph	1623	vph
Peak-hour factor, PHF	0.94		0.94	
Peak 15-minute volume, v15	419		432	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	896	pcphpl	923	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	896	pcphpl	923	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	19.9	pc/mi/ln	20.5	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	838.3	863.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.58	4.60
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Existing PM
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1550 veh/h
Opposing direction volume, Vo 1609 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1675	pc/h	1740	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	15.4	mi/h
Percent Free Flow Speed, PFFS	36.2	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1649 pc/h	1712 pc/h
Base percent time-spent-following,(note-4) BPTSFd	92.8 %	
Adjustment for no-passing zones, fnp	6.5	
Percent time-spent-following, PTSFd	96.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	0.97	
Peak 15-min vehicle-miles of travel, VMT15	989	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3720	veh-mi
Peak 15-min total travel time, TT15	64.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	15.4	mi/h
Percent time-spent-following, PTSFd (from above)	96.0	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1648.9
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.93
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	12/9/2014
Analysis Period:	Existing PM
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1609	vph	1550	vph
Peak-hour factor, PHF	0.97		0.97	
Peak 15-minute volume, v15	415		399	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	887	pcphpl	854	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	887	pcphpl	854	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	19.7	pc/mi/ln	19.0	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	829.4	799.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.58	4.56
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Existing Friday
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1380 veh/h
Opposing direction volume, Vo 1666 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1492	pc/h	1801	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	16.3	mi/h
Percent Free Flow Speed, PFFS	38.5	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1468	pc/h	1772	pc/h
Base percent time-spent-following,(note-4) BPTSFd	90.9	%		
Adjustment for no-passing zones, fnp	8.0			
Percent time-spent-following, PTSFd	94.5	%		

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	0.86	
Peak 15-min vehicle-miles of travel, VMT15	881	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3312	veh-mi
Peak 15-min total travel time, TT15	53.9	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	16.3	mi/h
Percent time-spent-following, PTSFd (from above)	94.5	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1468.1
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.87
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	12/30/2014
Analysis Period:	Existing Friday
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1666	vph	1380	vph
Peak-hour factor, PHF	0.97		0.97	
Peak 15-minute volume, v15	429		356	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	918	pcphpl	761	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	918	pcphpl	761	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		B	
Density, D	20.4	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	858.8	711.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.60	4.50
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Existing Sunday
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1245 veh/h
Opposing direction volume, Vo 1283 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1346	pc/h	1387	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.7	mi/h
Average travel speed, ATSd	20.6	mi/h
Percent Free Flow Speed, PFFS	48.4	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1324 pc/h	1365 pc/h
Base percent time-spent-following,(note-4) BPTSFd	87.7 %	
Adjustment for no-passing zones, fnp	9.7	
Percent time-spent-following, PTSFd	92.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.78	
Peak 15-min vehicle-miles of travel, VMT15	795	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2988	veh-mi
Peak 15-min total travel time, TT15	38.6	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	20.6	mi/h
Percent time-spent-following, PTSFd (from above)	92.5	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1324.5
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.82
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	12/30/2014
Analysis Period:	Existing Sunday
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1283	vph	1245	vph
Peak-hour factor, PHF	0.94		0.94	
Peak 15-minute volume, v15	341		331	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	730	pcphpl	708	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	730	pcphpl	708	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	B		B	
Density, D	16.2	pc/mi/ln	15.7	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	682.4	662.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.48	4.46
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Existing Plus Project AM
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1646 veh/h
Opposing direction volume, Vo 1596 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1779	pc/h	1725	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	14.7	mi/h
Percent Free Flow Speed, PFFS	34.6	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1751	pc/h	1698	pc/h
Base percent time-spent-following,(note-4) BPTSFd	93.7	%		
Adjustment for no-passing zones, fnp	6.4			
Percent time-spent-following, PTSFd	96.9	%		

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	1.03	
Peak 15-min vehicle-miles of travel, VMT15	1051	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3950	veh-mi
Peak 15-min total travel time, TT15	71.5	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	14.7	mi/h
Percent time-spent-following, PTSFd (from above)	96.9	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1751.1
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.96
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/2/2015
Analysis Period:	Existing Plus Project AM
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1596	vph	1646	vph
Peak-hour factor, PHF	0.94		0.94	
Peak 15-minute volume, v15	424		438	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	908	pcphpl	936	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	908	pcphpl	936	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	20.2	pc/mi/ln	20.8	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	848.9	875.5
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.59	4.61
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Existing Plus Project PM
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1570 veh/h
Opposing direction volume, Vo 1632 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1697	pc/h	1764	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	15.0	mi/h
Percent Free Flow Speed, PFFS	35.4	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1670 pc/h	1736 pc/h

Base percent time-spent-following,(note-4) BPTSFd	93.0	%
Adjustment for no-passing zones, fnp	6.5	
Percent time-spent-following, PTSFd	96.2	%

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	0.98	
Peak 15-min vehicle-miles of travel, VMT15	1002	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3768	veh-mi
Peak 15-min total travel time, TT15	66.6	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	15.0	mi/h
Percent time-spent-following, PTSFd (from above)	96.2	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1670.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.93
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/2/2015
Analysis Period:	Existing Plus Project PM
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1632	vph	1570	vph
Peak-hour factor, PHF	0.97		0.97	
Peak 15-minute volume, v15	421		405	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	900	pcphpl	865	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	900	pcphpl	865	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	20.0	pc/mi/ln	19.2	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	841.2	809.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.59	4.57
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Existing Plus Project Friday
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1402 veh/h
Opposing direction volume, Vo 1709 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1515	pc/h	1848	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	15.8	mi/h
Percent Free Flow Speed, PFFS	37.2	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1491	pc/h	1818	pc/h
Base percent time-spent-following,(note-4) BPTSFd	91.2	%		
Adjustment for no-passing zones, fnp	8.1			
Percent time-spent-following, PTSFd	94.8	%		

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	0.88	
Peak 15-min vehicle-miles of travel, VMT15	895	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3365	veh-mi
Peak 15-min total travel time, TT15	56.6	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	15.8	mi/h
Percent time-spent-following, PTSFd (from above)	94.8	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1491.5
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.88
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/2/2015
Analysis Period:	Existing Plus Project Friday
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1709	vph	1402	vph
Peak-hour factor, PHF	0.97		0.97	
Peak 15-minute volume, v15	440		361	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	942	pcphpl	773	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	942	pcphpl	773	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		B	
Density, D	20.9	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	880.9	722.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.61	4.51
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Existing Plus Project Sunday
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1262 veh/h
Opposing direction volume, Vo 1330 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1364	pc/h	1438	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.7	mi/h
Average travel speed, ATSd	20.1	mi/h
Percent Free Flow Speed, PFFS	47.2	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1343 pc/h	1415 pc/h
Base percent time-spent-following,(note-4) BPTSFd	88.3 %	
Adjustment for no-passing zones, fnp	9.3	
Percent time-spent-following, PTSFd	92.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.79	
Peak 15-min vehicle-miles of travel, VMT15	806	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3029	veh-mi
Peak 15-min total travel time, TT15	40.1	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	20.1	mi/h
Percent time-spent-following, PTSFd (from above)	92.8	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1342.6
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.82
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/2/2015
Analysis Period:	Existing Plus Project Sunday
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1330	vph	1262	vph
Peak-hour factor, PHF	0.94		0.94	
Peak 15-minute volume, v15	354		336	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	756	pcphpl	718	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	756	pcphpl	718	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	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	707.4	671.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.50	4.47
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Cumulative AM
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1929 veh/h
Opposing direction volume, Vo 2424 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	2085	pc/h	2621	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	5.4	mi/h
Percent Free Flow Speed, PFFS	12.7	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	2052	pc/h	2579	pc/h
Base percent time-spent-following,(note-4) BPTSFd	95.7	%		
Adjustment for no-passing zones, fnp	8.4			
Percent time-spent-following, PTSFd	99.4	%		

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	1.21	
Peak 15-min vehicle-miles of travel, VMT15	1231	veh-mi
Peak-hour vehicle-miles of travel, VMT60	4630	veh-mi
Peak 15-min total travel time, TT15	228.7	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	5.4	mi/h
Percent time-spent-following, PTSFd (from above)	99.4	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	2052.1
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.04
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/5/2014
Analysis Period:	Cumulative AM
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	2424	vph	1929	vph
Peak-hour factor, PHF	0.94		0.94	
Peak 15-minute volume, v15	645		513	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	1379	pcphpl	1097	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1379	pcphpl	1097	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	30.6	pc/mi/ln	24.4	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	1289.4	1026.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.80	4.69
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Cumulative PM
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1847 veh/h
Opposing direction volume, Vo 1897 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1996	pc/h	2051	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	10.5	mi/h
Percent Free Flow Speed, PFFS	24.7	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1965 pc/h	2018 pc/h

Base percent time-spent-following,(note-4) BPTSFd	95.2	%
Adjustment for no-passing zones, fnp	6.4	
Percent time-spent-following, PTSFd	98.4	%

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	1.16	
Peak 15-min vehicle-miles of travel, VMT15	1179	veh-mi
Peak-hour vehicle-miles of travel, VMT60	4433	veh-mi
Peak 15-min total travel time, TT15	112.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	10.5	mi/h
Percent time-spent-following, PTSFd (from above)	98.4	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1964.9
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.02
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/5/2015
Analysis Period:	Cumulative PM
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1897	vph	1847	vph
Peak-hour factor, PHF	0.97		0.97	
Peak 15-minute volume, v15	489		476	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	1046	pcphpl	1018	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1046	pcphpl	1018	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	23.2	pc/mi/ln	22.6	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	977.8	952.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.66	4.65
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Cumulative Friday
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1684 veh/h
Opposing direction volume, Vo 1966 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1820	pc/h	2125	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	11.3	mi/h
Percent Free Flow Speed, PFFS	26.6	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1791	pc/h	2091	pc/h
Base percent time-spent-following,(note-4) BPTSFd	94.0	%		
Adjustment for no-passing zones, fnp	7.7			
Percent time-spent-following, PTSFd	97.6	%		

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	1.05	
Peak 15-min vehicle-miles of travel, VMT15	1075	veh-mi
Peak-hour vehicle-miles of travel, VMT60	4042	veh-mi
Peak 15-min total travel time, TT15	95.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	11.3	mi/h
Percent time-spent-following, PTSFd (from above)	97.6	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1791.5
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.97
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/5/2015
Analysis Period:	Cumulative Friday
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1966	vph	1684	vph
Peak-hour factor, PHF	0.97		0.97	
Peak 15-minute volume, v15	507		434	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	1084	pcphpl	928	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1084	pcphpl	928	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	24.1	pc/mi/ln	20.6	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	1013.4	868.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.68	4.60
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Cumulative Sunday
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1516 veh/h
Opposing direction volume, Vo 1546 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1639	pc/h	1671	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	16.2	mi/h
Percent Free Flow Speed, PFFS	38.2	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1613 pc/h	1645 pc/h
Base percent time-spent-following,(note-4) BPTSFd	92.5 %	
Adjustment for no-passing zones, fnp	6.3	
Percent time-spent-following, PTSFd	95.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.95	
Peak 15-min vehicle-miles of travel, VMT15	968	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3638	veh-mi
Peak 15-min total travel time, TT15	59.7	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	16.2	mi/h
Percent time-spent-following, PTSFd (from above)	95.6	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1612.8
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.92
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/5/2015
Analysis Period:	Cumulative Sunday
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1546	vph	1516	vph
Peak-hour factor, PHF	0.94		0.94	
Peak 15-minute volume, v15	411		403	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	879	pcphpl	862	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	879	pcphpl	862	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	19.5	pc/mi/ln	19.2	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	822.3	806.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.57	4.56
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Cumulative Plus Project AM
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1952 veh/h
Opposing direction volume, Vo 2444 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	2110	pc/h	2642	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	5.0	mi/h
Percent Free Flow Speed, PFFS	11.8	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	2077	pc/h	2600	pc/h
Base percent time-spent-following,(note-4) BPTSFd	95.9	%		
Adjustment for no-passing zones, fnp	8.4			
Percent time-spent-following, PTSFd	99.6	%		

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	1.22	
Peak 15-min vehicle-miles of travel, VMT15	1246	veh-mi
Peak-hour vehicle-miles of travel, VMT60	4685	veh-mi
Peak 15-min total travel time, TT15	248.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	5.0	mi/h
Percent time-spent-following, PTSFd (from above)	99.6	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	2076.6
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.04
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/5/2014
Analysis Period:	Cumulative Plus Project AM
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	2444	vph	1952	vph
Peak-hour factor, PHF	0.94		0.94	
Peak 15-minute volume, v15	650		519	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	1391	pcphpl	1110	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1391	pcphpl	1110	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	30.9	pc/mi/ln	24.7	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	1300.0	1038.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.81	4.69
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Cumulative Plus Project PM
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1867 veh/h
Opposing direction volume, Vo 1920 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	2018	pc/h	2076	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	10.1	mi/h
Percent Free Flow Speed, PFFS	23.8	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1986 pc/h	2043 pc/h

Base percent time-spent-following,(note-4) BPTSFd	95.3	%
Adjustment for no-passing zones, fnp	6.4	
Percent time-spent-following, PTSFd	98.5	%

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	1.17	
Peak 15-min vehicle-miles of travel, VMT15	1192	veh-mi
Peak-hour vehicle-miles of travel, VMT60	4481	veh-mi
Peak 15-min total travel time, TT15	117.7	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	10.1	mi/h
Percent time-spent-following, PTSFd (from above)	98.5	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1986.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.02
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/5/2015
Analysis Period:	Cumulative Plus Project PM
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1920	vph	1867	vph
Peak-hour factor, PHF	0.97		0.97	
Peak 15-minute volume, v15	495		481	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	1058	pcphpl	1029	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1058	pcphpl	1029	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	23.5	pc/mi/ln	22.9	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	989.7	962.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.67	4.65
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Cumulative Plus Project Friday
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description Carmel Canine	

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1706 veh/h
Opposing direction volume, Vo 2009 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1844	pc/h	2172	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	10.7	mi/h
Percent Free Flow Speed, PFFS	25.3	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1815	pc/h	2137	pc/h
Base percent time-spent-following,(note-4) BPTSFd	94.2	%		
Adjustment for no-passing zones, fnp	7.8			
Percent time-spent-following, PTSFd	97.8	%		

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	1.07	
Peak 15-min vehicle-miles of travel, VMT15	1089	veh-mi
Peak-hour vehicle-miles of travel, VMT60	4094	veh-mi
Peak 15-min total travel time, TT15	101.4	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	10.7	mi/h
Percent time-spent-following, PTSFd (from above)	97.8	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1814.9
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.98
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/5/2015
Analysis Period:	Cumulative Plus Project Friday
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	2009	vph	1706	vph
Peak-hour factor, PHF	0.97		0.97	
Peak 15-minute volume, v15	518		440	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	1108	pcphpl	940	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1108	pcphpl	940	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	24.6	pc/mi/ln	20.9	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	1035.6	879.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.69	4.61
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	1/22/2015
Analysis Time Period	Cumulative Plus Project Sunday
Highway	Highway 1
From/To	Ocean/Carmel Valley
Jurisdiction	Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	1	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-6.0	%	Access point density	10	/mi

Analysis direction volume, Vd 1533 veh/h
Opposing direction volume, Vo 1593 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1657	pc/h	1722	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	2.5	mi/h
Free-flow speed, FFSd	42.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	15.7	mi/h
Percent Free Flow Speed, PFFS	36.9	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1631 pc/h	1695 pc/h
Base percent time-spent-following,(note-4) BPTSFd	92.7 %	
Adjustment for no-passing zones, fnp	6.5	
Percent time-spent-following, PTSFd	95.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	0.96	
Peak 15-min vehicle-miles of travel, VMT15	979	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3679	veh-mi
Peak 15-min total travel time, TT15	62.4	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	15.7	mi/h
Percent time-spent-following, PTSFd (from above)	95.9	
Level of service, LOSd (from above)	F	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1630.9
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.92
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Multilane Highways Release 6.60

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	KP
Agency/Co:	CCTC
Date:	1/5/2015
Analysis Period:	Cumulative Plus Project Sunday
Highway:	Highway 1
From/To:	Ocean/Carmel Valley
Jurisdiction:	Monterey County
Analysis Year:	2014
Project ID:	Carmel Canine

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	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	45.0	mph	45.0	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	2.5	mph	2.5	mph
Free-flow speed	42.5	mph	42.5	mph

VOLUME

Direction	1		2	
Volume, V	1593	vph	1533	vph
Peak-hour factor, PHF	0.94		0.94	
Peak 15-minute volume, v15	424		408	
Trucks and buses	8	%	8	%
Recreational vehicles	1	%	1	%
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		1.5	
Recreational vehicles PCE, ER	4.0		4.0	
Heavy vehicle adjustment, fHV	0.935		0.935	
Flow rate, vp	906	pcphpl	872	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	906	pcphpl	872	pcphpl
Free-flow speed, FFS	42.5	mph	42.5	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	20.1	pc/mi/ln	19.4	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	847.3	815.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.59	4.57
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing AM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 528 veh/h
Opposing direction volume, Vo 833 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	577	pc/h	910	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	28.8	mi/h
Percent Free Flow Speed, PFFS	69.4	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	568	pc/h	896	pc/h
Base percent time-spent-following,(note-4) BPTSFd	59.9	%		
Adjustment for no-passing zones, fnp	25.7			
Percent time-spent-following, PTSFd	69.9	%		

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.33	
Peak 15-min vehicle-miles of travel, VMT15	341	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1267	veh-mi
Peak 15-min total travel time, TT15	11.8	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	28.8	mi/h
Percent time-spent-following, PTSFd (from above)	69.9	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	567.7
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.39
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing AM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 833 veh/h
Opposing direction volume, Vo 528 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	910	pc/h	577	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.9	mi/h
Average travel speed, ATSd	28.1	mi/h
Percent Free Flow Speed, PFFS	67.6	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	896 pc/h	568 pc/h
Base percent time-spent-following,(note-4) BPTSFd	70.2 %	
Adjustment for no-passing zones, fnp	25.7	
Percent time-spent-following, PTSFd	85.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.53	
Peak 15-min vehicle-miles of travel, VMT15	537	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1999	veh-mi
Peak 15-min total travel time, TT15	19.1	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	28.1	mi/h
Percent time-spent-following, PTSFd (from above)	85.9	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	895.7
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.62
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing PM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 624 veh/h
Opposing direction volume, Vo 859 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	682	pc/h	939	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	27.8	mi/h
Percent Free Flow Speed, PFFS	67.0	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	671	pc/h	924	pc/h
Base percent time-spent-following,(note-4) BPTSFd	65.0	%		
Adjustment for no-passing zones, fnp	24.3			
Percent time-spent-following, PTSFd	75.2	%		

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.39	
Peak 15-min vehicle-miles of travel, VMT15	403	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1498	veh-mi
Peak 15-min total travel time, TT15	14.5	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	27.8	mi/h
Percent time-spent-following, PTSFd (from above)	75.2	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	671.0
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.47
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing PM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 859 veh/h
Opposing direction volume, Vo 624 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	939	pc/h	682	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.6	mi/h
Average travel speed, ATSd	27.4	mi/h
Percent Free Flow Speed, PFFS	65.9	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	924 pc/h	671 pc/h
Base percent time-spent-following,(note-4) BPTSFd	72.4 %	
Adjustment for no-passing zones, fnp	24.3	
Percent time-spent-following, PTSFd	86.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.54	
Peak 15-min vehicle-miles of travel, VMT15	554	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2062	veh-mi
Peak 15-min total travel time, TT15	20.2	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	27.4	mi/h
Percent time-spent-following, PTSFd (from above)	86.5	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	923.7
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.63
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Friday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 603 veh/h
Opposing direction volume, Vo 914 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	659	pc/h	999	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	27.5	mi/h
Percent Free Flow Speed, PFFS	66.3	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	648	pc/h	983	pc/h
Base percent time-spent-following,(note-4) BPTSFd	65.0	%		
Adjustment for no-passing zones, fnp	23.3			
Percent time-spent-following, PTSFd	74.3	%		

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.38	
Peak 15-min vehicle-miles of travel, VMT15	389	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1447	veh-mi
Peak 15-min total travel time, TT15	14.1	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	27.5	mi/h
Percent time-spent-following, PTSFd (from above)	74.3	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	648.4
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.45
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Friday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 914 veh/h
Opposing direction volume, Vo 603 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	999	pc/h	659	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.6	mi/h
Average travel speed, ATSd	27.0	mi/h
Percent Free Flow Speed, PFFS	65.1	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	983 pc/h	648 pc/h
Base percent time-spent-following,(note-4) BPTSFd	74.3 %	
Adjustment for no-passing zones, fnp	23.3	
Percent time-spent-following, PTSFd	88.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.58	
Peak 15-min vehicle-miles of travel, VMT15	590	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2194	veh-mi
Peak 15-min total travel time, TT15	21.8	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	27.0	mi/h
Percent time-spent-following, PTSFd (from above)	88.3	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	982.8
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.66
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Sunday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 624 veh/h
Opposing direction volume, Vo 575 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	682	pc/h	628	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.7	mi/h
Average travel speed, ATSd	29.6	mi/h
Percent Free Flow Speed, PFFS	71.4	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	671	pc/h	618	pc/h
Base percent time-spent-following,(note-4) BPTSFd	61.7	%		
Adjustment for no-passing zones, fnp	31.5			
Percent time-spent-following, PTSFd	78.1	%		

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.39	
Peak 15-min vehicle-miles of travel, VMT15	403	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1498	veh-mi
Peak 15-min total travel time, TT15	13.6	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	29.6	mi/h
Percent time-spent-following, PTSFd (from above)	78.1	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	671.0
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.47
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Sunday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 575 veh/h
Opposing direction volume, Vo 624 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	628	pc/h	682	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.6	mi/h
Average travel speed, ATSd	29.8	mi/h
Percent Free Flow Speed, PFFS	71.8	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	618 pc/h	671 pc/h

Base percent time-spent-following,(note-4) BPTSFd	59.8	%
Adjustment for no-passing zones, fnp	31.5	
Percent time-spent-following, PTSFd	74.9	%

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.36	
Peak 15-min vehicle-miles of travel, VMT15	371	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1380	veh-mi
Peak 15-min total travel time, TT15	12.5	veh-h
Capacity from ATS, CdATS	1686	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	29.8	mi/h
Percent time-spent-following, PTSFd (from above)	74.9	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	618.3
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.43
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Plus Project AM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd	856	veh/h
Opposing direction volume, Vo	555	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	935	pc/h	606	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.8	mi/h
Average travel speed, ATSd	27.8	mi/h
Percent Free Flow Speed, PFFS	66.9	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	920	pc/h	597	pc/h
Base percent time-spent-following,(note-4) BPTSFd	71.6	%		
Adjustment for no-passing zones, fnp	25.0			
Percent time-spent-following, PTSFd	86.8	%		

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.54	
Peak 15-min vehicle-miles of travel, VMT15	552	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2054	veh-mi
Peak 15-min total travel time, TT15	19.9	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	27.8	mi/h
Percent time-spent-following, PTSFd (from above)	86.8	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	920.4
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.63
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Plus Project AM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 555 veh/h
Opposing direction volume, Vo 856 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	606	pc/h	935	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	28.4	mi/h
Percent Free Flow Speed, PFFS	68.5	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	597 pc/h	920 pc/h
Base percent time-spent-following,(note-4) BPTSFd	61.4 %	
Adjustment for no-passing zones, fnp	25.0	
Percent time-spent-following, PTSFd	71.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.35	
Peak 15-min vehicle-miles of travel, VMT15	358	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1332	veh-mi
Peak 15-min total travel time, TT15	12.6	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	28.4	mi/h
Percent time-spent-following, PTSFd (from above)	71.2	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	596.8
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.41
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Plus Project PM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd	651	veh/h
Opposing direction volume, Vo	882	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	711	pc/h	964	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	27.4	mi/h
Percent Free Flow Speed, PFFS	66.0	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	700	pc/h	948	pc/h
Base percent time-spent-following,(note-4) BPTSFd	66.8	%		
Adjustment for no-passing zones, fnp	23.5			
Percent time-spent-following, PTSFd	76.8	%		

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.41	
Peak 15-min vehicle-miles of travel, VMT15	420	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1562	veh-mi
Peak 15-min total travel time, TT15	15.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	27.4	mi/h
Percent time-spent-following, PTSFd (from above)	76.8	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	700.0
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.49
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Plus Project PM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 882 veh/h
Opposing direction volume, Vo 651 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	964	pc/h	711	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.5	mi/h
Average travel speed, ATSd	27.0	mi/h
Percent Free Flow Speed, PFFS	65.1	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	948 pc/h	700 pc/h
Base percent time-spent-following,(note-4) BPTSFd	73.8 %	
Adjustment for no-passing zones, fnp	23.5	
Percent time-spent-following, PTSFd	87.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.56	
Peak 15-min vehicle-miles of travel, VMT15	569	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2117	veh-mi
Peak 15-min total travel time, TT15	21.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	27.0	mi/h
Percent time-spent-following, PTSFd (from above)	87.3	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	948.4
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.65
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Plus Project Friday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 653 veh/h
Opposing direction volume, Vo 939 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	714	pc/h	1026	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	26.9	mi/h
Percent Free Flow Speed, PFFS	64.8	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	702	pc/h	1010	pc/h
Base percent time-spent-following,(note-4) BPTSFd	67.4	%		
Adjustment for no-passing zones, fnp	22.2			
Percent time-spent-following, PTSFd	76.5	%		

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.41	
Peak 15-min vehicle-miles of travel, VMT15	421	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1567	veh-mi
Peak 15-min total travel time, TT15	15.6	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	26.9	mi/h
Percent time-spent-following, PTSFd (from above)	76.5	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	702.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.49
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Plus Project Friday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 939 veh/h
Opposing direction volume, Vo 653 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1026	pc/h	714	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.5	mi/h
Average travel speed, ATSd	26.5	mi/h
Percent Free Flow Speed, PFFS	64.0	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1010 pc/h	702 pc/h
Base percent time-spent-following,(note-4) BPTSFd	75.5 %	
Adjustment for no-passing zones, fnp	22.2	
Percent time-spent-following, PTSFd	88.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.59	
Peak 15-min vehicle-miles of travel, VMT15	606	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2254	veh-mi
Peak 15-min total travel time, TT15	22.8	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	26.5	mi/h
Percent time-spent-following, PTSFd (from above)	88.6	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1009.7
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.68
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Plus Project Sunday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 679 veh/h
Opposing direction volume, Vo 595 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	742	pc/h	650	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.6	mi/h
Average travel speed, ATSd	29.0	mi/h
Percent Free Flow Speed, PFFS	70.0	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	730	pc/h	640	pc/h
Base percent time-spent-following,(note-4) BPTSFd	64.5	%		
Adjustment for no-passing zones, fnp	29.0			
Percent time-spent-following, PTSFd	80.0	%		

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.43	
Peak 15-min vehicle-miles of travel, VMT15	438	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1630	veh-mi
Peak 15-min total travel time, TT15	15.1	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	29.0	mi/h
Percent time-spent-following, PTSFd (from above)	80.0	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	730.1
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.51
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Existing Plus Project Sunday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 595 veh/h
Opposing direction volume, Vo 679 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	650	pc/h	742	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.4	mi/h
Average travel speed, ATSd	29.3	mi/h
Percent Free Flow Speed, PFFS	70.7	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	640 pc/h	730 pc/h

Base percent time-spent-following,(note-4) BPTSFd	62.1	%
Adjustment for no-passing zones, fnp	29.0	
Percent time-spent-following, PTSFd	75.6	%

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.38	
Peak 15-min vehicle-miles of travel, VMT15	384	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1428	veh-mi
Peak 15-min total travel time, TT15	13.1	veh-h
Capacity from ATS, CdATS	1686	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	29.3	mi/h
Percent time-spent-following, PTSFd (from above)	75.6	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	639.8
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.45
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative AM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 1378 veh/h
Opposing direction volume, Vo 894 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1506	pc/h	977	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	21.1	mi/h
Percent Free Flow Speed, PFFS	50.9	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1482	pc/h	961	pc/h
Base percent time-spent-following,(note-4) BPTSFd	87.2	%		
Adjustment for no-passing zones, fnp	12.2			
Percent time-spent-following, PTSFd	94.6	%		

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.87	
Peak 15-min vehicle-miles of travel, VMT15	889	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3307	veh-mi
Peak 15-min total travel time, TT15	42.1	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	21.1	mi/h
Percent time-spent-following, PTSFd (from above)	94.6	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1481.7
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.87
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative AM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 894 veh/h
Opposing direction volume, Vo 1378 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	977	pc/h	1506	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	21.6	mi/h
Percent Free Flow Speed, PFFS	52.0	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	961 pc/h	1482 pc/h

Base percent time-spent-following,(note-4) BPTSFd	81.1	%
Adjustment for no-passing zones, fnp	12.2	
Percent time-spent-following, PTSFd	85.9	%

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.57	
Peak 15-min vehicle-miles of travel, VMT15	577	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2146	veh-mi
Peak 15-min total travel time, TT15	26.7	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	21.6	mi/h
Percent time-spent-following, PTSFd (from above)	85.9	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	961.3
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.65
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative PM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd	905	veh/h
Opposing direction volume, Vo	1174	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	989	pc/h	1283	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	0.9	mi/h
Average travel speed, ATSd	23.0	mi/h
Percent Free Flow Speed, PFFS	55.4	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	973	pc/h	1262	pc/h
Base percent time-spent-following,(note-4) BPTSFd	79.7	%		
Adjustment for no-passing zones, fnp	14.9			
Percent time-spent-following, PTSFd	86.2	%		

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.57	
Peak 15-min vehicle-miles of travel, VMT15	584	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2172	veh-mi
Peak 15-min total travel time, TT15	25.4	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	23.0	mi/h
Percent time-spent-following, PTSFd (from above)	86.2	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	973.1
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.66
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative PM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 1174 veh/h
Opposing direction volume, Vo 905 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1283	pc/h	989	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	22.8	mi/h
Percent Free Flow Speed, PFFS	54.9	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1262 pc/h	973 pc/h
Base percent time-spent-following,(note-4) BPTSFd	83.5 %	
Adjustment for no-passing zones, fnp	14.9	
Percent time-spent-following, PTSFd	91.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.74	
Peak 15-min vehicle-miles of travel, VMT15	757	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2818	veh-mi
Peak 15-min total travel time, TT15	33.3	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	22.8	mi/h
Percent time-spent-following, PTSFd (from above)	91.9	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1262.4
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.79
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Friday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 889 veh/h
Opposing direction volume, Vo 1248 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	971	pc/h	1364	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATSd	22.6	mi/h
Percent Free Flow Speed, PFFS	54.5	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	956	pc/h	1342	pc/h
Base percent time-spent-following,(note-4) BPTSFd	79.9	%		
Adjustment for no-passing zones, fnp	13.9			
Percent time-spent-following, PTSFd	85.7	%		

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.56	
Peak 15-min vehicle-miles of travel, VMT15	574	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2134	veh-mi
Peak 15-min total travel time, TT15	25.4	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	22.6	mi/h
Percent time-spent-following, PTSFd (from above)	85.7	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	955.9
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.65
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Friday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 1248 veh/h
Opposing direction volume, Vo 889 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1364	pc/h	971	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	22.3	mi/h
Percent Free Flow Speed, PFFS	53.7	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1342 pc/h	956 pc/h
Base percent time-spent-following,(note-4) BPTSFd	84.9 %	
Adjustment for no-passing zones, fnp	13.9	
Percent time-spent-following, PTSFd	93.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.79	
Peak 15-min vehicle-miles of travel, VMT15	805	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2995	veh-mi
Peak 15-min total travel time, TT15	36.2	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	22.3	mi/h
Percent time-spent-following, PTSFd (from above)	93.0	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1341.9
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.82
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Sunday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd	917	veh/h
Opposing direction volume, Vo	827	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1002	pc/h	904	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	25.6	mi/h
Percent Free Flow Speed, PFFS	61.6	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	986	pc/h	889	pc/h
Base percent time-spent-following,(note-4) BPTSFd	76.4	%		
Adjustment for no-passing zones, fnp	20.5			
Percent time-spent-following, PTSFd	87.2	%		

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.58	
Peak 15-min vehicle-miles of travel, VMT15	592	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2201	veh-mi
Peak 15-min total travel time, TT15	23.2	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	25.6	mi/h
Percent time-spent-following, PTSFd (from above)	87.2	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	986.0
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.67
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Sunday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 827 veh/h
Opposing direction volume, Vo 917 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	904	pc/h	1002	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	25.6	mi/h
Percent Free Flow Speed, PFFS	61.7	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	889 pc/h	986 pc/h
Base percent time-spent-following,(note-4) BPTSFd	74.4 %	
Adjustment for no-passing zones, fnp	20.5	
Percent time-spent-following, PTSFd	84.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.52	
Peak 15-min vehicle-miles of travel, VMT15	534	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1985	veh-mi
Peak 15-min total travel time, TT15	20.9	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	25.6	mi/h
Percent time-spent-following, PTSFd (from above)	84.1	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	889.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.61
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Plus Project AM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 1401 veh/h
Opposing direction volume, Vo 921 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1531	pc/h	1006	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	20.7	mi/h
Percent Free Flow Speed, PFFS	49.9	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1506	pc/h	990	pc/h
Base percent time-spent-following,(note-4) BPTSFd	87.9	%		
Adjustment for no-passing zones, fnp	11.5			
Percent time-spent-following, PTSFd	94.8	%		

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.89	
Peak 15-min vehicle-miles of travel, VMT15	904	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3362	veh-mi
Peak 15-min total travel time, TT15	43.6	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	20.7	mi/h
Percent time-spent-following, PTSFd (from above)	94.8	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1506.5
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.88
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Plus Project AM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 921 veh/h
Opposing direction volume, Vo 1401 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1006	pc/h	1531	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	0.6	mi/h
Average travel speed, ATSd	21.2	mi/h
Percent Free Flow Speed, PFFS	51.0	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	990 pc/h	1506 pc/h

Base percent time-spent-following,(note-4) BPTSFd	81.8	%
Adjustment for no-passing zones, fnp	11.5	
Percent time-spent-following, PTSFd	86.4	%

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.58	
Peak 15-min vehicle-miles of travel, VMT15	594	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2210	veh-mi
Peak 15-min total travel time, TT15	28.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	21.2	mi/h
Percent time-spent-following, PTSFd (from above)	86.4	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	990.3
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.67
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Plus Project PM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 932 veh/h
Opposing direction volume, Vo 1197 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1018	pc/h	1308	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATSd	22.6	mi/h
Percent Free Flow Speed, PFFS	54.5	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1002	pc/h	1287	pc/h
Base percent time-spent-following,(note-4) BPTSFd	80.8	%		
Adjustment for no-passing zones, fnp	14.2			
Percent time-spent-following, PTSFd	87.0	%		

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.59	
Peak 15-min vehicle-miles of travel, VMT15	601	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2237	veh-mi
Peak 15-min total travel time, TT15	26.6	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	22.6	mi/h
Percent time-spent-following, PTSFd (from above)	87.0	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1002.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.67
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Plus Project PM
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 1197 veh/h
Opposing direction volume, Vo 932 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1308	pc/h	1018	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	22.4	mi/h
Percent Free Flow Speed, PFFS	53.9	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1287 pc/h	1002 pc/h
Base percent time-spent-following,(note-4) BPTSFd	84.3 %	
Adjustment for no-passing zones, fnp	14.2	
Percent time-spent-following, PTSFd	92.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.76	
Peak 15-min vehicle-miles of travel, VMT15	772	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2873	veh-mi
Peak 15-min total travel time, TT15	34.5	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	22.4	mi/h
Percent time-spent-following, PTSFd (from above)	92.3	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1287.1
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.80
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Plus Project Friday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 939 veh/h
Opposing direction volume, Vo 1244 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1026	pc/h	1359	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATSd	22.2	mi/h
Percent Free Flow Speed, PFFS	53.6	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1010	pc/h	1338	pc/h
Base percent time-spent-following,(note-4) BPTSFd	81.4	%		
Adjustment for no-passing zones, fnp	13.4			
Percent time-spent-following, PTSFd	87.2	%		

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.59	
Peak 15-min vehicle-miles of travel, VMT15	606	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2254	veh-mi
Peak 15-min total travel time, TT15	27.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	22.2	mi/h
Percent time-spent-following, PTSFd (from above)	87.2	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1009.7
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.68
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Plus Project Friday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 1244 veh/h
Opposing direction volume, Vo 939 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1359	pc/h	1026	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	21.9	mi/h
Percent Free Flow Speed, PFFS	52.8	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1338 pc/h	1010 pc/h

Base percent time-spent-following,(note-4) BPTSFd	85.3	%
Adjustment for no-passing zones, fnp	13.4	
Percent time-spent-following, PTSFd	92.9	%

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.79	
Peak 15-min vehicle-miles of travel, VMT15	803	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2986	veh-mi
Peak 15-min total travel time, TT15	36.7	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	21.9	mi/h
Percent time-spent-following, PTSFd (from above)	92.9	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1337.6
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.82
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Plus Project Sunday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 972 veh/h
Opposing direction volume, Vo 847 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1062	pc/h	926	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	24.9	mi/h
Percent Free Flow Speed, PFFS	60.1	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0*		1.0*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1045	pc/h	911	pc/h
Base percent time-spent-following,(note-4) BPTSFd	78.1	%		
Adjustment for no-passing zones, fnp	19.0			
Percent time-spent-following, PTSFd	88.3	%		

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.61	
Peak 15-min vehicle-miles of travel, VMT15	627	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2333	veh-mi
Peak 15-min total travel time, TT15	25.1	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	24.9	mi/h
Percent time-spent-following, PTSFd (from above)	88.3	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1045.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.70
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

* These items have been entered or edited to override calculated value

HCS 2010: Two-Lane Highways Release 6.60

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	KP
Agency/Co.	CCTC
Date Performed	2/2/2015
Analysis Time Period	Cumulative Plus Project Sunday
Highway	Carmel Valley Road
From/To	Rancho San Carlos/Schulte
Jurisdiction	Unincorporated Monterey County
Analysis Year	2014
Description	Carmel Canine

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.93	
Shoulder width	6.0	ft	% Trucks and buses	8	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	2.4	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	1	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	14	/mi

Analysis direction volume, Vd 847 veh/h
Opposing direction volume, Vo 972 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.2*		1.2*	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.984		0.984	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	926	pc/h	1062	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.5	mi/h
Free-flow speed, FFSd	41.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	25.0	mi/h
Percent Free Flow Speed, PFFS	60.3	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0*	1.0*
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	911 pc/h	1045 pc/h
Base percent time-spent-following,(note-4) BPTSFd	75.6 %	
Adjustment for no-passing zones, fnp	19.0	
Percent time-spent-following, PTSFd	84.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.54	
Peak 15-min vehicle-miles of travel, VMT15	546	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2033	veh-mi
Peak 15-min total travel time, TT15	21.8	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	2.4	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	25.0	mi/h
Percent time-spent-following, PTSFd (from above)	84.4	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	910.8
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.63
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

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APPENDIX I
ALTERNATIVES DOCUMENTATION

CCSC Site selection narrative

The current proposed site for the Carmel Canine Sports Center at 8100 Valley Greens Drive was selected after investigating numerous alternate locations. Each site offered different potentials and challenges. While we cannot share the specifics of private properties not selected, we can describe some of the considerations that resulted in the final choice.

Our first efforts were undertaken as part of a much larger project proposed by a non-profit organization focused on creating a training facility for service dog trainers. This larger development plan included retail and veterinary components as well as the educational facilities, but did require reducing the variety of dog sports and general recreation we could offer. The canine sports facilities in that plan would have offered training and event venues, including a covered arena, as well as a dog park for the public. Before beginning to look for a site in 2007 we met with County Planning officials to understand what areas and zoning descriptions could potentially allow a project of this sort. It was suggested that the redevelopment of the former Fort Ord might present a good opportunity for such a project, and subsequently two sites on the former Fort Ord were seriously considered.

Over the course of several years, a lease for 27 acres of undeveloped land in the City of Marina was obtained for this complex and project development commenced. Challenges with base re-use requirements, the economic downturn, and political changes within the City of Marina eventually made this effort unsustainable. In 2012 our non-profit abandoned the project, and returned the nearly $450,000 in contributions we had collected and expended to the original donors.

Our friends and colleagues who are devoted to reducing the wait for trained service dogs continue their work as a non-profit through collaboration with the Community Foundation of Monterey County. The three CCSC partners resolved to proceed with a canine sports center separately as an LLC to allow a more flexible and nimble approach to project planning and decision making than is possible in a non-profit organization.

We then met again with County Planning staff to discuss what areas, zoning descriptions, and other considerations would be important to consider from a permitting point of view when selecting a location for a canine sports and recreation facility. We were told that a use of this sort seemed similar in character and intensity to a country club and could thus be considered in most zoning areas with a use permit. Each location would be considered on its merits. Access, water, and

buffering from neighboring residential uses would be important considerations for any such proposal.

We then began searching for appropriate properties near our primary customer base in Carmel Valley. Besides working directly and with area realtors to locate private properties, we also spoke at length with individuals at the Monterey County Regional Parks and the Big Sur Land Trust to see if we could identify public-private options that might work. No clear options were found.

We looked at several small (3-5 acre) properties near the mouth of Carmel Valley, but found that even combined these properties were not large enough for our use. In addition, water for these properties was limited or unavailable and access to these properties in only available through unimproved private roads that do not allow or support commercial activities.

We also had conversations with a local dog-friendly resort to investigate the possibility of lease or purchase of a fallowed farm field and turfed event ground comprising approximately 50 acres approximately 3 miles from the mouth of Carmel Valley. The property was well located for convenience of potential clients, level and clear, partially enclosed in a food safety fence, and accessed via an improved private road leading to a signalized intersection with Carmel Valley Road. The property is zoned P/QP and has a history of successful use as an event site including dog trials. However challenges include that while irrigation water is available for turf and row crops, the site lacks a clear source for potable water. It is without electrical service, and a majority of the property is within the 100-year flood plain of the Carmel River limiting potential for built improvements, in particular restrooms. It is transected by a public hiking/biking trail and private driveway, and would need to accommodate several regular events held by the resort unrelated to dogs, both of which would impact the ability of CCSC to operate a safe controlled access facility for members and their dogs. After some discussion, the resort management decided leasing the property to CCSC was not something they wished to pursue further at that time.

We seriously investigated purchase of an equestrian property of over 100 fenced acres consisting of 3 lots, internal fencing, a barn, and one residence near the mouth of Carmel Valley. This property was located close to our prospective customer base and would have provided space for all our proposed uses, as well as some significant off-lead hiking trails. It had sufficient water and privacy. However the property was only accessible via both improved and fairly long unimproved private roads, which presented a concern for our proposed use. Also, upon investigation the property was found to be included within a larger planned development area with use restrictions that would have required a General Plan amendment for a use permit, which unfortunately made this location infeasible.

We also explored leasing another equestrian property of about 50 acres containing two residences, barns and fencing. While lovely and suitably located approximately 5 miles from the mouth of Carmel Valley and so convenient for our customer base, the property has significant topography limiting the usefulness of the acreage, and the current improvements designed for horses occupy the available space. Even after altering or removing those facilities, which would require a large capital outlay, the property would have provided only limited space for dog training activities and no space for water training. In addition the available water supply was quite limited, access to the property is directly off Carmel Valley Road in an area that presents safety challenges, and the property is located adjacent to a densely populated senior facility. These considerations made this property a distant second choice.

We became aware of the possible availability of the Wolter family farm fields during this time, and began conversations with the owners. This 47+-acre property is ideally located to be convenient for our customers, and it offers a number of unique advantages among the available properties we examined. Primarily, it is accessible off an improved County roadway that is used not only for daily commercial activities now but also routinely for events many times larger than those we envision. It is almost entirely surrounded by non-residential uses and is within walking distance of restaurants and a dog-friendly resort hotel. It has significant existing vegetative screening at the boundaries. The main portion of the property is contained within an existing 8' food safety fence, and since this area has been actively farmed for over 100 years there are no habitat issues to consider within that area. It is essentially level, it is undeveloped except for the existing ranch manager's residence, and it has sufficient water available to raise row crops which is significantly more than is required for our project. The zoning, LDR-2.5, and the fact that the property is currently divided into 8 lots of record with access roads planned, suggest that development of some sort would be permissible here. A majority of the farm field is located outside of the Carmel River flood plain, allowing flexibility in siting built improvements including restrooms. It is remarkably scenic, and includes an area that does have shade trees and a suitable picnic site as well as almost 1000' of frontage on the Carmel River, all of which suggests that a use that preserves the area as farmland and open space in a rural aesthetic and does not require significant built infrastructure would provide a community benefit.

As conversations with the landowners progressed, we developed a plan that addressed their objectives and ours in an innovative mixed-use proposal that is described in detail in the submitted Project Description.