# Appendix D-1
# Traffic Impact Analysis

# MEMORANDUM

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|---|---|---|
| To: | Ara Mihranian, AICP | JN 10104089 |
| From: | Paul Martin – RBF Consulting | |
| Date: | January 19, 2010 | |
| Subject: | Revised Marymount College Project Traffic & Parking Analysis | |

RBF prepared the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*, and the *Revised Marymount College Project Traffic & Parking Analysis (May 15, 2009)*, which were utilized for environmental review of the proposed project. This technical memorandum summarizes traffic and parking operations associated with the designation of up to 250 students from an Associates of Arts degree program (AA Program) to a Bachelor of Arts degree program (BA Program). For purposes of this analysis, the AA Program and BA Program are defined as follows:

- **AA Program –** For traffic purposes defined as educational programs under the Junior/Community College land use, which usually last about two-years, but may vary depending on the student; and
- **BA Program –** For traffic purposes defined as educational programs under the University land use, which usually last about four-years, but may vary depending on the student.

The *Revised Marymount College Project Traffic & Parking Analysis (May 15, 2009)*, included analysis for the following modifications:

- Removal of residence halls;
- Revised number of existing student seats from 578 to 648;
- Reduce net new seats from 131 to 5 seats;
- Reduce new employees/faculty from 12 to 7 staff; and
- Increase weekend student enrollment from 83 to 150 students.

The traffic and parking operations associated with the current project modifications are analyzed to determine if impacts are greater, the same, or less than those identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*, and the *Revised Marymount College Project Traffic & Parking Analysis (May 15, 2009)*.

## 1. TRAFFIC IMPACT ANALYSIS

### Analysis Methodology

Level of service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. The *Intersection Capacity Utilization* (*ICU*) analysis methodology is utilized in this study to determine the operating LOS of the signalized study intersections; the *2000 Highway Capacity Manual (HCM)* analysis methodology is utilized to determine the operating LOS of the unsignalized study intersections. Intersection LOS calculations are determined using the Traffix software except at the Miraleste Drive/Via Colinita intersection which is evaluated using the Highway Capacity Software (HCS). HCS is utilized at the Miraleste Drive/Via Colinita intersection to take into account the large median and effective refuge area when crossing Miraleste Drive from Via Colinita known as a Two-stage Gap Acceptance.

The ICU analysis methodology describes the operation of a signalized intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on corresponding Volume/Capacity (V/C) ratios shown in Table 1.

**Table 1**
**LOS & V/C Ratio Ranges**
**Signalized Intersections**

| LOS | V/C Ratio (2 decimals) | V/C Ratio (3 decimals) |
|---|---|---|
| A | ≤ 0.60 | ≤ 0.600 |
| B | ≥ 0.61 ≤ 0.70 | ≥ 0.601 ≤ 0.700 |
| C | ≥ 0.71 ≤ 0.80 | ≥ 0.701 ≤ 0.800 |
| D | ≥ 0.81 ≤ 0.90 | ≥ 0.801 ≤ 0.900 |
| E | ≥ 0.91 ≤ 1.00 | ≥ 0.901 ≤ 1.000 |
| F | > 1.00 | > 1.000 |

**Source:** *1990 Transportation Research Board*

The *2000 Highway Capacity Manual (HCM)* Operational Analysis Methodology describes the operation of an unsignalized intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on delay experienced per vehicle as shown in Table 2.

**Table 2**
**LOS & Delay Ranges**
**Unsignalized Intersections**

| LOS | Delay (seconds) |
|---|---|
| A | ≤ 10.0 |
| B | ≥ 10.1 ≤ 15.0 |
| C | ≥ 15.1 ≤ 25.0 |
| D | ≥ 25.1 ≤ 35.0 |
| E | ≥ 35.1 ≤ 50.0 |
| F | > 50.0 |

**Source:** *2000 Highway Capacity Manual*

Level of service is based on the average stopped delay per vehicle for all movements of all-way stop-controlled unsignalized intersections; for one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

### Thresholds of Significance

The County of Los Angeles has established thresholds of significance to determine whether a project traffic impact at a study intersection is considered significant and thus requires mitigation. Table 3 identifies the County of Los Angeles thresholds of significance for signalized intersections as defined in the *Los Angeles County Traffic Impact Analysis Report Guidelines (January 1, 1997),* based on V/C ratios calculated to “2” decimals.

**Table 3**
**County of Los Angeles**
**Signalized Intersection Thresholds of Significance**

| Pre-Project | | Project V/C Increase |
|---|---|---|
| LOS | V/C | |
| C | 0.71 - 0.80 | 0.04 or more |
| D | 0.81 - 0.90 | 0.02 or more |
| E/F | 0.91 or more | 0.01 or more |

**Source:** *Los Angeles County Traffic Impact Analysis Report Guidelines (January 1, 1997).*

The County of Los Angeles traffic thresholds of significance for signalized intersections are utilized by the City of Rancho Palos Verdes.

To determine whether the addition of project-generated trips at an unsignalized study intersection results in a significant impact, the City of Rancho Palos Verdes has established the following thresholds of significance:

- A significant impact would occur at an unsignalized study intersection when the addition of project-generated trips causes the peak hour level of service of the study intersection to change from acceptable operation (LOS D or better) to deficient operation (LOS E or F); or
- A significant impact would occur at an unsignalized study intersection if the addition of project-generated trips changes the delay by the value shown in Table 4.

**Table 4**
**City of Rancho Palos Verdes**
**Unsignalized Intersection Thresholds of Significance**

| Pre-Project | | Project Delay Increase (seconds) |
|---|---|---|
| LOS | Delay (seconds) | |
| E/F | 35.1 or more | 2.0 or more |

**Source:** *City of Rancho Palos Verdes.*

Table 5 identifies the City of Los Angeles thresholds of significance for signalized intersections as defined in the *Los Angeles Department of Transportation (LADOT) Traffic Study Policies and Procedures (Revised August 2003),* based on V/C ratios calculated to “3” decimals.

**Table 5**
**City of Los Angeles**
**Signalized Intersection Thresholds of Significance**

| LOS | Final V/C Ratio | Project V/C Increase |
|---|---|---|
| C | > 0.700 - 0.800 | Equal to or greater than 0.040 |
| D | > 0.800 - 0.900 | Equal to or greater than 0.020 |
| E, F | > 0.900 | Equal to or greater than 0.010 |

**Source:** *LADOT Traffic Study Policies and Procedures (Revised August 2003).*

Where significant traffic impacts are identified, mitigation measures are identified to reduce the traffic impact to a level considered less than significant. Mitigation measures would be the full responsibility of the Project Applicant when the project causes a significant impact for existing with proposed project conditions and may be eligible for potential reimbursement by future projects that result in impacts at the same intersection. Further, mitigation measures would be a proportionate share contribution by the Project Applicant when the project causes a significant impact for cumulative with proposed project conditions.

Traffic analysis has been prepared for the following four scenarios:

- Existing Conditions;
- Forecast Existing With Project Conditions;
- Forecast Year 2012 Without Project Conditions; and
- Forecast Year 2012 With Project Conditions.

Traffic analysis has been prepared consistent with the 2007 and 2009 analyses, however, refinements to analysis software may produce slightly varying delay values. For ease in reading this focused analysis, exhibits showing intersection volumes and forecast trip assignment of the proposed project are contained in Appendix A.

**Existing Weekday Conditions AM & PM Peak Hour Intersection Level of Service**

Table 6 summarizes existing weekday conditions a.m. and p.m. peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 6**
**City of Rancho Palos Verdes**
**Existing Weekday AM & PM Peak Hour Intersection LOS**

| Study Intersection | Weekday AM Peak Hour (7 AM to 10 AM) | | | Weekday PM Peak Hour (4 PM to 6 PM) | | |
|---|---|---|---|---|---|---|
| | V/C | Delay | LOS | V/C | Delay | LOS |
| Palos Verdes Dr East/Miraleste Dr | N/A | 287.9 | F | N/A | 414.9 | F |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.44 | N/A | A | 0.33 | N/A | A |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A | 190.0 | C | N/A | 17.8 | C |
| Miraleste Dr/Via Colinita | N/A | 21.7 | C | N/A | 18.3 | C |
| Miraleste Dr/1$^{st}$ St | N/A | 14.7 | B | N/A | 14.6 | B |
| Western Ave (SR-213)/Toscanini Dr | 0.81 | N/A | D | 0.70 | N/A | B |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 0.91 | N/A | E | 0.80 | N/A | C |
| Western Ave (SR-213)/Crestwood St | 0.86 | N/A | D | 0.81 | N/A | D |

**Note**: V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

Table 7 summarizes existing weekday conditions a.m. and p.m. peak hour LOS of the City of Los Angeles study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 7**
**City of Los Angeles**
**Existing Weekday AM & PM Peak Hour Intersection LOS**

| Study Intersection | Weekday AM Peak Hour (7 AM to 10 AM) | | Weekday PM Peak Hour (4 PM to 6 PM) | |
|---|---|---|---|---|
| | V/C | LOS | V/C | LOS |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 0.912 | E | 0.788 | C |
| Western Ave (SR-213)/Crestwood St | 0.809 | D | 0.759 | C |
| Western Ave (SR-213)/1st St | 1.414 | F | 1.317 | F |
| Western Ave (SR-213)/9th St | 0.607 | B | 0.804 | D |
| Western Ave (SR-213)/25th St | 0.681 | B | 0.622 | B |

**Note**: V/C = volume to capacity ratio.

### Existing Weekday Mid-day & Afternoon Conditions Peak Hour Intersection Level of Service

Table 8 summarizes existing weekday conditions mid-day peak hour and afternoon peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 8**
**City of Rancho Palos Verdes**
**Existing Weekday Mid-day Peak Hour & Afternoon Peak Hour Intersection LOS**

| Study Intersection | Weekday Mid-day Peak Hour (11 AM to 1 PM) | | | Weekday Afternoon Peak Hour (2 PM to 4 PM) | | |
|---|---|---|---|---|---|---|
| | V/C | Delay | LOS | V/C | Delay | LOS |
| Palos Verdes Dr East/Miraleste Dr | N/A | 169.3 | F | N/A | 250.5 | F |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.31 | N/A | A | 0.48 | N/A | A |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A | 13.5 | B | N/A | 20.4 | C |
| Miraleste Dr/Via Colinita | N/A | 16.5 | C | N/A | 17.3 | C |

**Note**: V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

### Existing Saturday Mid-day Conditions Peak Hour Intersection Level of Service

Table 9 summarizes existing Saturday conditions mid-day peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 9**
**City of Rancho Palos Verdes**
**Existing Saturday Mid-day Peak Hour Intersection LOS**

| Study Intersection | Saturday Mid-day Peak Hour (11 AM to 1 PM) | | |
|---|---|---|---|
| | **V/C** | **Delay** | **LOS** |
| Palos Verdes Dr East/Miraleste Dr | N/A | 25.9 | D |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.20 | N/A | A |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A | 14.9 | B |
| Miraleste Dr/Via Colinita | N/A | 16.3 | C |

**Note**: V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

## PROPOSED PROJECT

As indicated, this technical memorandum summarizes traffic and parking operations associated with the designation of 250 students from an AA Program to a BA Program. For purposes of this analysis, the AA Program and BA Program are defined as follows:

- **AA Program –** For traffic purposes defined as educational programs under the Junior/Community College land use, which usually last about two-years, but may vary depending on the student; and
- **BA Program –** For traffic purposes defined as educational programs under the University land use, which usually last about four-years, but may vary depending on the student.

As previously noted, the *Revised Marymount College Project Traffic & Parking Analysis (May 15, 2009)*, included analysis for the following modifications:

- Removal of residence halls;
- Revised number of existing student seats from 578 to 648;
- Reduce net new seats from 131 to 5 seats;
- Reduce new employees/faculty from 12 to 7 staff; and
- Increase weekend student enrollment from 83 to 150 students.

Refer to the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)* for additional proposed project descriptions.

## Forecast Project Trip Generation

To determine forecast trip generation of the proposed project, *ITE Trip Generation* published trip generation rates were used for specific land uses. *ITE* trip rates are based on surveys of representative facilities throughout the United States. Forecast project trip generation is determined through consideration of the following project components:

- Increase in junior college buildings through construction of 77,504 square feet and demolition of 18,022 square feet; and
- Designation of 250 students from an AA Program to a BA Program.

Consistent with *ITE*, the analysis assumes the project components consisting of the construction and demolition of campus facilities and buildings as the *ITE* Junior/Community College land use category. *ITE* describes the Junior/Community College land use as including two-year junior, community, or technical colleges. *ITE* describes the University/College land use as including four-year universities or colleges that may or may not offer graduate programs. The *ITE* Junior/Community College and University/College categories are assumed to include buildings serving administration and instruction, as well as ancillary uses such as library, cafeteria, athletic facilities, etc., but no on-campus dormitories. *ITE* trip rates for the Junior/Community College and University categories are assumed to account for trips associated with students, faculty, and support staff.

Consistent with *ITE*, traffic generation associated with the BA Program designation project component is quantified through comparison of trip generation per student in a BA Program versus an AA Program. The net increase in *ITE* trip generation through the BA Program designation of up to 250 students is then added to the trip generation identified for expansion of buildings on the campus. It is worth noting the *ITE* University land use category, which is utilized for the BA Program, does not include trip rates based on building square footage.

Table 10 summarizes the *ITE* weekday trip generation rates for the proposed project.

**Table 10**
**Weekday *ITE* Trip Rates for Proposed Project**

| Land Use (*ITE* Code) | Units | AM Peak Hour Rates (7 AM to 10 AM) | | | Mid-Day Peak Hour Rates[1] (11 AM to 1 PM) | | | Afternoon Peak Hour Rates[2] (2 PM to 4 PM) | | | PM Peak Hour Rates (4 PM to 6 PM) | | | Daily Trip Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Junior/Community College (540) | tsf | 2.21 | 0.78 | 2.99 | 1.55 | 1.54 | 3.09 | 1.16 | 1.48 | 2.64 | 1.47 | 1.07 | 2.54 | 27.49 |
| Junior/Community College (540) | stu | 0.10 | 0.02 | 0.12 | 0.08 | 0.04 | 0.12 | 0.07 | 0.05 | 0.12 | 0.08 | 0.04 | 0.12 | 1.20 |
| University (550) | stu | 0.17 | 0.04 | 0.21 | 0.15 | 0.05 | 0.20 | 0.07 | 0.17 | 0.24 | 0.06 | 0.15 | 0.21 | 2.38 |

**Source:** *2008 ITE Trip Generation Manual, 8th Edition.*
**Note:** tsf = thousand square feet; stu = students.
1 = AM Peak Hour of Generator rates used.
2 = PM Peak Hour of Generator rates used.

Table 11 summarizes weekday trips forecast to be generated by the proposed project utilizing the *ITE* trip generation rates contained in Table 10.

**Table 11**
**Forecast Weekday Trip Generation of Proposed Project**

| Land Use | AM Peak Hour Trips (7 AM to 10 AM) | | | Mid-Day Peak Hour Trips (11 AM to 1 PM) | | | Afternoon Peak Hour Trips (2 PM to 4 PM) | | | PM Peak Hour Trips (4 PM to 6 PM) | | | Daily Trips |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **In** | **Out** | **Total** | **In** | **Out** | **Total** | **In** | **Out** | **Total** | **In** | **Out** | **Total** | |
| Junior/Community College Building Expansion | | | | | | | | | | | | | |
| - Proposed 77.504-tsf[1] | 171 | 60 | 231 | 120 | 119 | 239 | 90 | 115 | 205 | 114 | 83 | 197 | 2,131 |
| - Demolished 18.022-tsf | - 40 | - 14 | - 54 | - 28 | - 28 | - 56 | - 21 | - 27 | - 48 | - 26 | - 19 | - 45 | - 495 |
| **Subtotal** | **131** | **46** | **177** | **92** | **91** | **183** | **69** | **88** | **157** | **88** | **64** | **152** | **1,636** |
| University | | | | | | | | | | | | | |
| - 250 stu BA Program | 43 | 10 | 53 | 38 | 13 | 52 | 18 | 43 | 61 | 15 | 38 | 53 | 595 |
| - 250 stu AA Program | - 25 | - 5 | - 30 | - 20 | - 10 | - 30 | - 18 | - 13 | - 31 | - 20 | - 10 | - 30 | - 300 |
| **Subtotal** | **18** | **5** | **23** | **18** | **3** | **22** | **0** | **30** | **30** | **- 5** | **28** | **23** | **295** |
| **Total Forecast Trip Generation of Proposed Project** | **149** | **51** | **200** | **110** | **94** | **204** | **69** | **118** | **187** | **83** | **92** | **175** | **1,931** |

**Note:** tsf = thousand square feet; stu = student.

As shown in Table 11, the proposed project is forecast to generate approximately 1,931 weekday daily trips, which include approximately 200 weekday a.m. peak hour trips, approximately 204 weekday mid-day peak hour trips, approximately 187 weekday afternoon trips, and approximately 175 weekday p.m. peak hour trips.

It should be noted, *ITE* also publishes Junior/Community College trip generation rates based on enrolled students; therefore, if *ITE* trip generation rates based on enrolled students are used, the junior college component of the proposed project would generate no new weekday trips because enrollment is not proposed to change.

Since the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*, did not assume increased weekend student enrollment, the *ITE* Junior/Community College land use category trip rate is utilized based on either building square footage or student enrollment, where applicable.

Table 12 summarizes the *ITE* Saturday trip generation rates for the proposed project without residence halls.

**Table 12**
**Saturday *ITE* Trip Rates for Proposed Project**

| Land Use (*ITE* Code) | Units | Mid-day Peak Hour Rates | | | Daily Trip Rate |
|---|---|---|---|---|---|
| | | In | Out | Total | |
| Junior/Community College (540) | tsf | 0.81 | 0.61 | 1.42 | 11.23 |
| Junior/Community College (540) | stu | 0.03 | 0.02 | 0.05 | 0.42 |
| University (550) | stu | 0.09 | 0.06 | 0.15 | 1.30 |

**Source**: *2008 ITE Trip Generation Manual, 8th Edition.*
**Note:** tsf = thousand square feet; stu = students.

Table 13 summarizes Saturday trips forecast to be generated by the proposed project utilizing the *ITE* trip generation rates contained in Table 12.

**Table 13**
**Forecast Saturday Trip Generation of Proposed Project**

| Land Use | Mid-day Peak Hour Trips In | Mid-day Peak Hour Trips Out | Mid-day Peak Hour Trips Total | Daily Trips |
|---|---|---|---|---|
| Junior/Community College Building Expansion | | | | |
| - Proposed 77.504-tsf | 63 | 47 | 110 | 870 |
| - Demolished 18.022-tsf | - 15 | - 11 | - 26 | - 202 |
| **Subtotal** | **48** | **36** | **84** | **668** |
| Junior/Community College | | | | |
| - 67 Students[1] | **2** | **1** | **3** | **28** |
| University | | | | |
| - 250 stu BA Program | 23 | 15 | 38 | 325 |
| - 250 stu AA Program | - 8 | - 5 | - 13 | - 105 |
| **Subtotal** | **15** | **10** | **25** | **220** |
| **Total Forecast Trip Generation of Proposed Project** | **65** | **47** | **112** | **888** |

**Note:** tsf = thousand square feet; stu = student.
1 = Represents increased weekend student enrollment (150 - 83 = 67).

As shown in Table 13, the proposed project is forecast to generate approximately 888 additional Saturday daily trips, which include approximately 112 additional Saturday mid-day peak hour trips.

### Trip Distribution of Proposed Project

The trip distribution utilized in this analysis is consistent with that identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)* and is assumed to remain unchanged with project description modifications because origination and destinations of students, faculty, and staff are not expected to be substantially different due to the inclusion of the BA programs.

### Trip Assignment of Proposed Project

Exhibit A-1 shows the corresponding assignment of project-generated weekday a.m. and p.m. peak hour trips assuming the project trip percent distribution. Exhibit A-2 shows the corresponding assignment of project-generated weekday mid-day and afternoon peak hour trips assuming the project trip percent distribution. Exhibit A-3 shows the corresponding assignment of project-generated Saturday mid-day peak hour trips assuming the project trip percent distribution.

## EXISTING PLUS MARYMOUNT PROJECT CONDITIONS

This section analyzes the impact of adding trips forecast to be generated by the proposed project to existing traffic conditions.

## Existing Plus Marymount Project Conditions Peak Hour Traffic Volumes

Existing plus Marymount project traffic volumes were derived by adding project-generated trips to existing traffic volumes.

Exhibit A-4 shows existing plus Marymount project weekday conditions a.m. and p.m. peak hour volumes at the study intersections. Exhibit A-5 shows existing plus Marymount project weekday conditions mid-day peak hour and afternoon peak hour volumes. Exhibit A-6 shows existing plus Marymount project Saturday conditions mid-day peak hour volumes.

## Existing Plus Marymount Project Conditions Weekday AM & PM Peak Hour Intersection Level of Service

Table 14 summarizes existing plus Marymount project weekday conditions a.m. and p.m. peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 14**
**City of Rancho Palos Verdes**
**Existing Plus Marymount Project Weekday**
**Conditions AM & PM Peak Hour Intersection LOS**

| Study Intersection | Existing Weekday Conditions | | Existing Plus Marymount Project Weekday Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | |
| | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 287.9 – F | N/A – 414.9 – F | N/A – 724.1 – F | N/A – 643.0 – F | Yes |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.44 – N/A – A | 0.33 – N/A – A | 0.54 – N/A – A | 0.41 – N/A – A | No |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A – 19.0 – C | N/A – 17.8 – C | N/A – 21.9 – C | N/A – 21.2 – C | No |
| Miraleste Dr/Via Colinita | N/A – 21.7 – C | N/A – 18.3 – C | N/A – 18.7 – C | N/A – 27.1 – D | No |
| Miraleste Dr/1st St | N/A – 14.7 – B | N/A – 14.6 – B | N/A – 14.9 – B | N/A – 15.1 – B | No |
| Western Ave (SR-213)/Toscanini Dr | 0.81 – N/A – D | 0.70 – N/A – B | 0.82 – N/A – D | 0.71 – N/A – C | No |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 0.91 – N/A – E | 0.80 – N/A – C | 0.93 – N/A – E | 0.83 – N/A – D | Yes |
| Western Ave (SR-213)/Crestwood St | 0.86 – N/A – D | 0.81 – N/A – D | 0.86 – N/A – D | 0.82 – N/A – D | No |

**Note:** V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 14, based on City of Rancho Palos Verdes established thresholds of significance, the addition of project-generated trips is forecast to result in a significant impact at the following study intersections for existing plus Marymount project weekday conditions:

- Palos Verdes Drive East/Miraleste Drive (a.m. and p.m. peak hours); and
- Western Avenue (SR-213)/Trudie Drive-Capitol Drive (a.m. and p.m. peak hours).

Table 15 summarizes existing plus Marymount project weekday conditions a.m. and p.m. peak hour LOS of the City of Los Angeles study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 15**
**City of Los Angeles**
**Existing Plus Marymount Project Weekday**
**Conditions AM & PM Peak Hour Intersection LOS**

| Study Intersection | Existing Weekday Conditions | | Existing Plus Marymount Project Weekday Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | |
| | V/C – LOS | V/C – LOS | V/C – LOS | V/C – LOS | |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 0.912 – E | 0.788 – C | 0.935 – E | 0.822 – D | Yes |
| Western Ave (SR-213)/Crestwood St | 0.809 – D | 0.759 – C | 0.812 – D | 0.764 – C | No |
| Western Ave (SR-213)/1st St | 1.414 – F | 1.317 – F | 1.367 – F | 1.321 – F | No |
| Western Ave (SR-213)/9th St | 0.607 – B | 0.804 – D | 0.609 – B | 0.804 – D | No |
| Western Ave (SR-213)/25th St | 0.681 – B | 0.622 – B | 0.703 – C | 0.635 – B | No |

**Note:** V/C = volume to capacity ratio.

As shown in Table 15, based on City of Los Angeles established thresholds of significance, the addition of project-generated trips is forecast to result in a significant impact at the following intersection for existing plus Marymount project weekday conditions:

- Western Avenue (SR-213)/Trudie Drive-Capitol Drive (a.m. and p.m. peak hours).

**Existing Plus Marymount Project Weekday Mid-day & Afternoon Peak Hour Conditions Intersection Level of Service**

Table 16 summarizes existing plus Marymount project weekday conditions mid-day peak hour and afternoon peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 16**
**City of Rancho Palos Verdes**
**Existing Plus Marymount Project Weekday Conditions**
**Mid-day Peak Hour & Afternoon Peak Hour Intersection LOS**

| Study Intersection | Existing Weekday Conditions | | Existing Plus Marymount Project Weekday Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | Mid-day Peak Hour (11 AM to 1 PM) | Afternoon Peak Hour (2 PM to 4 PM) | Mid-day Peak Hour (11 AM to 1 PM) | Afternoon Peak Hour (2 PM to 4 PM) | |
| | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 169.3 – F | N/A – 250.5 – F | N/A – 345.5 – F | N/A – 437.4 – F | Yes |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.31 – N/A – A | 0.48 – N/A – A | 0.44 – N/A – A | 0.57 – N/A – A | No |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A – 13.5 – B | N/A – 20.4 – C | N/A – 14.6 – B | N/A – 28.2 – C | No |
| Miraleste Dr/Via Colinita | N/A – 16.5 – C | N/A – 17.3 – C | N/A – 23.6 – C | N/A – 20.5 – C | No |

**Note:** V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 16, based on City of Rancho Palos Verdes established thresholds of significance, the addition of project-generated trips is forecast to result in a significant impact at the following study intersection for existing plus Marymount project weekday conditions:

- Palos Verdes Drive East/Miraleste Drive (mid-day and afternoon peak hours).

**Existing Plus Marymount Project Saturday Mid-day Peak Hour Conditions Intersection Level of Service**

Table 17 summarizes existing plus Marymount project Saturday conditions mid-day peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 17**
**City of Rancho Palos Verdes**
**Existing Plus Marymount Project Saturday Conditions Mid-day Peak Hour Intersection LOS**

| Study Intersection | Existing Saturday Conditions | Existing Plus Marymount Project Saturday Conditions | Significant Impact? |
|---|---|---|---|
| | Mid-day Peak Hour (11 AM to 1 PM) | Mid-day Peak Hour (11 AM to 1 PM) | |
| | V/C – Delay – LOS | V/C – Delay – LOS | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 25.9 – D | N/A – 48.5 – E | Yes |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.20 – N/A – A | 0.26 – N/A – A | No |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A – 14.9 – B | N/A – 15.9 – C | No |
| Miraleste Dr/Via Colinita | N/A – 16.3 – C | N/A – 17.3 – C | No |

**Note:** V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 17, based on City of Rancho Palos Verdes established thresholds of significance, the addition of project-generated trips is forecast to result a significant impact at the following study intersection for existing plus Marymount project Saturday conditions:

- Palos Verdes Drive East/Miraleste Drive (mid-day peak hour).

**Existing Plus Marymount Project Conditions Recommended Mitigation Measures**

The following feasible mitigation measures are recommended to eliminate significant traffic impacts for existing plus Marymount project conditions:

**Mitigation Measure No. 1**:

**Palos Verdes Drive East/Miraleste Drive –** Prior to issuance of any Certificate of Occupancy, the applicant shall signalize the intersection. Additionally, the applicant shall design the Palos Verdes Drive East/Miraleste Drive intersection traffic signal to include a westbound right-turn overlap, which will preclude u-turn movement from southbound to northbound Palos Verdes Drive East. The applicant may be eligible for reimbursement from future projects that result in impacts at this intersection.

**Mitigation Measure No. 2**:

**Western Avenue (SR-213)/Trudie Drive-Capitol Drive –** Prior to issuance of any Certificate of Occupancy, the applicant shall implement the re-striping of the eastbound Trudie Drive approach from one shared left-turn/through lane and one de-facto right-turn lane to consist of one left-turn lane and one shared through/right-turn lane. Implementation of this mitigation measure likely requires coordination with City of Los Angeles and Caltrans staff. The applicant may be eligible for reimbursement from future projects that result in impacts at this intersection.

**Mitigation Measure No. 3**:

The traffic impacts and corresponding mitigation measures assume the Marymount College student enrollment as a maximum of 793 weekday students (based on the formula allowing 750 full-time students, 20 part-time students, and a marginal difference of 3.0 percent) and 150 weekend students. Additionally, it is assumed, Marymount College student enrollment as a maximum of 250 weekday students enrolled in the BA Program and a maximum of 793 weekday students minus current BA Program weekday students enrolled in the AA Program. Therefore, prior to issuance of any Certificate of Occupancy, student enrollment shall be limited to a maximum of 793 weekday students and 150 weekend students, including full- and part-time students, and maximum of 250 weekday students enrolled in the BA Program and a maximum of 793 weekday students minus current BA Program weekday students enrolled in the AA Program.

Assuming modifications to the project description as described, Mitigation Measures 1 through 3 are the same as those identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*, and the *Revised Marymount College Project Traffic & Parking Analysis (May 15, 2009)*.

**Mitigated Existing Plus Marymount Project Weekday Conditions Intersection Level of Service**

Table 18 summarizes existing plus Marymount project weekday conditions a.m. and p.m. peak hour LOS of the City of Rancho Palos Verdes study intersections assuming full implementation of the recommended mitigation measures; detailed LOS analysis sheets are contained in Appendix B.

**Table 18**
**City of Rancho Palos Verdes**
**Mitigated Existing Plus Marymount Project Weekday Conditions AM & PM Peak Hour Intersection LOS**

| Study Intersection | Existing Conditions | | Mitigated Existing Plus Marymount Project Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | |
| | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 287.9 – F | N/A – 414.9 – F | 0.95 – N/A – E | 0.88 – N/A – D | No |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 0.91 – N/A – E | 0.80 – N/A – C | 0.86 – N/A – D | 0.78 – N/A – C | No |

**Note**: V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 18, no significant impacts are forecast to occur at City of Rancho Palos Verdes study intersections assuming full implementation of the recommended mitigation measures (1 and 2) for the existing plus Marymount project weekday conditions a.m. and p.m. peak hour.

Table 19 summarizes existing plus Marymount project weekday conditions a.m. and p.m. peak hour LOS of the Western Avenue (SR-213)/Trudie Drive-Capitol Drive intersection assuming full implementation of the recommended mitigation measure; detailed LOS analysis sheets are contained in Appendix B.

**Table 19**
**City of Los Angeles**
**Mitigated Existing Plus Marymount Project Weekday Conditions AM & PM Peak Hour Intersection LOS**

| Study Intersection | Existing Conditions | | Mitigated Existing Plus Marymount Project Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | |
| | V/C – LOS | V/C – LOS | V/C – LOS | V/C – LOS | |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 0.912 – E | 0.788 – C | 0.855 – D | 0.764 – C | No |

**Note:** V/C = volume to capacity ratio.

As shown in Table 19, no significant impacts are forecast to occur at City of Los Angeles study intersections assuming full implementation of the recommended mitigation measure (2) for the existing plus Marymount project weekday conditions a.m. and p.m. peak hour.

Table 20 summarizes existing plus Marymount project weekday conditions mid-day and afternoon peak hour LOS of the City of Rancho Palos Verdes study intersections assuming full implementation of the recommended mitigation measures; detailed LOS analysis sheets are contained in Appendix B.

**Table 20**
**City of Rancho Palos Verdes**
**Mitigated Existing Plus Marymount Project Weekday Conditions Mid-day Peak Hour & Afternoon Peak Hour Intersection LOS**

| Study Intersection | Existing Weekday Conditions | | Mitigated Existing Plus Marymount Project Weekday Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | Mid-day Peak Hour (11 AM to 1 PM) | Afternoon Peak Hour (2 PM to 4 PM) | Mid-day Peak Hour (11 AM to 1 PM) | Afternoon Peak Hour (2 PM to 4 PM) | |
| | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 169.3 – F | N/A – 250.5 – F | 0.78 – N/A – C | 0.87 – N/A – D | No |

**Note:** V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 20, no significant impacts are forecast to occur at City of Rancho Palos Verdes study intersections assuming full implementation of the recommended mitigation measure (1) for the existing plus Marymount project weekday conditions mid-day and afternoon peak hour.

**Mitigated Existing Plus Marymount Project Saturday Conditions Intersection Level of Service**

Table 21 summarizes existing plus Marymount project Saturday conditions mid-day peak hour LOS of the Palos Verdes Drive East/Miraleste Drive intersection assuming full implementation of the recommended mitigation measures; detailed LOS analysis sheets are contained in Appendix B.

**Table 21**
**City of Rancho Palos Verdes**
**Mitigated Existing Plus Marymount Project Saturday Conditions Mid-day Peak Hour Intersection LOS**

| Study Intersection | Existing Saturday Conditions | Mitigated Existing Plus Marymount Project Saturday Conditions | Significant Impact? |
|---|---|---|---|
| | Mid-day Peak Hour (11 AM to 1 PM) | Mid-day Peak Hour (11 AM to 1 PM) | |
| | V/C – Delay – LOS | V/C – Delay – LOS | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 25.9 – D | 0.63 – N/A – B | No |

**Note:** V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 21, no significant impacts are forecast to occur at City of Rancho Palos Verdes study intersections assuming full implementation of the recommended mitigation measure (1) for the existing plus Marymount project Saturday conditions mid-day peak hour.

## FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS

This section evaluates study area traffic conditions in forecast year 2012 without the proposed project utilizing traffic volumes contained in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*.

Forecast year 2012 without project conditions does not assume the recommended mitigation measures identified for existing plus Marymount project conditions. Forecast year 2012 without project conditions includes the following City-planned modification at the Palos Verdes Drive East/Crest Road-College Entrance intersection associated with narrowing of Palos Verdes Drive East in the project vicinity from four lanes to two lanes:

- Narrowing the eastbound and westbound Palos Verdes Drive East approaches at the Palos Verdes Drive East/Crest Road-College Entrance intersection from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, one through lane, and one right-turn lane.

Additionally, forecast year 2012 conditions include the following recent modification at the Western Avenue (SR-213)/Crestwood Street intersection:

- Recent re-stripe of the eastbound Crestwood Street approach from one shared left-turn/through/right-turn lane to consist of one left-turn lane and one shared through/right-turn lane. Additionally, the east-west signal phasing has been modified from permitted left-turn phasing to split phasing.

**Forecast Year 2012 Without Project Weekday AM & PM Peak Hour Conditions Intersection Level of Service**

Table 22 summarizes forecast year 2012 without project weekday conditions a.m. and p.m. peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 22**
**City of Rancho Palos Verdes**
**Forecast Year 2012 Without Project Weekday Conditions**
**AM & PM Peak Hour Intersection LOS**

| Study Intersection | Weekday AM Peak Hour (7 AM to 10 AM) | | | Weekday PM Peak Hour (4 PM to 6 PM) | | |
|---|---|---|---|---|---|---|
| | V/C | Delay | LOS | V/C | Delay | LOS |
| Palos Verdes Dr East/Miraleste Dr | N/A | 311.7 | F | N/A | 469.2 | F |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.50 | N/A | A | 0.39 | N/A | A |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A | 28.2 | D | N/A | 31.9 | D |
| Miraleste Dr/Via Colinita | N/A | 23.5 | C | N/A | 19.7 | C |
| Miraleste Dr/1st St | N/A | 14.8 | B | N/A | 14.9 | B |
| Western Ave (SR-213)/Toscanini Dr | 0.90 | N/A | D | 0.79 | N/A | C |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 1.06 | N/A | F | 1.03 | N/A | F |
| Western Ave (SR-213)/Crestwood St | 0.86 | N/A | D | 0.90 | N/A | D |

**Note**: V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

Table 23 summarizes forecast year 2012 without project weekday conditions a.m. and p.m. peak hour LOS of the City of Los Angeles study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 23**
**City of Los Angeles**
**Forecast Year 2012 Without Project Weekday Conditions**
**AM & PM Peak Hour Intersection LOS**

| Study Intersection | Weekday AM Peak Hour (7 AM to 10 AM) | | Weekday PM Peak Hour (4 PM to 6 PM) | |
|---|---|---|---|---|
| | V/C | LOS | V/C | LOS |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 1.074 | F | 1.048 | F |
| Western Ave (SR-213)/Crestwood St | 0.858 | D | 0.893 | D |
| Western Ave (SR-213)/1st St | 1.516 | F | 1.438 | F |
| Western Ave (SR-213)/9th St | 0.659 | B | 0.868 | D |
| Western Ave (SR-213)/25th St | 0.814 | D | 0.805 | D |

**Note:** V/C = volume to capacity ratio.

### Forecast Year 2012 Without Project Weekday Mid-day & Afternoon Peak Hour Conditions Intersection Level of Service

Table 24 summarizes forecast year 2012 without project weekday conditions mid-day peak hour and afternoon peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 24**
**City of Rancho Palos Verdes**
**Forecast Year 2012 Without Project Weekday Conditions**
**Mid-Day Peak Hour & Afternoon Peak Hour Intersection LOS**

| Study Intersection | Weekday Mid-day-Peak Hour (11 AM to 1 PM) | | | Weekday Afternoon Peak Hour (2 PM to 4 PM) | | |
|---|---|---|---|---|---|---|
| | V/C | Delay | LOS | V/C | Delay | LOS |
| Palos Verdes Dr East/Miraleste Dr | N/A | 205.6 | F | N/A | 313.3 | F |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.36 | N/A | A | 0.51 | N/A | A |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A | 19.7 | C | N/A | 46.4 | E |
| Miraleste Dr/Via Colinita | N/A | 17.6 | C | N/A | 18.3 | C |

**Note**: V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

### Forecast Year 2012 Without Project Saturday Mid-day Conditions Intersection Level of Service

Table 25 summarizes forecast year 2012 without project Saturday conditions mid-day peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 25**
**City of Rancho Palos Verdes**
**Forecast Year 2012 Without Project**
**Saturday Conditions Mid-day Peak Hour Intersection LOS**

| Study Intersection | Saturday Mid-day Peak Hour (11 AM to 1 PM) | | |
|---|---|---|---|
| | **V/C** | **Delay** | **LOS** |
| Palos Verdes Dr East/Miraleste Dr | N/A | 36.5 | E |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.26 | N/A | A |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A | 31.8 | D |
| Miraleste Dr/Via Colinita | N/A | 17.3 | C |

**Note**: V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

## FORECAST YEAR 2012 WITH PROJECT CONDITIONS

Consistent with the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*, this section analyzes the impact of adding trips forecast to be generated by the proposed project to forecast year 2012 without project traffic conditions.

### Forecast Year 2012 With Project Conditions Peak Hour Traffic Volumes

Forecast year 2012 with project traffic volumes were derived by adding project-generated trips to forecast year 2012 without project traffic volumes.

Exhibit A-7 shows forecast year 2012 with project conditions weekday a.m. and p.m. peak hour volumes. Exhibit A-8 shows forecast year 2012 with project conditions weekday mid-day peak hour and afternoon peak hour volumes. Exhibit A-9 shows forecast year 2012 with project conditions Saturday mid-day peak hour volumes.

### Forecast Year 2012 With Project Weekday AM & PM Peak Hour Conditions Intersection Level of Service

Table 26 summarizes forecast year 2012 with project weekday conditions a.m. and p.m. peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 26**
**City of Rancho Palos Verdes**
**Forecast Year 2012 With Project Weekday**
**Conditions AM & PM Peak Hour Intersection LOS**

| **Study Intersection** | **Forecast Year 2012 Without Project Conditions** | | **Forecast Year 2012 With Project Conditions** | | **Significant Impact?** |
|---|---|---|---|---|---|
| | **AM Peak Hour (7 AM to 10 AM)** | **PM Peak Hour (4 PM to 6 PM)** | **AM Peak Hour (7 AM to 10 AM)** | **PM Peak Hour (4 PM to 6 PM)** | |
| | **V/C – Delay – LOS** | **V/C – Delay – LOS** | **V/C – Delay – LOS** | **V/C – Delay – LOS** | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 311.7 – F | N/A – 469.2 – F | N/A – 766.9 – F | N/A – 715.3 – F | Yes |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.50 – N/A – A | 0.39 – N/A – A | 0.61 – N/A – B | 0.45 – N/A – A | No |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A – 28.2 – D | N/A – 31.9 – D | N/A – 36.1 – E | N/A – 47.5 – E | Yes |
| Miraleste Dr/Via Colinita | N/A – 23.5 – C | N/A – 19.7 – C | N/A – 19.1 – C | N/A – 18.1 – C | No |
| Miraleste Dr/1st St | N/A –14.8 – B | N/A – 14.9 – B | N/A – 15.0 – B | N/A – 15.3 – C | No |
| Western Ave (SR-213)/Toscanini Dr | 0.90 – N/A – D | 0.79 – N/A – C | 0.91 – N/A – E | 0.80 – N/A – C | No |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 1.06 – N/A – F | 1.03 – N/A – F | 1.08 – N/A – F | 1.06 – N/A – F | Yes |
| Western Ave (SR-213)/Crestwood St | 0.86 – N/A – D | 0.90 – N/A – D | 0.87 – N/A – D | 0.90 – N/A – D | No |

**Note:** V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 26, based on City of Rancho Palos Verdes established thresholds of significance, the addition of project-generated trips is forecast to result in a significant impact at the following study intersections for forecast year 2012 with project weekday conditions:

- Palos Verdes Drive East/Miraleste Drive (a.m. and p.m. peak hours);
- Palos Verdes Drive East/Palos Verdes Drive South (a.m. and p.m. peak hours); and
- Western Avenue (SR-213)/Trudie Drive-Capitol Drive (a.m. and p.m. peak hours).

Table 27 summarizes forecast year 2012 with project weekday conditions a.m. and p.m. peak hour LOS of the City of Los Angeles study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 27**
**City of Los Angeles**
**Forecast Year 2012 With Project Weekday**
**Conditions AM & PM Peak Hour Intersection LOS**

| Study Intersection | Forecast Year 2012 Without Project Conditions | | Forecast Year 2012 With Project Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | |
| | V/C – LOS | V/C – LOS | V/C – LOS | V/C – LOS | |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 1.074 – F | 1.048 – F | 1.097 – F | 1.082 – F | Yes |
| Western Ave (SR-213)/Crestwood St | 0.858 – D | 0.893 – D | 0.861 – D | 0.898 – D | No |
| Western Ave (SR-213)/1st St | 1.516 – F | 1.438 – F | 1.465 – F | 1.442 – F | No |
| Western Ave (SR-213)/9th St | 0.659 – B | 0.868 – D | 0.661 – B | 0.868 – D | No |
| Western Ave (SR-213)/25th St | 0.814 – D | 0.805 – D | 0.833 – D | 0.818 – D | No |

**Note:** V/C = volume to capacity ratio.

As shown in Table 27, based on City of Los Angeles established thresholds of significance, the addition of project-generated trips is forecast to result in a significant impact at the following study intersection for forecast year 2012 with project weekday conditions:

- Western Avenue (SR-213)/Trudie Drive-Capitol Drive (a.m. and p.m. peak hours).

**Forecast Year 2012 With Project Weekday Mid-day & Afternoon Peak Hour Conditions Intersection Level of Service**

Table 28 summarizes forecast year 2012 with project weekday conditions mid-day peak hour and afternoon peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 28**
**City of Rancho Palos Verdes**
**Forecast Year 2012 With Project Weekday Conditions**
**Mid-day Peak Hour & Afternoon Peak Hour Intersection LOS**

| Study Intersection | Forecast Year 2012 Without Project Conditions | | Forecast Year 2012 With Project Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | Mid-day Peak Hour (11 AM to 1 PM) | Afternoon Peak Hour (2 PM to 4 PM) | Mid-day Peak Hour (11 AM to 1 PM) | Afternoon Peak Hour (2 PM to 4 PM) | |
| | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 205.6 – F | N/A – 313.3 – F | N/A – 398.2 – F | N/A – 525.6 – F | Yes |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.36 – N/A – A | 0.51 – N/A – A | 0.48 – N/A – A | 0.63 – N/A – B | No |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A – 19.7 – C | N/A – 46.4 – E | N/A – 23.4 – C | N/A – 90.9 – F | Yes |
| Miraleste Dr/Via Colinita | N/A –17.6 – C | N/A – 18.3 – C | N/A – 29.3 – D | N/A – 22.2 – C | No |

**Note:** V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 28, based on City of Rancho Palos Verdes established thresholds of significance, the addition of project-generated trips is forecast to result in a significant impact at the following study intersections for forecast year 2012 with project weekday conditions:

- Palos Verdes Drive East/Miraleste Drive (mid-day and afternoon peak hours); and
- Palos Verdes Drive East/Palos Verdes Drive South (afternoon peak hour only).

**Forecast Year 2012 With Project Saturday Mid-day Peak Hour Conditions Intersection Level of Service**

Table 29 summarizes forecast year 2012 with project Saturday conditions mid-day peak hour LOS of the City of Rancho Palos Verdes study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 29**
**City of Rancho Palos Verdes**
**Forecast Year 2012 With Project Saturday**
**Conditions Mid-day Peak Hour Intersection LOS**

| Study Intersection | Forecast Year 2012 Without Project Conditions | Forecast Year 2012 With Project Conditions | Significant Impact? |
|---|---|---|---|
| | Mid-day Peak Hour (11 AM to 1 PM) | Mid-day Peak Hour (11 AM to 1 PM) | |
| | V/C – Delay – LOS | V/C – Delay – LOS | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 36.5 – E | N/A – 75.1 – F | Yes |
| Palos Verdes Dr East/Crest Dr-College Entrance | 0.26 – N/A – A | 0.33 – N/A – A | No |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A – 31.8 – D | N/A – 38.9 – E | Yes |
| Miraleste Dr/Via Colinita | N/A – 17.3 – C | N/A – 18.5 – C | No |

**Note:** V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 29, based on City of Rancho Palos Verdes established thresholds of significance, the addition of project-generated trips is forecast to result in a significant impact at the following study intersections for forecast year 2012 with project Saturday conditions:

- Palos Verdes Drive East/Miraleste Drive (mid-day peak hour); and
- Palos Verdes Drive East/Palos Verdes Drive South (mid-day peak hour).

**Forecast Year 2012 With Project Conditions Recommended Mitigation Measures**

The following feasible mitigation measures are recommended to eliminate significant traffic impacts for forecast year 2012 with project conditions:

**Mitigation Measure No. 4**:

**Palos Verdes Drive East/Miraleste Drive –** Prior to issuance of any Certificate of Occupancy, the applicant shall signalize the intersection. Additionally, the applicant shall design the Palos Verdes Drive East/Miraleste Drive intersection traffic signal to include a westbound right-turn overlap, which will preclude u-turn movement from southbound to northbound Palos Verdes Drive East. The applicant may be eligible for reimbursement from future projects that result in impacts at this intersection *(Same recommendation as mitigation measure 1 identified for existing plus Marymount project conditions)*.

**Mitigation Measure No. 5**:

**Palos Verdes Drive East/Palos Verdes Drive South –** Prior to issuance of any Certificate of Occupancy, the applicant shall make a proportionate share contribution to implement the modification of the intersection to provide a two-stage gap acceptance design for southbound left-turning vehicles. The applicant shall make a proportionate share contribution to implement the construction of a raised median refuge area for vehicles to turn left from Palos Verdes Drive East to cross westbound Palos Verdes Drive South while waiting for a gap in eastbound traffic to complete the turn to eastbound Palos Verdes Drive South. Additionally, the applicant shall make a proportionate share contribution to implement the narrowing of the existing raised median to provide an acceleration lane along Palos Verdes Drive South to accommodate vehicles accelerating to join eastbound Palos Verdes Drive South traffic flow. Modifications to the Palos Verdes Drive East/Palos Verdes Drive South intersection shall be designed taking into account truck turning radius requirements and shall be to the satisfaction of the Public Works Director. Since the Palos Verdes Drive East/Palos Verdes Drive South intersection is impacted by the proposed project for cumulative with proposed project conditions, a proportionate share contribution by the project applicant is applicable.

**Mitigation Measure No. 6**:

**Western Avenue (SR-213)/Trudie Drive-Capitol Drive –** Prior to issuance of any Certificate of Occupancy, the applicant shall implement the re-striping of the eastbound Trudie Drive approach from one shared left-turn/through lane and one de-facto right-turn lane to consist of one left-turn lane and one shared through/right-turn lane. Implementation of this mitigation measure likely requires coordination with City of Los Angeles and Caltrans staff. The applicant may be eligible for reimbursement from future projects that result in impacts at this intersection *(Same recommendation as mitigation measure 2 identified for existing plus Marymount project conditions)*.

**Mitigation Measure No. 7**:

The traffic impacts and corresponding mitigation measures assume the Marymount College student enrollment as a maximum of 793 weekday students (based on the formula allowing 750 full-time students, 20 part-time students, and a marginal difference of 3.0 percent) and 150 weekend students. Therefore, prior to issuance of any Certificate of Occupancy, student enrollment shall be limited to a maximum of 793 weekday students and 150 weekend students, including full- and part-time students *(Same recommendation as mitigation measure 3 identified for existing plus Marymount project conditions)*.

Assuming modifications to the project description as described, Mitigation Measures 4 through 7 are the same as those identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*, and the *Revised Marymount College Project Traffic & Parking Analysis (May 15, 2009)*.

**Mitigated Forecast Year 2012 With Project Weekday Conditions Intersection Level of Service**

Table 30 summarizes forecast year 2012 with project weekday conditions a.m. and p.m. peak hour LOS of the City of Rancho Palos Verdes study intersections assuming full implementation of the recommended mitigation measures; detailed LOS analysis sheets are contained in Appendix B. Assuming full implementation of the recommended Mitigation Measure 8, LOS calculations at the Palos Verdes Drive East/Palos Verdes Drive South intersection are determined using the *Highway Capacity Software (HCS)* to take into account the two-stage gap acceptance.

**Table 30**
**City of Rancho Palos Verdes**
**Mitigated Forecast Year 2012 With Project Weekday Conditions AM & PM Peak Hour Intersection LOS**

| Study Intersection | Forecast Year 2012 Without Project Conditions | | Mitigated Forecast Year 2012 With Project Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | |
| | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 311.7 – F | N/A – 469.2 – F | 0.96 – N/A – E | 0.90 – N/A – D | No |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A – 28.2 – C | N/A – 31.9 – D | N/A – 19.1 – C | N/A – 20.4 – C | No |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 1.06 – N/A – F | 1.03 – N/A – F | 1.00 – N/A – E | 1.01 – N/A – F | No |

**Note:** V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 30, no significant impacts are forecast to occur at City of Rancho Palos Verdes mitigated study intersections assuming full implementation of the recommended mitigation measures (4 through 6) for the forecast year 2012 with project weekday conditions a.m. and p.m. peak hour.

Table 31 summarizes forecast year 2012 with project weekday conditions a.m. and p.m. peak hour LOS of the Western Avenue (SR-213)/Trudie-Capitol Drive intersection assuming full implementation of the recommended mitigation measure; detailed LOS analysis sheets are contained in Appendix B.

**Table 31**
**City of Los Angeles**
**Mitigated Forecast Year 2012 With Project Weekday Conditions AM & PM Peak Hour Intersection LOS**

| Study Intersection | Forecast Year 2012 Without Project Conditions | | Mitigated Forecast Year 2012 With Project Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | |
| | V/C – LOS | V/C – LOS | V/C – LOS | V/C – LOS | |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 1.074 – F | 1.048 – F | 1.013 – F | 1.023 – F | No |

**Note:** V/C = volume to capacity ratio.

As shown in Table 31, no significant impacts are forecast to occur at City of Los Angeles mitigated study intersections assuming full implementation of the recommended mitigation measure (6) for the forecast year 2012 with project weekday conditions a.m. and p.m. peak hour.

Table 32 summarizes forecast year 2012 with project weekday conditions mid-day and afternoon peak hour LOS of the City of Rancho Palos Verdes study intersections assuming full implementation of the recommended mitigation measures; detailed LOS analysis sheets are contained in Appendix B.

**Table 32**
**City of Rancho Palos Verdes**
**Mitigated Forecast Year 2012 With Project Weekday Conditions Mid-day Peak Hour & Afternoon Peak Hour Intersection LOS**

| Study Intersection | Forecast Year 2012 Without Project Conditions | | Mitigated Forecast Year 2012 With Project Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | Mid-day Peak Hour (11 AM to 1 PM) | Afternoon Peak Hour (2 PM to 4 PM) | Mid-day Peak Hour (11 AM to 1 PM) | Afternoon Peak Hour (2 PM to 4 PM) | |
| | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | V/C – Delay – LOS | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 205.6 – F | N/A – 313.3 – F | 0.80 – N/A – C | 0.90 – N/A – D | No |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A – 19.7 – C | N/A – 46.4 – E | N/A – 15.8 – C | N/A – 25.3 – D | No |

**Note:** V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 32, no significant impacts are forecast to occur at City of Rancho Palos Verdes mitigated study intersections assuming full implementation of the recommended mitigation measures (4 and 5) for the forecast year 2012 with project weekday conditions mid-day and afternoon peak hour.

Full implementation of Mitigation Measures 4, 5, and 6 would reduce the significant impacts to a level considered less than significant at the following intersections for forecast year 2012 with project weekday conditions:

- Palos Verdes Drive East/Miraleste Drive;
- Palos Verdes Drive East/Palos Verdes Drive South; and
- Western Avenue (SR-213)/Trudie Drive-Capitol Drive.

However, since proportionate share contribution to Mitigation Measure 5 would not fully implement the measure, the significant impact at the Palos Verdes Drive East/Palos Verdes Drive South intersection would not be reduced to a level considered less than significant. Therefore, a significant and unavoidable traffic impact would remain at the Palos Verdes Drive East/Palos Verdes Drive South intersection for forecast year 2012 with project weekday conditions.

### Mitigated Forecast Year 2012 With Project Saturday Conditions Intersection Level of Service

Table 33 summarizes forecast year 2012 with project Saturday conditions mid-day peak hour LOS of the Palos Verdes Drive East/Miraleste Drive intersection assuming full implementation of the recommended mitigation measures; detailed LOS analysis sheets are contained in Appendix B.

**Table 33**
**City of Rancho Palos Verdes**
**Mitigated Forecast Year 2012 With Project Saturday Conditions Mid-day Peak Hour Intersection LOS**

| **Study Intersection** | **Forecast Year 2012 Without Project Saturday Conditions** | **Mitigated Forecast Year 2012 With Project Saturday Conditions** | **Significant Impact?** |
|---|---|---|---|
| | **Mid-day Peak Hour (11 AM to 1 PM)** | **Mid-day Peak Hour (11 AM to 1 PM)** | |
| | **V/C – Delay – LOS** | **V/C – Delay – LOS** | |
| Palos Verdes Dr East/Miraleste Dr | N/A – 36.5 – E | 0.67 – N/A – B | No |
| Palos Verdes Dr East/Palos Verdes Dr South | N/A – 31.8 – D | N/A – 20.1 – C | No |

**Note:** V/C = volume to capacity ratio; N/A = not applicable since delay is shown at unsignalized intersections and V/C ratio is shown at signalized intersections; delay shown in seconds per vehicle.

As shown in Table 33, no significant impacts are forecast to occur at City of Rancho Palos Verdes mitigated study intersections assuming full implementation of the recommended mitigation measures (7 and 8) for the forecast year 2012 with project Saturday conditions mid-day peak hour.

Full implementation of Mitigation Measures 4 and 5 would reduce the significant impacts to a level considered less than significant at the following intersections for forecast year 2012 with project Saturday conditions:

- Palos Verdes Drive East/Miraleste Drive; and
- Palos Verdes Drive East/Palos Verdes Drive South.

However, since proportionate share contribution to Mitigation Measure 5 would not fully implement the measure, the significant impact at the Palos Verdes Drive East/Palos Verdes Drive South intersection would not be reduced to a level considered less than significant. Therefore, a significant and unavoidable traffic impact would remain at the Palos Verdes Drive East/Palos Verdes Drive South intersection for forecast year 2012 with project Saturday conditions.

## LOS ANGELES CONGESTION MANAGEMENT PROGRAM ANALYSIS

The purpose of the Los Angeles Congestion Management Program (CMP) is to develop a coordinated approach to managing and decreasing traffic congestion by linking the various transportation, land use and air quality planning programs throughout the County. The program is consistent with that of the Southern California Association of Governments (SCAG). The CMP program requires review of substantial individual projects, which might on their own impact the CMP transportation system.

Utilizing CMP *(Los Angeles County Metropolitan Transportation Authority, July 2004)* guidelines, the following intersections are included in the CMP study area:

- Western Avenue (SR-213)/Toscanini Drive; and
- Western Avenue (SR-213)/9$^{th}$ Street.

**CMP Thresholds of Significance**

To determine whether the addition of project-generated trips results in a significant impact at the CMP study facility, and thus requires mitigation, the Los Angeles County CMP utilizes the following threshold of significance based on V/C ratios calculated to “2” decimals:

- A significant project impact occurs when a proposed project increases traffic demand at a CMP study facility by two-percent of capacity (V/C $\geq$ 0.02), causing or worsening LOS F (V/C > 1.00).

**Existing Plus Marymount Project Weekday AM & PM Peak Hour Conditions CMP Intersection Level of Service**

Table 34 summarizes the existing plus Marymount project weekday a.m. peak hour and p.m. peak hour LOS of the CMP study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 34**
**Existing Plus Marymount Project Weekday**
**Conditions AM & PM Peak Hour CMP Intersection LOS**

| CMP Study Intersection | Existing Weekday Conditions | | Existing Plus Marymount Project Weekday Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | |
| | V/C - LOS | V/C - LOS | V/C – LOS | V/C - LOS | |
| Western Ave (SR-213)/Toscanini Dr | 0.81 – D | 0.70 – B | 0.82 – D | 0.71 – B | No |
| Western Ave (SR-213)/9th Street | 0.64 – B | 0.82 – D | 0.64 – B | 0.82 – D | No |

**Note:** V/C = Volume to capacity ratio.

As shown in Table 34, the addition of project-generated trips at the CMP study intersections is forecast to result in no significant impacts for existing plus Marymount project conditions.

**Forecast Year 2012 With Project Weekday AM & PM Hour Conditions CMP Intersection Peak Level of Service**

Table 35 summarizes the forecast year 2012 with project weekday a.m. peak hour and p.m. peak hour LOS of the CMP study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 35**
**Forecast Year 2012 With Project Weekday Conditions AM & PM Peak Hour CMP Intersection LOS**

| CMP Study Intersection | Forecast Year 2012 Without Project Weekday Conditions | | Forecast Year 2012 With Project Weekday Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | |
| | V/C - LOS | V/C - LOS | V/C - LOS | V/C - LOS | |
| Western Ave (SR-213)/Toscanini Dr | 0.90 – D | 0.79 – C | 0.91 – E | 0.80 – C | No |
| Western Ave (SR-213)/9th Street | 0.69 – B | 0.87 – D | 0.69 – B | 0.87 – D | No |

**Note:** V/C = Volume to capacity ratio.

As shown in Table 35, the addition of project-generated trips at the CMP study intersections is forecast to result in no significant impacts for forecast year 2012 with project conditions.

### CMP Transit Impact Analysis

The following transit services are available in the vicinity of the proposed project site:

- Palos Verdes Peninsula Transit Authority (PVPTA) Gold, Orange, and Green Lines; and
- Metro Bus Lines 205, 447 and 550.

The proposed project site is located approximately 1.4 miles (directly) from the Metro Bus Lines 205, 447 and 550, generally serving the San Pedro area east of the proposed project site, with bus stops along Western Avenue and 7th Street. The PVPTA Gold and Orange lines pass adjacent Marymount College via Palos Verdes Drive East. The PVPTA Green line passes through the Palos Verdes Drive East/Miraleste Drive intersection approximately one mile (directly) from the project site.

Additionally, the College provides a shuttle bus service operating on a set schedule to transport students and faculty to and from the two housing facilities (Palos Verdes North and Pacific View) and the campus, a distance of approximately six miles. The shuttle operates between 7:00 a.m. and 10:00 p.m. Monday through Friday, and operates on a limited schedule on the weekends during the last week of each semester, finals week, and for special occasions or events. Based on shuttle ridership information provided by the College, approximately 136 students/faculty utilize the shuttle on a typical weekday to arrive on campus from the Palos Verdes North housing facility and 76 students/faculty utilize the shuttle on a typical weekday to arrive on campus from the Pacific View housing facility. Shuttle ridership leaving the campus shows lower usage, likely due to carpooling with students driving in their own vehicles.

The proposed project is forecast to generate approximately 1,931 weekday daily trips, which includes approximately 200 weekday a.m. peak hour trips and approximately 175 weekday p.m. peak hour trips. As per CMP guidelines, person trips can be estimated using a 1.4 factor to convert total vehicle trips to person trips, which results in a total of 280 a.m. peak hour person trips, 245 p.m. peak hour person trips and 2,703 daily person trips generated by the project.

Based on the CMP guidelines for determining trips assigned to transit the following factor applicable to the proposed project is utilized:

- 3.5 percent of Total Person Trips Generated.

Table 36 shows the calculation of project-generated transit trips utilizing CMP guidelines.

**Table 36**
**CMP Transit Trip Generation of Proposed Project**

| | **AM Peak Hour (7 AM to 10 AM)** | **PM Peak Hour (4 PM to 6 PM)** | **Daily Trips** |
|---|---|---|---|
| Trip Generation of Proposed Project (Vehicles) | 200 | 175 | 1,931 |
| Person Trips Conversion Factor | 1.4 | 1.4 | 1.4 |
| Person Trips of Proposed Project | 280 | 245 | 2,703 |
| 3.5% Transit Trips Conversion Factor | 3.5% | 3.5% | 3.5% |
| **Total Transit Trips of Proposed Project** | **10** | **9** | **95** |

As shown in Table 36, based on the CMP guidelines, and the proximity of the various project land uses in relation to available transit in the project vicinity, the proposed project is forecast to generate approximately 10 a.m. peak hour transit trips, approximately 9 p.m. peak hour transit trips, and approximately 95 daily transit trips.

## STATE HIGHWAY ANALYSIS

The purpose of the Caltrans *Guide for the Preparation of Traffic Impact Studies (State of California Department of Transportation, December 2002)* is to provide a safe and efficient State transportation system, provide consistency and uniformity in the identification of traffic impacts generated by local land use proposals, and consistency and equity in the identification of measures to mitigate the traffic impacts generated by land use proposals. The Caltrans traffic studies guide identifies review of substantial individual projects, which might on their own impact the CMP State Highway transportation system.

### State Highway Intersection Analysis Methodology

Caltrans advocates use of Highway Capacity Manual (HCM) intersection analysis methodology to analyze the operation of study intersections. The HCM analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle as shown in Table 37.

**Table 37**
**State Highway LOS & Delay Ranges for Signalized Intersections**

| LOS | Delay (in seconds) Signalized Intersections |
|---|---|
| **A** | ≤ 10.0 |
| **B** | > 10.0 to ≤ 20.0 |
| **C** | > 20.0 to ≤ 35.0 |
| **D** | > 35.0 to ≤ 55.0 |
| **E** | > 55.0 to ≤ 80.0 |
| **F** | > 80.0 |

**Source:** Transportation Research Board, *Highway Capacity Manual, HCM 2000 Edition (Washington D.C., 2000).*

Level of service at signalized intersections is based on the average stopped delay per vehicle for all movements. The Caltrans goal for peak hour intersection operation is LOS C or better.

### State Highway Intersection Threshold of Significance

While Caltrans has not established traffic thresholds of significance, this traffic analysis utilizes the following traffic threshold of significance:

- A significant project impact occurs at a State Highway study intersection when the addition of project-generated trips causes the peak hour level of service of the study intersection to change from acceptable operation (LOS A, B, or C) to deficient operation (LOS D, E or F).

### Existing Weekday AM & PM Peak Hour Conditions Intersection Level of Service

Table 38 summarizes existing weekday conditions a.m. and p.m. peak hour LOS of the State Highway study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 38**
**State Highway Existing Weekday Conditions**
**AM & PM Peak Hour Intersection LOS**

| State Highway Study Intersection | Weekday AM Peak Hour (7 AM to 10 AM) | Weekday PM Peak Hour (4 PM to 6 PM) |
|---|---|---|
| | Delay - LOS | Delay - LOS |
| Western Ave (SR-213)/Toscanini Dr | 17.5 – B | 9.8 – A |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 23.0 – C | 22.4 – C |
| Western Ave (SR-213)/Crestwood St | 17.4 – B | 13.6 – B |
| Western Ave (SR-213)/1st St | **68.9 – E** | **86.6 – F** |
| Western Ave (SR-213)/9th St | 21.8 – C | 23.4 – C |
| Western Ave (SR-213)/25th St | 25.6 – C | 24.9 – C |

**Note**: Delay is shown in seconds.

As shown in Table 38, the Western Avenue (SR-213)/1st Street intersection is currently operating at a deficient LOS (LOS D or worse) according to Caltrans performance criteria for weekday conditions.

### Existing Plus Marymount Project Weekday AM & PM Peak Hour Conditions Intersection Level of Service

Table 39 summarizes existing plus Marymount project weekday conditions a.m. and p.m. peak hour LOS of the State Highway study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 39**
**State Highway**
**Existing Plus Marymount Project Weekday**
**Conditions AM & PM Peak Hour Intersection LOS**

| State Highway Study Intersection | Existing Weekday Conditions | | Existing Plus Marymount Project Weekday Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | |
| | Delay - LOS | Delay - LOS | Delay - LOS | Delay - LOS | |
| Western Ave (SR-213)/Toscanini Dr | 17.5 – B | 9.8 – A | 17.4 – B | 9.8 – A | No |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 23.0 – C | 22.4 – C | 24.0 – C | 23.7 – C | No |
| Western Ave (SR-213)/Crestwood St | 17.4 – B | 13.6 – B | 17.5 – B | 13.6 – B | No |
| Western Ave (SR-213)/1st St | **68.9 – E** | **86.6 – F** | **67.9 – E** | **88.8 – F** | No |
| Western Ave (SR-213)/9th St | 21.8 – C | 23.4 – C | 21.8 – C | 23.5 – C | No |
| Western Ave (SR-213)/25th St | 25.6 – C | 24.9 – C | 25.8 – C | 25.0 – C | No |

**Note**: Delay is shown in seconds.

As shown in Table 39, with the addition of project-generated trips, the Western Avenue (SR-213)/1st Street intersection is forecast to continue to operate at a deficient LOS (LOS D or worse) according to Caltrans performance criteria for existing plus Marymount project weekday conditions.

As also shown in Table 39, the addition of project-generated trips is forecast to result in no significant impacts at the State Highway study intersections for existing plus Marymount project weekday conditions.

### Forecast Year 2012 Without Project Weekday AM & PM Peak Hour Conditions Intersection Level of Service

Table 40 summarizes forecast year 2012 without project weekday conditions a.m. and p.m. peak hour LOS of the State Highway study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 40**
**State Highway Forecast Year 2012 Without Project**
**Weekday Conditions AM & PM Peak Hour Intersection LOS**

| **State Highway Study Intersection** | **Weekday AM Peak Hour (7 AM to 10 AM)** | **Weekday PM Peak Hour (4 PM to 6 PM)** |
|---|---|---|
| | **Delay - LOS** | **Delay - LOS** |
| Western Ave (SR-213)/Toscanini Dr | 18.3 – B | 10.3 – B |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 34.9 – C | **35.9 – D** |
| Western Ave (SR-213)/Crestwood St | 17.2 – B | 21.9 – C |
| Western Ave (SR-213)/1st St | **86.4 – F** | **117.6 – F** |
| Western Ave (SR-213)/9th St | 22.2 – C | 24.5 – C |
| Western Ave (SR-213)/25th St | 27.3 – C | 27.0 – C |

**Note**: Delay is shown in seconds.

As shown in Table 40, the Western Avenue (SR-213)/1st Street intersection is forecast to operate at a deficient LOS (LOS D or worse) according to Caltrans performance criteria for forecast year 2012 without project weekday conditions.

### Forecast Year 2012 With Project Weekday AM & PM Peak Hour Conditions Intersection Level of Service

Table 41 summarizes forecast year 2012 with project weekday conditions a.m. and p.m. peak hour LOS of the State Highway study intersections; detailed LOS analysis sheets are contained in Appendix B.

**Table 41**
**State Highway**
**Forecast Year 2012 With Project Weekday**
**Conditions AM & PM Peak Hour Intersection LOS**

| **State Highway Study Intersection** | **Forecast Year 2012 Without Project Weekday Conditions** | | **Forecast Year 2012 With Project Weekday Conditions** | | **Significant Impact?** |
|---|---|---|---|---|---|
| | **AM Peak Hour (7 AM to 10 AM)** | **PM Peak Hour (4 PM to 6 PM)** | **AM Peak Hour (7 AM to 10 AM)** | **PM Peak Hour (4 PM to 6 PM)** | |
| | **Delay - LOS** | **Delay - LOS** | **Delay - LOS** | **Delay - LOS** | |
| Western Ave (SR-213)/Toscanini Dr | 18.3 – B | 10.3 – B | 18.3 – B | 10.3 – B | No |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 34.9 – C | **35.9 – D** | **38.2 – D** | **40.2 – D** | Yes |
| Western Ave (SR-213)/Crestwood St | 17.2 – B | 21.9 – C | 17.3 – B | 22.1 – C | No |
| Western Ave (SR-213)/1st St | **86.4 – F** | **117.6 – F** | **84.8 – F** | **120.1 – F** | No |
| Western Ave (SR-213)/9th St | 22.2 – C | 24.5 – C | 22.3 – C | 24.6 – C | No |
| Western Ave (SR-213)/25th St | 27.3 – C | 27.0 – C | 27.7 – C | 27.2 – C | No |

**Note**: Delay is shown in seconds.

As shown in Table 41, with the addition of project-generated trips, the following study intersections are forecast to operate at a deficient LOS (LOS D or worse) according to Caltrans performance criteria for forecast year 2012 with project weekday conditions:

- Western Avenue (SR-213)/Trudie Drive-Capitol Drive (both a.m. and p.m. peak hour); and
- Western Avenue (SR-213)/1$^{st}$ Street (both a.m. and p.m. peak hour).

As also shown in Table 41, the addition of project-generated trips is forecast to result in a significant impact at the Western Avenue (SR-213)/Trudie Drive-Capitol Drive intersection for forecast year 2012 with project weekday conditions.

**Forecast Year 2012 With Project Conditions Recommended Mitigation Measures**

The following feasible mitigation measure is recommended to eliminate significant State Highway traffic impacts for forecast year 2012 with project conditions:

**Mitigation Measure No. 8**:

> **Western Avenue (SR-213)/Trudie Drive-Capitol Drive –** Prior to issuance of any Certificate of Occupancy, the applicant shall implement the re-striping of the eastbound Trudie Drive approach from one shared left-turn/through lane and one de-facto right-turn lane to consist of one left-turn lane and one shared through/right-turn lane. Implementation of this mitigation measure likely requires coordination with City of Los Angeles and Caltrans staff *(Same recommendation as mitigation measure 2 identified for existing plus Marymount project conditions)*.

Assuming modifications to the project description as described, Mitigation Measure 8 is the same as that identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)* , and the *Revised Marymount College Project Traffic & Parking Analysis (May 15, 2009)*.

**Mitigated Forecast Year 2012 With Project Weekday AM & PM Conditions Peak Hour Intersection Level of Service**

Table 42 summarizes forecast year 2012 with project weekday conditions a.m. and p.m. peak hour LOS of the Western Avenue (SR-213)/Trudie Drive-Capitol Drive intersection assuming full implementation of the recommended mitigation measure; detailed LOS analysis sheets are contained in Appendix B.

**Table 42**
**State Highway**
**Mitigated Forecast Year 2012 With Project Weekday Conditions AM & PM Peak Hour Intersection LOS**

| State Highway Study Intersection | Forecast Year 2012 Without Project Weekday Conditions | | Mitigated Forecast Year 2012 With Project Weekday Conditions | | Significant Impact? |
|---|---|---|---|---|---|
| | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | AM Peak Hour (7 AM to 10 AM) | PM Peak Hour (4 PM to 6 PM) | |
| | Delay - LOS | Delay - LOS | Delay - LOS | Delay - LOS | |
| Western Ave (SR-213)/Trudie Dr-Capitol Dr | 34.9 – C | **35.9 – D** | 28.0 – C | 32.9 – C | No |

**Note**: Delay is shown in seconds.

As shown in Table 42, no significant impacts are forecast to occur at the State Highway Western Avenue (SR-213)/Trudie Drive-Capitol Drive intersection assuming full implementation of the recommended mitigation measure (8) for the forecast year 2012 with project conditions a.m. and p.m. peak hour.

## 2. PARKING ANALYSIS

Parking operations associated with the project modifications are analyzed to determine if impacts are greater, the same, or less than those identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*, and the *Revised Marymount College Project Traffic & Parking Analysis (May 15, 2009)*. The analysis includes review of parking capacity required based on City of Palos Verdes Parking Code, as well as based on observed college-related parking counts, including forecast demand associated with the two proposed project components (i.e., campus facilities and BA Program).

It should be noted, City Municipal Code for college/university does not differentiate between AA and BA college programs.

### Existing On-Site Parking Required According to City Code

Table 43 summarizes the parking capacity required according to City of Rancho Palos Verdes Parking Code (RPVMC Section 17.50.020) to accommodate current on-site land uses based on the following existing conditions:

- Maximum student enrollment of 793 students;
- 215 employees and faculty members; and
- 648 student seats provided on campus.

**Table 43**
**Forecast Existing Parking Spaces Required Per City Code**

| City Parking Code Requirement | Existing Marymount College Conditions | |
|---|---|---|
| | Quantity | Parking Spaces Required |
| College and University | | |
| - 1 Space per 2 Regularly Enrolled Students | 793 Regularly Enrolled Students | 397 |
| - 1 Space per 2 Employees/Faculty | 215 Employees/Faculty | 108 |
| - 1 space per 5 Student Seats | 648 Student Seats | 130 |
| **Total Parking spaces Required for Existing Marymount College Conditions** | | **635** |

**Note:** City Municipal Code does not differentiate between AA and BA college programs

As shown in Table 43, according to City of Rancho Palos Verdes Parking Code, 635 parking spaces are currently required to accommodate the existing Marymount College parking demand.

Table 44 summarizes the current parking capacity required according to City code versus parking spaces provided at the Marymount College.

**Table 44**
**Review of Existing Parking Spaces Adequacy Based on City Code**

| | Existing Marymount College Conditions |
|---|---|
| Forecast Parking Spaces Required Per City Code | 635 spaces[1] |
| Parking Spaces Provided | 343 existing spaces |
| Forecast Surplus/Deficient Parking Spaces Provided | -292 spaces |
| Sufficient Parking Spaces Provided? | No |
| Observed Overflow Parking Demand on Adjacent Streets | 49 vehicles[2] |

1 = Based on 793 regularly enrolled students.

2 = Based on Fall 2005 parking demand counts at 2:00 p.m.

As shown in Table 44, since the Marymount College currently provides 343 parking spaces, a 292 parking space deficiency currently exists based on City of Rancho Palos Verdes Parking Code. It should be noted, while parking spaces required by City code indicated a potential deficiency of 292 parking spaces, only 49 college-related vehicles were observed to park on the street during the weekday peak parking demand between 2:00 p.m. and 3:00 p.m. when 54 parking spaces were unoccupied on-campus

## EXISTING PLUS MARYMOUNT PROJECT CONDITIONS

This section reviews parking capacity required for the proposed project based on City of Rancho Palos Verdes Parking Code as well as based on observed College-related parking counts.

### Existing Plus Marymount Project On-Site Parking Required According to City Code

Table 45 summarizes the parking capacity required according to City of Rancho Palos Verdes Parking Code to accommodate existing College uses as well as proposed project. As previously noted, City Municipal Code does not differentiate between AA and BA college programs; therefore, the tables in this section apply to both project conditions.

**Table 45**
**Forecast Parking Spaces Required Per City Code**

| City Parking Code Requirement | Existing Marymount College Conditions | | Proposed Expansion Project | | Existing With Expansion Project Marymount College | |
|---|---|---|---|---|---|---|
| | Quantity | Parking Spaces Required | Quantity | Parking Spaces Required | Quantity | Parking Spaces Required |
| College | | | | | | |
| - 1 Space per 2 Students | 793 Stu | 397 | 0 New Stu | 0 | 793 Stu | 397 |
| - 1 Space per 2 E/F | 215 E/F | 108 | 7 New E/F | 4 | 222 E/F | 112 |
| - 1 Space per 5 Stu Seats | 648 Stu Seats | 130 | 5 Net Stu Seats | 1 | 653 Stu Seats | 131 |
| **Parking Spaces Required** | | **635** | | **5** | | **640** |

**Note:** Stu = Students; E/F = Employees/Faculty.

As shown in Table 45, according to the City of Rancho Palos Verdes Parking Code, 5 additional parking spaces would be required to accommodate the proposed project parking demand. As also shown in Table 45, according to the City of Rancho Palos Verdes Parking Code, 640 parking spaces would be required to accommodate the entire Marymount College parking demand assuming completion of the proposed project.

Table 46 summarizes the parking capacity required based on City code versus the number of parking spaces planned to be provided at the Marymount College assuming completion of the proposed project.

**Table 46**
**Review of parking Spaces Adequacy Based on City Code**

| | Existing Marymount College Conditions | Proposed Expansion Project | Existing With Expansion Project Marymount College |
|---|---|---|---|
| Forecast Parking Spaces Required | 635 spaces[1] | 5 additional spaces | 640 total spaces[1] |
| Parking Spaces Provided | 343 existing spaces | 120 additional spaces | 463 total spaces |
| Forecast Surplus/Deficient Parking Spaces Provided | -292 spaces | +115 spaces | -177 spaces |
| Sufficient Parking Spaces Provided? | No | Yes | No |
| Observed Overflow Parking Demand on Adjacent Streets | 49 vehicles[2] | N/A | N/A |

**Note:** N/A = Not Applicable.
1 = Based on 793 regularly enrolled students.
2 = Based on Fall 2005 parking demand counts at 2:00 p.m.

As shown in Table 46, since the proposed project is planned to add 120 parking spaces, a surplus of 115 parking spaces is forecast to occur based on City of Rancho Palos Verdes Parking Code. As also shown in Table 46, since the entire Marymount College assuming completion of the proposed project is planned to provide 463 parking spaces, a 177 parking space deficiency is forecast to occur based on City of Rancho Palos Verdes Parking Code.

Since parking deficiencies are forecast to occur for existing and future conditions based on calculations using City code rather than observed parking counts, an alternate parking analysis has been prepared to more accurately portray future parking conditions assuming completion of the proposed project. It is worth noting, parking required based on City code indicates 640 parking spaces may be required and is based on the strict interpretation of code.

Table 47 summarizes the Marymount College-related weekday and Saturday peak hour parking ratio for existing conditions, based on observed parking demand during the Fall 2005 semester when weekday student enrollment was 658 students and weekend student enrollment was 80 students.

**Table 47**
**Existing Marymount College Peak Hour Parking Ratio**

| Parking Component | Weekday | Saturday |
|---|---|---|
| Observed Peak Hour Parking Demand | 372 vehicles[1] (11 AM) | 87 vehicles[1] (12 PM) |
| Student Enrollment (Fall 2005) | 658 Students | 738 Students[2] |
| **Peak Hour Parking Ratio (demand/student)** | 0.57 parked vehicles/student | 0.12 parked vehicles/student |

1 = Based on Fall 2005 parking demand counts.
2 = 738 students accounts for 658 weekday enrolled students and 80 weekend enrolled students.

As shown in Table 47, the existing peak parking ratio at Marymount College is 0.57 parked vehicles/student during weekday conditions and 0.12 parked vehicles/student during Saturday conditions. It is noted the parking ratio identified above assumes all on-street parking associated with Marymount College is included, and therefore, forecast demand using these ratios assume all Marymount College-related on-street parking activity is relocated on-campus.

The parking ratios presented above reflect parking activity for a junior college (AA Program) and require an adjustment when accounting for University (BA Program) students parking behavior. *ITE* provides weekday parking rates for University and Junior College land uses, with a higher rate for University students. To account for higher forecast parking demand by University (BA Program) students, a multiplier is derived that will be utilized in the parking demand calculations.

The derivation of the multiplier to account for higher weekday parking demand by students in the BA Program is shown in Table 48..

**Table 48**
**University to Junior College Weekday Peak Hour Parking Rate Multiplier**

| Parking Component | Weekday |
|---|---|
| *ITE* University Parking Rate (BA Program) | 0.30 vehicles/student population |
| *ITE* Junior College Parking Rate (AA Program) | 0.21 vehicles/student population |
| ***ITE* University to Junior College Peak Hour Parking Rate Multiplier** | 1.43 veh/student population |

**Source:** *ITE Parking Generation, (3rd Edition, 2004)*.

As shown Table 48, the multiplier to account for higher weekday parking demand by students in the BA Program is derived as 1.43. Since *ITE* parking rate data is not available for weekend conditions, this analysis conservatively assumes use of the weekday peak hour parking multiplier when calculating weekend student parking demand.

### Forecast Existing Plus Marymount Project Parking Demand

Forecast parking demand for forecast existing plus Marymount project weekday and Saturday conditions has been prepared utilizing the following assumptions:

- Maximum weekday student enrollment is 793 students (based on the formula allowing 750 full-time students, 20 part-time students, and a marginal difference of 3.0 percent);
- Up to 250 students are enrolled in the BA Program, remaining balance of student enrollment would be in AA Program;
- Maximum weekend student enrollment is 150 students (based on modified project description) with no weekend students enrolled in the BA Program;
- Students would park at the campus based on the observed vehicle to student peak parking ratios with application of multiplier to account for BA Program student parking activity where applicable;

- Calculations of parking spaces required assumes no Marymount College-related parking on adjacent streets, i.e., all on-street parking demand is relocated to on-campus parking areas;
- Parking spaces required for new student seats is based on City of Rancho Palos Verdes Parking Code for colleges and universities;
- Addition of 7 new security, custodial, and maintenance staff; and
- The cumulative projects identified within the traffic analysis section are not forecast to increase parking demand at the parking study area.

Table 49 summarizes the forecast parking capacity required for existing plus Marymount project weekday peak hour conditions assuming a maximum weekday enrollment of 793 students, based on the observed weekday parking ratio and City of Rancho Palos Verdes Parking Code.

**Table 49**
**Forecast Weekday Parking Demand Based on Observed Parking Ratio and City Code**

| Parking Component | Peak Hour Parking Space Demand |
|---|---|
| 7 New Employees/Faculty[1] | 4 |
| 793 Students<br>- 543 AA Program students * 0.57 parked vehicles/student<br>- 250 BA Program students * 0.57 parked vehicles/student * 1.43 multiplier | <br>310<br>204 |
| 5 Net New Student Seats (City Code: 1 parking space per 5 student seats)[2] | 1 |
| Forecast Parking Spaces Required | 519 |
| Parking Spaces Provided (343 existing + 120 added by proposed project)[3] | 463 |
| **Project Parking Surplus/Deficiency** | **-56** |

1 = Based on City of Rancho Palos Verdes Parking Code for Colleges and Universities for employee/faculty category.
2 = Based on City of Rancho Palos Verdes Parking Code for Colleges and Universities.
3 = Based on site plan (Rasmussen and Associates, November 2005).

As shown in Table 49, since the proposed project is planned to add 120 parking spaces to the existing 343 parking spaces, a 56 parking space deficiency is forecast to occur during the weekday peak hour based on the observed weekday parking ratio and City of Rancho Palos Verdes Parking Code.

Table 50 summarizes the forecast parking capacity required for existing plus Marymount project Saturday peak hour conditions assuming a maximum weekend enrollment of 150 students, based on the observed Saturday parking ratio and City of Rancho Palos Verdes Parking Code. Since weekday enrolled students utilize the campus during weekend conditions, the 793 maximum enrolled weekday students are included in the Table 50 Saturday parking demand forecast.

**Table 50**
**Forecast Saturday Parking Demand Based on Observed Parking Ratio and City Code**

| Parking Component | Peak Hour Parking Space Demand |
|---|---|
| 7 New Employees/Faculty[1] | 4 |
| 943 Students[2]<br>- 693 AA Program students * 0.12 parked vehicles/student<br>- 250 BA Program students * 0.12 parked vehicles/student * 1.43 multiplier | <br>83<br>43 |
| 5 Net New Student Seats (City Code: 1 parking space per 5 student seats) [3] | 1 |
| Forecast Parking Spaces Required | 131 |
| Parking Spaces Provided (343 existing + 120 added by proposed project)[4] | 463 |
| **Proposed Project Parking Surplus/Deficiency** | **+332** |

1 = Based on City of Rancho Palos Verdes Parking Code for Colleges and Universities for employee/faculty category.
2 = 943 students not living on-campus accounts for 793 weekday enrolled students and 150 weekend enrolled students.
3 = Based on City of Rancho Palos Verdes Parking Code for Colleges and Universities.
4 = Based on site plan (Rasmussen and Associates, November 2005).

As shown in Table 50, since the proposed project is planned to add 120 parking spaces to the existing 343 parking spaces, a 332 parking space surplus is forecast to occur during the Saturday peak hour based on the observed Saturday parking ratio and City of Rancho Palos Verdes Parking Code.

### Parking Mitigation Measures

The following mitigation measures have been identified to reduce weekday parking demand associated with Marymount College assuming implementation of the proposed project:

**Mitigation Measure 9**:

Prior to issuance of any Certificate of Occupancy, the applicant shall institute, to the satisfaction of the Director of Planning, Building, and Code Enforcement and the Public Works Director, parking management strategies to reduce weekday College-related parking demand by the following values:

- 11 percent or greater for student enrollment between 744 and 793;
- 6 percent or greater for student enrollment between 694 and 743;
- 0 percent or greater for student enrollment of 693 or less.

Potential parking management strategies may include, but are not limited to, the following:

- Provision of “carpool only” parking spaces;
- Implementation of parking pricing for campus parking permits;
- Utilization of remote parking;
- Provision of increased shuttle services;

- Offering financial incentives; and
- Implementation of restrictions on parking allowed by residents of the Palos Verdes North Facility.

Marymount College shall provide, on an annual basis, a Parking Management Strategy Program documenting prior-year achieved parking demand reductions and strategies for use in upcoming academic school year. Marymount College shall annually submit the Parking Management Strategy Program to the Department of Planning, Building, and Code Enforcement by July 1st for review by the Director of Planning, Building, and Code Enforcement. The Parking Management Strategy Program shall be modified on an as needed basis, as deemed necessary by the Director of Planning, Building, and Code Enforcement.

**Mitigation Measure 10**:

The parking impacts and corresponding mitigation measures assume the Marymount College student enrollment as a maximum of 793 weekday students (based on the formula allowing 750 full-time students, 20 part-time students, and a marginal difference of 3.0 percent) and 150 weekend students. Additionally, it is assumed, Marymount College student enrollment as a maximum of 250 weekday students enrolled in the BA Program and a maximum of 793 weekday students minus current BA Program weekday students enrolled in the AA Program. Therefore, prior to issuance of any Certificate of Occupancy, student enrollment shall be limited to a maximum of 793 weekday students and 150 weekend students, including full- and part-time students, and maximum of 250 weekday students enrolled in the BA Program and a maximum of 793 weekday students minus current BA Program weekday students enrolled in the AA Program.

## MITIGATED EXISTING PLUS MARYMOUNT PROJECT PARKING CONDITIONS

This analysis conservatively assumes no reduction of forecast trip generation of the proposed project associated with reduced traffic and parking related to parking management strategies.

Table 51 summarizes the mitigated forecast parking capacity required for existing plus Marymount project weekday conditions based on the observed parking ratio as well as proposed project improvements.

**Table 51**
**Mitigated Forecast Parking Demand Based on Observed Parking Ratio and City Code**

| Parking Component | Peak Hour Parking Space Demand |
|---|---|
| 7 New Employees/Faculty[1] | 4 |
| 793 Students<br>- 543 AA Program students * 0.57 parked vehicles/student<br>- 250 BA Program students * 0.57 parked vehicles/student * 1.43 multiplier | <br>310<br>204 |
| 5 Net New Student Seats (City Code: 1 parking space per 5 student seats)[2] | 1 |
| Subtotal Forecast Parking Spaces Required | 519 |
| Mitigation Measure: Parking Management Strategy (11% Reduction applied to 519 demand) | - 57 |
| Total Forecast Parking Spaces Required | 462 |
| Parking Spaces Provided (343 existing + 120 added by proposed project) [3] | 463 |
| **Parking Surplus/Deficiency** | **+1** |

1 = Based on City of Rancho Palos Verdes Parking Code for Colleges and Universities for employee/faculty category.
2 = Based on City of Rancho Palos Verdes Parking Code for Colleges and Universities.
3 = Based on site plan (Rasmussen and Associates, November 2005).

As shown in Table 51, assuming implementation of the recommended mitigation measures (9 and 10), a parking surplus of one (1) space is forecast to occur during the weekday peak hour based on the observed weekday parking ratio and City of Rancho Palos Verdes Parking Code for project conditions.

## 3. MITIGATION MEASURES

To reduce project traffic impacts to a level considered less than significant for existing plus Marymount project conditions, the following mitigation measures are recommended:

**Mitigation Measure No. 1**:

**Palos Verdes Drive East/Miraleste Drive –** Prior to issuance of any Certificate of Occupancy, the applicant shall signalize the intersection. Additionally, the applicant shall design the Palos Verdes Drive East/Miraleste Drive intersection traffic signal to include a westbound right-turn overlap, which will preclude u-turn movement from southbound to northbound Palos Verdes Drive East. The applicant may be eligible for reimbursement from future projects that result in impacts at this intersection.

**Mitigation Measure No. 2**:

**Western Avenue (SR-213)/Trudie Drive-Capitol Drive –** Prior to issuance of any Certificate of Occupancy, the applicant shall implement the re-striping of the eastbound Trudie Drive approach from one shared left-turn/through lane and one de-facto right-turn lane to consist of one left-turn lane and one shared through/right-turn lane. Implementation of this mitigation measure likely requires coordination with City of Los Angeles and Caltrans staff. The applicant may be eligible for reimbursement from future projects that result in impacts at this intersection.

**Mitigation Measure No. 3**:

The traffic impacts and corresponding mitigation measures assume the Marymount College student enrollment as a maximum of 793 weekday students (based on the formula allowing 750 full-time students, 20 part-time students, and a marginal difference of 3.0 percent) and 150 weekend students. Additionally, it is assumed, Marymount College student enrollment as a maximum of 250 weekday students enrolled in the BA Program and a maximum of 793 weekday students minus current BA Program weekday students enrolled in the AA Program. Therefore, prior to issuance of any Certificate of Occupancy, student enrollment shall be limited to a maximum of 793 weekday students and 150 weekend students, including full- and part-time students, and maximum of 250 weekday students enrolled in the BA Program and a maximum of 793 weekday students minus current BA Program weekday students enrolled in the AA Program.

Assuming modifications to the project description as described, Mitigation Measures 1 through 3 are the same as those identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*.

To reduce project traffic impacts to a level considered less than significant for forecast year 2012 with project conditions, the following mitigation measures are recommended:

**Mitigation Measure No. 4**:

**Palos Verdes Drive East/Miraleste Drive –** Prior to issuance of any Certificate of Occupancy, the applicant shall signalize the intersection. Additionally, the applicant shall design the Palos Verdes Drive East/Miraleste Drive intersection traffic signal to include a westbound right-turn overlap, which will preclude u-turn movement from southbound to northbound Palos Verdes Drive East. The applicant may be eligible for reimbursement from future projects that result in impacts at this intersection *(Same recommendation as mitigation measure 1 identified for existing plus Marymount project conditions)*.

**Mitigation Measure No. 5**:

**Palos Verdes Drive East/Palos Verdes Drive South –** Prior to issuance of any Certificate of Occupancy, the applicant shall make a proportionate share contribution to implement the modification of the intersection to provide a two-stage gap acceptance design for southbound left-turning vehicles. The applicant shall make a proportionate share contribution to implement the construction of a raised median refuge area for vehicles to turn left from Palos Verdes Drive East to cross westbound Palos Verdes Drive South while waiting for a gap in eastbound traffic to complete the turn to eastbound Palos Verdes Drive South. Additionally, the applicant shall make a proportionate share contribution to implement the narrowing of the existing raised median to provide an acceleration lane along Palos Verdes Drive South to accommodate vehicles accelerating to join eastbound Palos Verdes Drive South traffic flow. Modifications to the Palos Verdes Drive East/Palos Verdes Drive South intersection shall be designed taking into account truck turning radius requirements and shall be to the satisfaction of the Public Works Director. Since the Palos Verdes Drive East/Palos Verdes Drive South intersection is impacted by the proposed project for cumulative with proposed project conditions, a proportionate share contribution by the project applicant is applicable.

**Mitigation Measure No. 6**:

**Western Avenue (SR-213)/Trudie Drive-Capitol Drive –** Prior to issuance of any Certificate of Occupancy, the applicant shall implement the re-striping of the eastbound Trudie Drive approach from one shared left-turn/through lane and one de-facto right-turn lane to consist of one left-turn lane and one shared through/right-turn lane. Implementation of this mitigation measure likely requires coordination with City of Los Angeles and Caltrans staff. The applicant may be eligible for reimbursement from future projects that result in impacts at this intersection *(Same recommendation as mitigation measure 2 identified for existing plus Marymount project conditions)*.

**Mitigation Measure No. 7**:

The traffic impacts and corresponding mitigation measures assume the Marymount College student enrollment as a maximum of 793 weekday students (based on the formula allowing 750 full-time students, 20 part-time students, and a marginal difference of 3.0 percent) and 150 weekend students. Therefore, prior to issuance of any Certificate of Occupancy, student enrollment shall be limited to a maximum of 793 weekday students and 150 weekend students, including full- and part-time students *(Same recommendation as mitigation measure 3 identified for existing plus Marymount project conditions)*.

Assuming modifications to the project description as described, Mitigation Measures 7 through 10 are the same as those identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*.

To reduce project traffic impacts to a level considered less than significant at the State Highway study intersection for forecast year 2012 with project conditions, the following mitigation measure is recommended:

**Mitigation Measure No. 8**:

**Western Avenue (SR-213)/Trudie Drive-Capitol Drive –** Prior to issuance of any Certificate of Occupancy, the applicant shall implement the re-striping of the eastbound Trudie Drive approach from one shared left-turn/through lane and one de-facto right-turn lane to consist of one left-turn lane and one shared through/right-turn lane. Implementation of this mitigation measure likely requires coordination with City of Los Angeles and Caltrans staff *(Same recommendation as mitigation measure 2 identified for existing plus Marymount project conditions)*.

Assuming modifications to the project description as described, Mitigation Measure 16 is the same as that identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*.

To reduce project parking impacts to a level considered less than significant for existing plus Marymount project conditions, the following mitigation measures are recommended:

**Mitigation Measure No. 9:** Prior to issuance of any Certificate of Occupancy the applicant shall institute, to the satisfaction of the Director of Planning, Building, and Code Enforcement and the Public Works Director, parking management strategies to reduce weekday College-related parking demand by the following values:

- 11 percent or greater for student enrollment between 744 and 793;
- 6 percent or greater for student enrollment between 694 and 743;
- 0 percent or greater for student enrollment of 693 or less.

Potential parking management strategies may include, but are not limited to, the following:

- Provision of "carpool only" parking spaces;
- Implementation of parking pricing for campus parking permits;
- Utilization of remote parking;
- Provision of increased shuttle services;
- Offering financial incentives; and
- Implementation of restrictions on parking allowed by residents of the Palos Verdes North Facility.

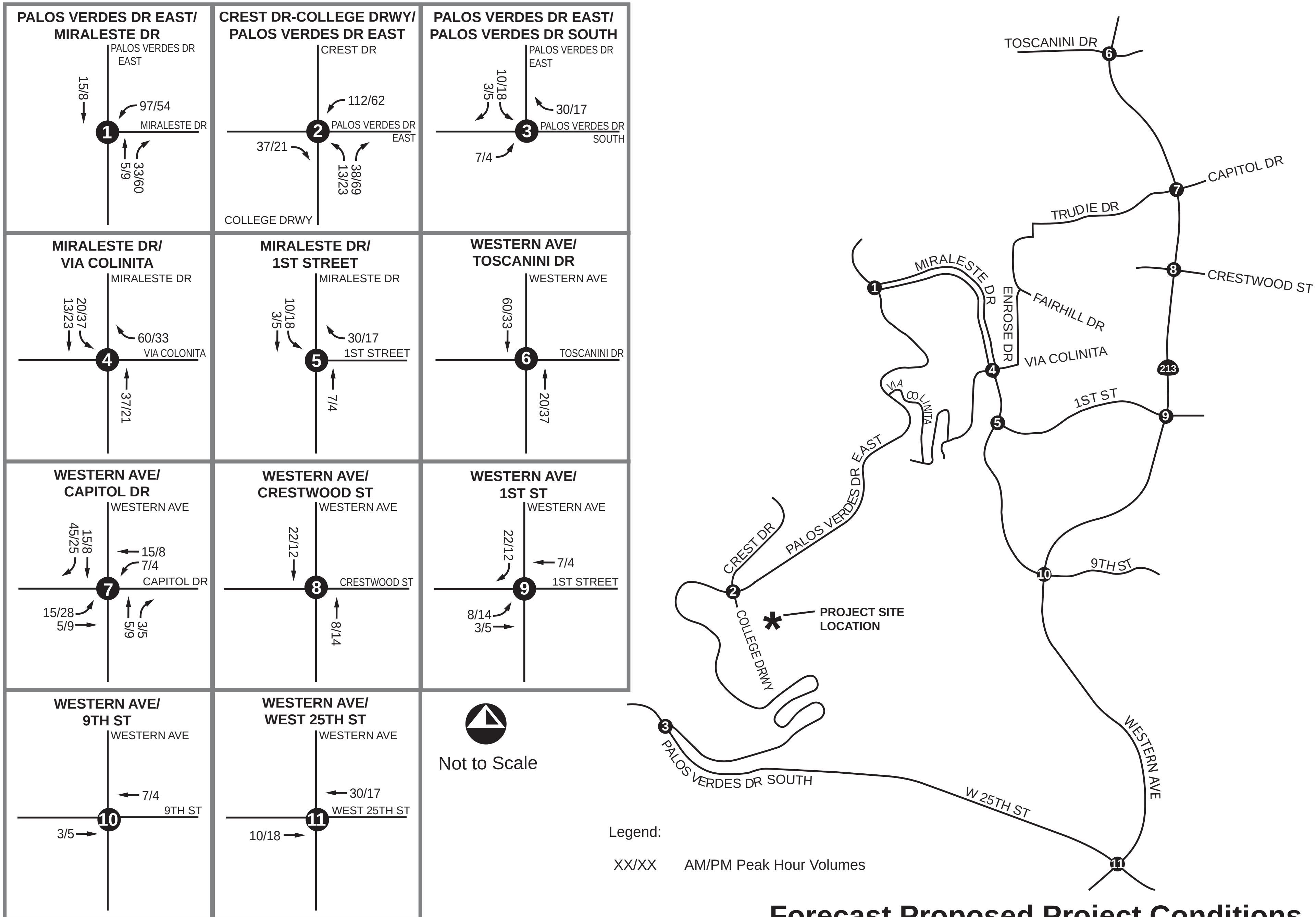
Marymount College shall provide, on an annual basis, a Parking Management Strategy Program documenting prior-year achieved parking demand reductions and strategies for use in upcoming academic school year. Marymount College shall annually submit the Parking Management Strategy Program to the Department of Planning, Building, and Code Enforcement by July 1st for review by the Director of Planning, Building, and Code Enforcement. The Parking Management Strategy Program shall be modified on an as needed basis, as deemed necessary by the Director of Planning, Building, and Code Enforcement.

**Mitigation Measure No. 10:** The parking impacts and corresponding mitigation measures assume the Marymount College student enrollment as a maximum of 793 weekday students (based on the formula allowing 750 full-time students, 20 part-time students, and a marginal difference of 3.0 percent) and 150 weekend students. Additionally, it is assumed, Marymount College student enrollment as a maximum of 250 weekday students enrolled in the BA Program and a maximum of 793 weekday students minus current BA Program weekday students enrolled in the AA Program. Therefore, prior to issuance of any Certificate of Occupancy, student enrollment shall be limited to a maximum of 793 weekday students and 150 weekend students, including full- and part-time students, and maximum of 250 weekday students enrolled in the BA Program and a maximum of 793 weekday students minus current BA Program weekday students enrolled in the AA Program.

## 4. CONCLUSIONS

We have analyzed traffic and parking operations associated with modifications to the proposed project to determine if impacts are greater, the same, or less than those identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*. While forecast traffic generation increased for both weekday and Saturday conditions, the traffic impacts and associated mitigation measures remained the same as identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)* , and the *Revised Marymount College Project Traffic & Parking Analysis (May 15, 2009)*. Since forecast parking demand increased with the project modifications, a weekday parking deficiency was identified, and therefore, two parking mitigation measures were identified, which are similar to mitigation identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)*.

# APPENDIX A
# Volume Exhibits

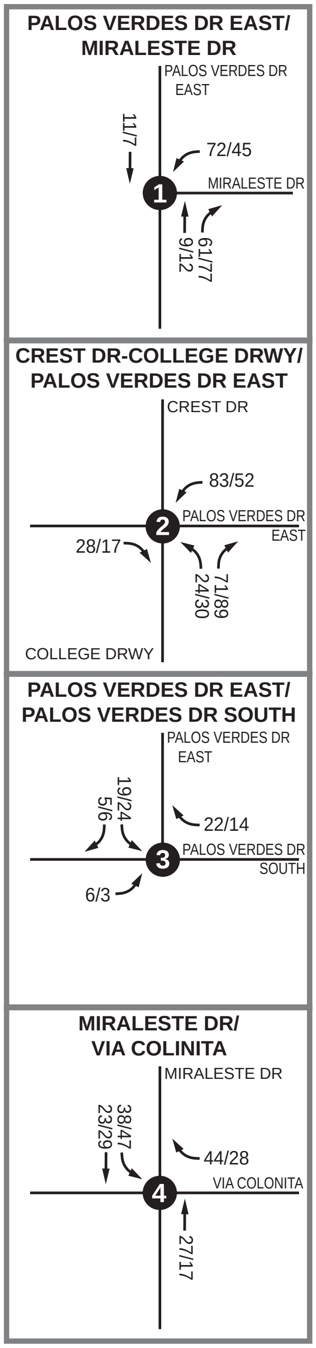


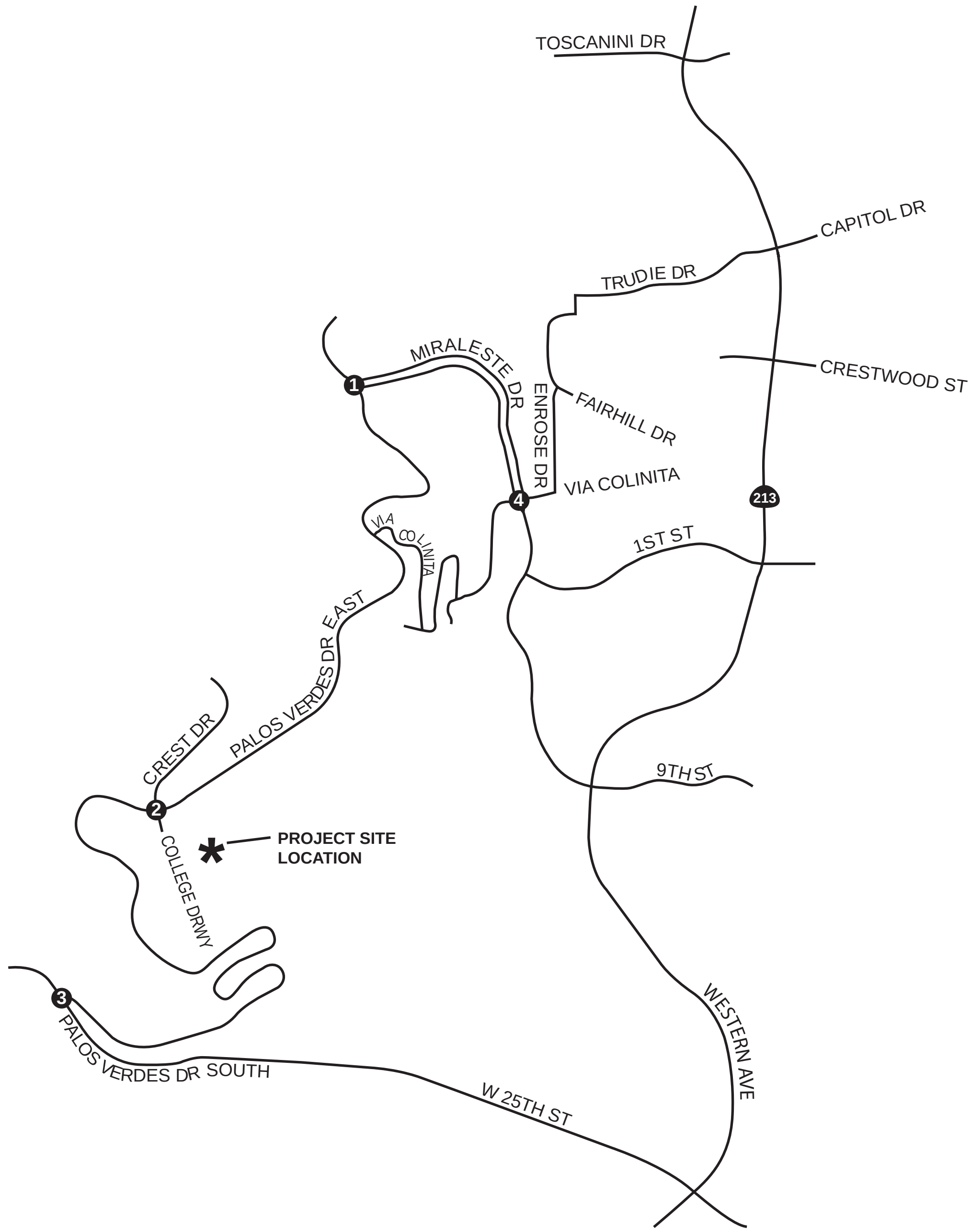

# Forecast Proposed Project Conditions
# Weekday AM & PM Peak Hour Trip Assignment

RBF

H:\pdata\10104089\Traffic\Exhibits\DEC_2009\ExhA-01.ai DEC/2009

Exhibit A-1




Legend:

XX/XX Weekday Mid-Day 11:00 AM-1:00 PM/Afternoon 2:00-4:00 PM Peak Hour Volumes

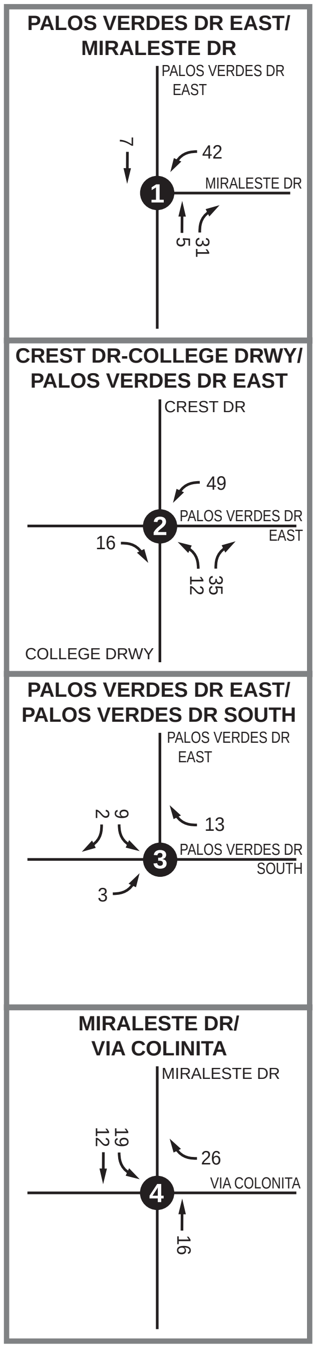
Not to Scale

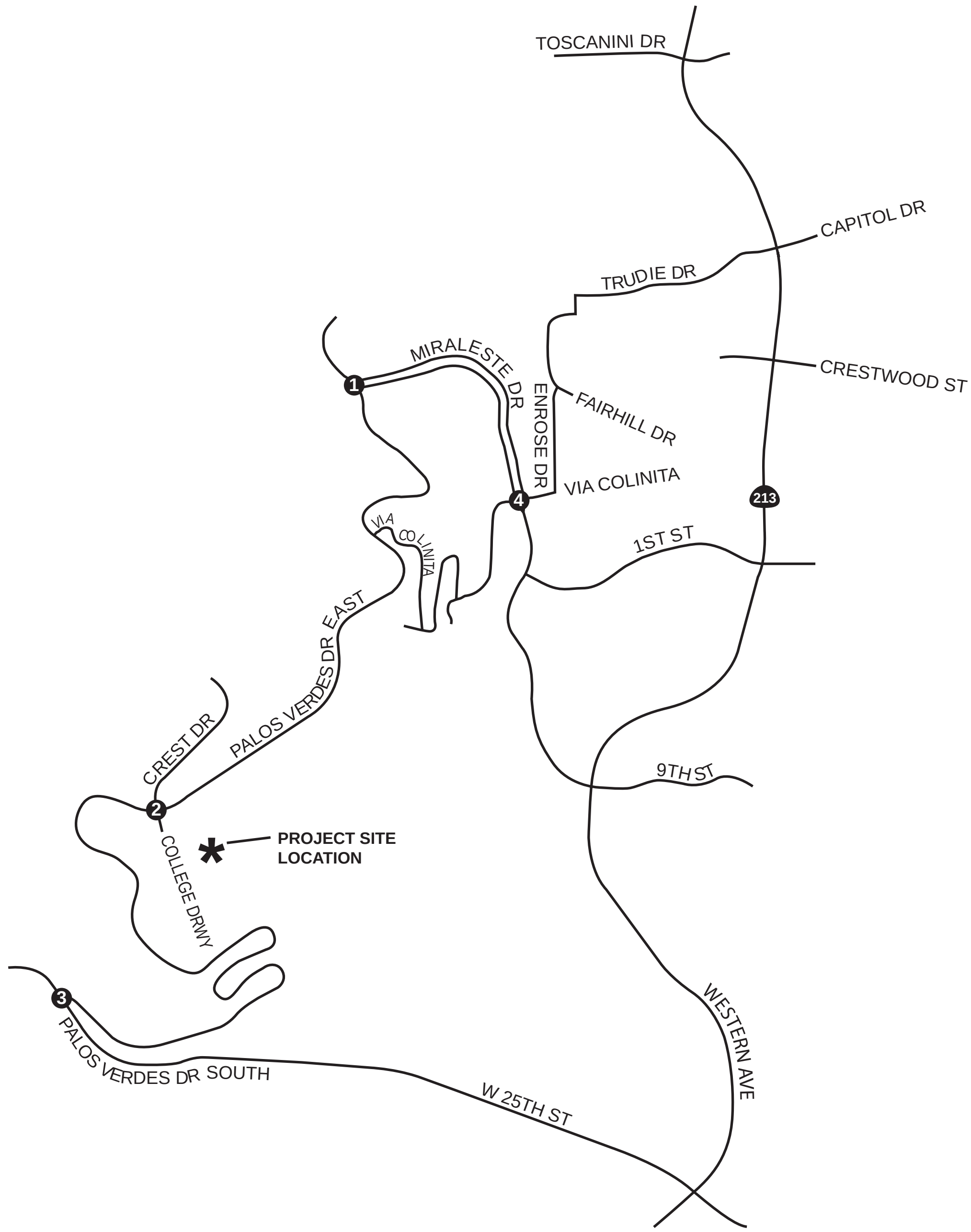
RBF

# Forecast Proposed Project Conditions Weekday Mid-day 11:00 AM-1:00 PM & Afternoon 2:00-4:00 PM Peak Hour Trip Assignment

H:\pdata\10104089\Traffic\Exhibits\DEC_2009\ExhA-02.ai DEC/2009

Exhibit A-2




Legend:

XX/XX Mid-Day Weekend 11:00-1:00 PM Peak Hour Volumes

Not to Scale

RBF

# Forecast Proposed Project Conditions
# Saturday 11:00 AM-1:00 PM Peak Hour Trip Assignment

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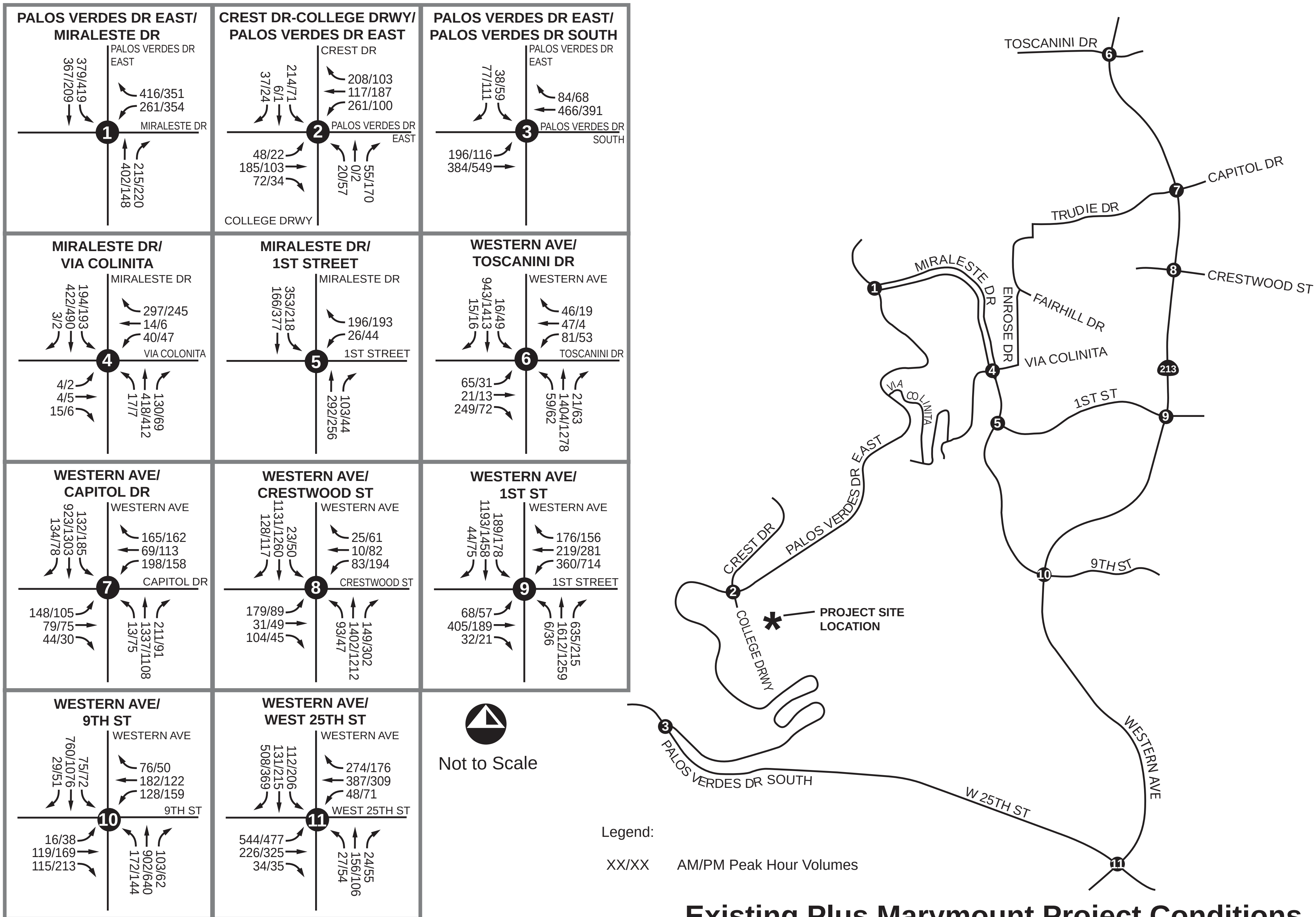
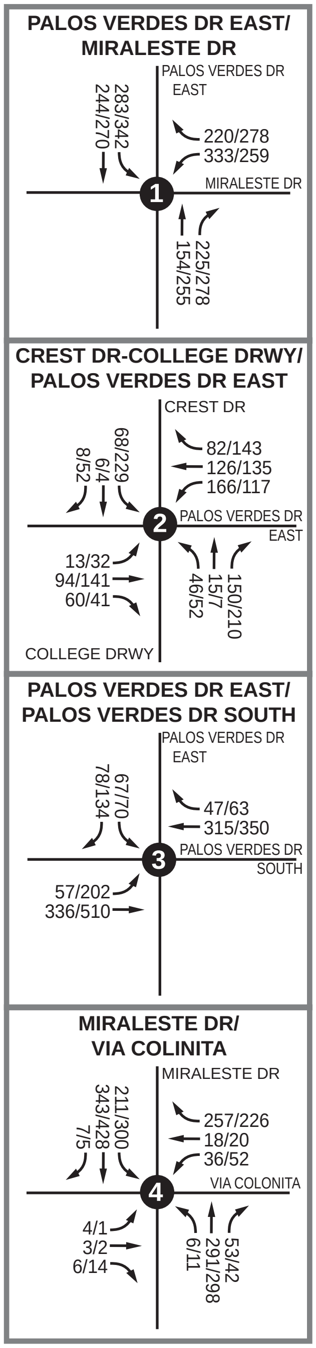
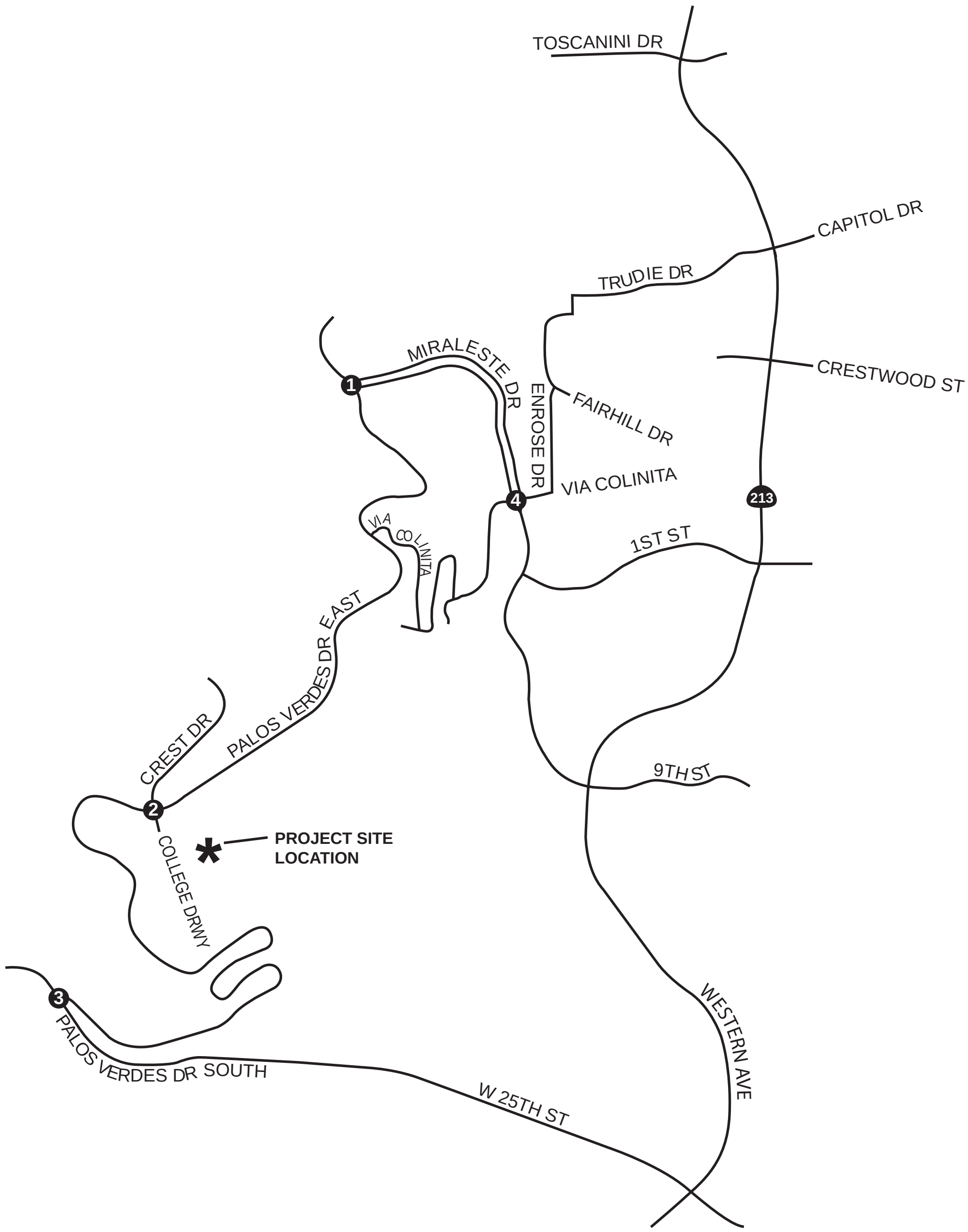



# Existing Plus Marymount Project Conditions
# Weekday AM & PM Peak Hour Intersection Volumes




Legend:

XX/XX Weekday Mid-Day 11:00 AM-1:00 PM/Afternoon 2:00-4:00 PM Peak Hour Volumes

Not to Scale

RBF

# Existing Plus Marymount Project Conditions
# Weekday Mid-day 11:00 AM-1:00 PM & Afternoon
# 2:00-4:00 PM Peak Hour Intersection Volumes

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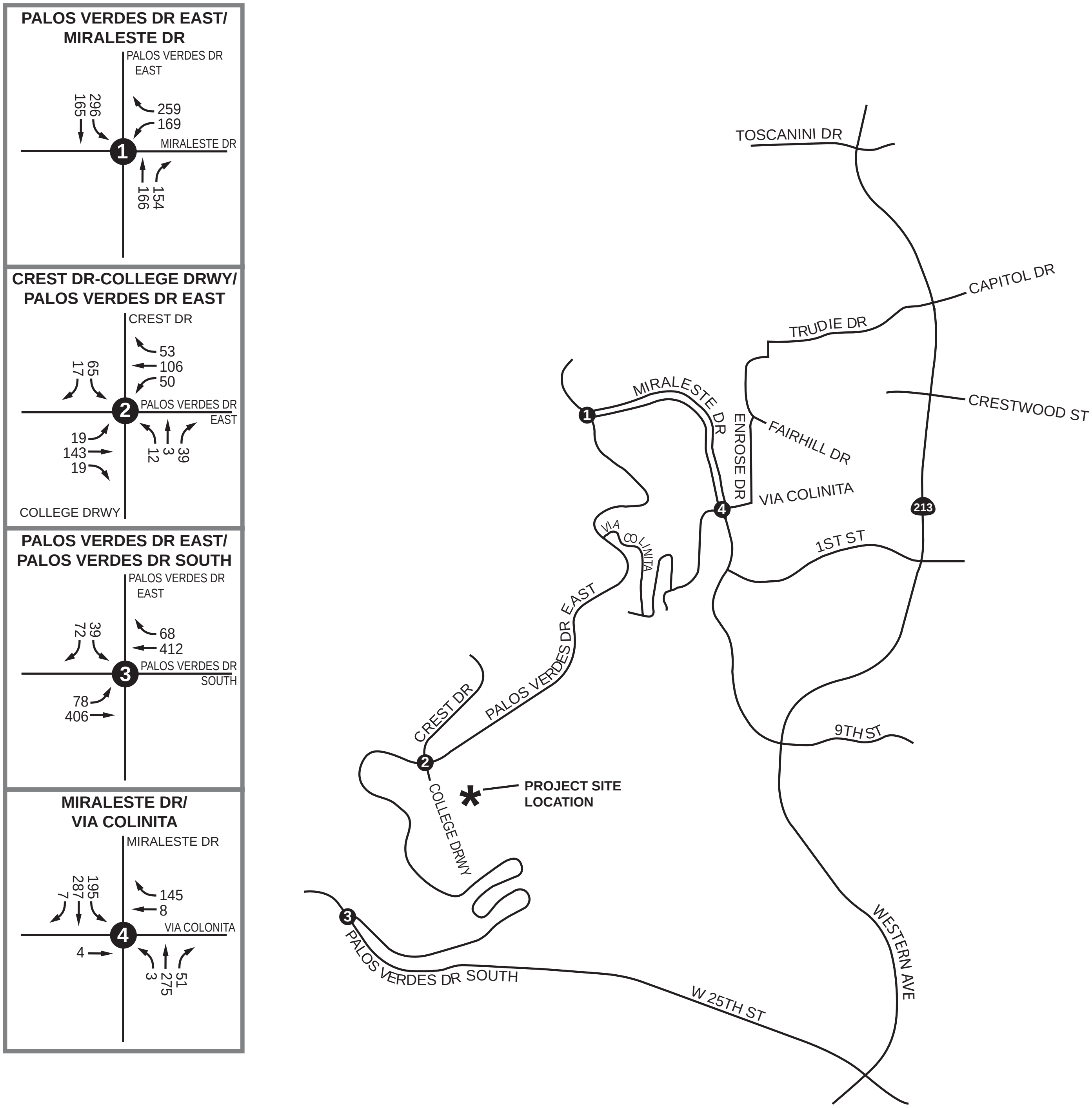
Exhibit A-5




Legend:

XX Saturday Mid-Day Peak Hour Volumes

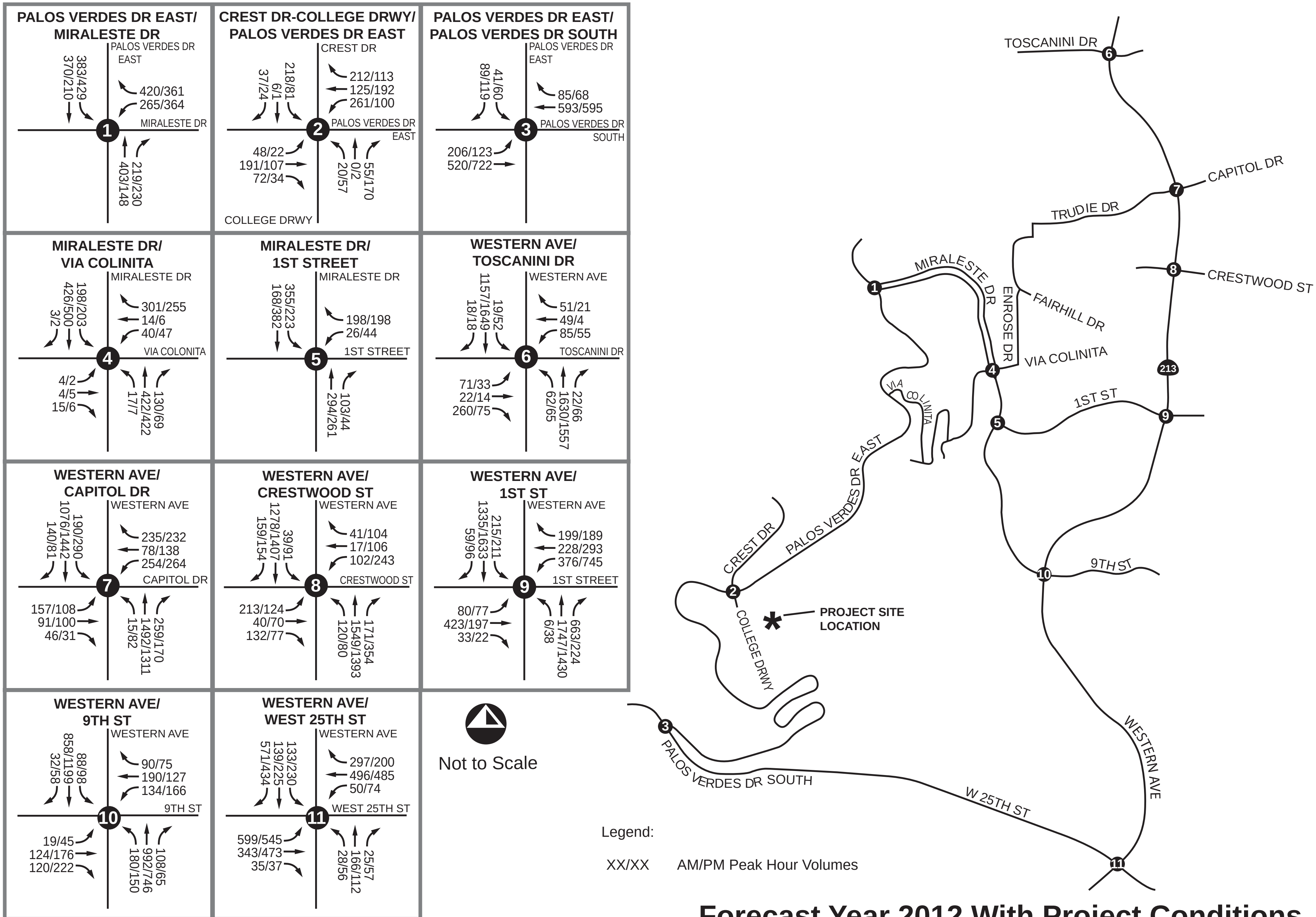
Not to Scale

RBF

# Existing Plus Marymount Project Conditions
# Saturday Mid-Day Peak Hour Intersection Volumes

H:\pdata\10104089\Traffic\Exhibits\DEC_2009\ExhA-06.ai DEC/2009

Exhibit A-6

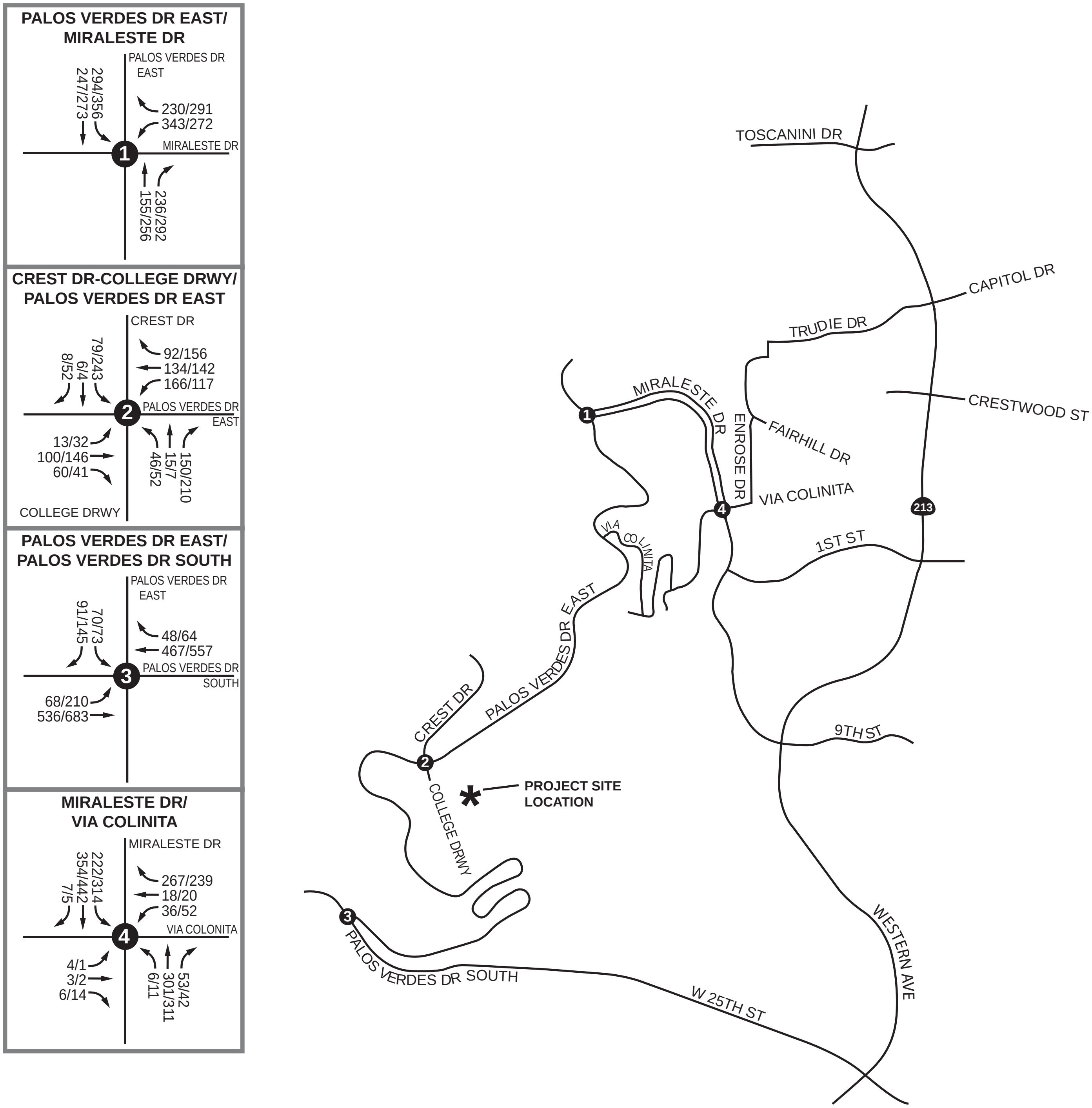



# Forecast Year 2012 With Project Conditions
# Weekday AM & PM Peak Hour Intersection Volumes

RBF

H:\pdata\10104089\Traffic\Exhibits\DEC_2009\ExhA-07.ai DEC/2009

Exhibit A-7




Legend:

XX/XX Weekday Mid-Day 11:00 AM-1:00 PM/Afternoon 2:00-4:00 PM Peak Hour Volumes

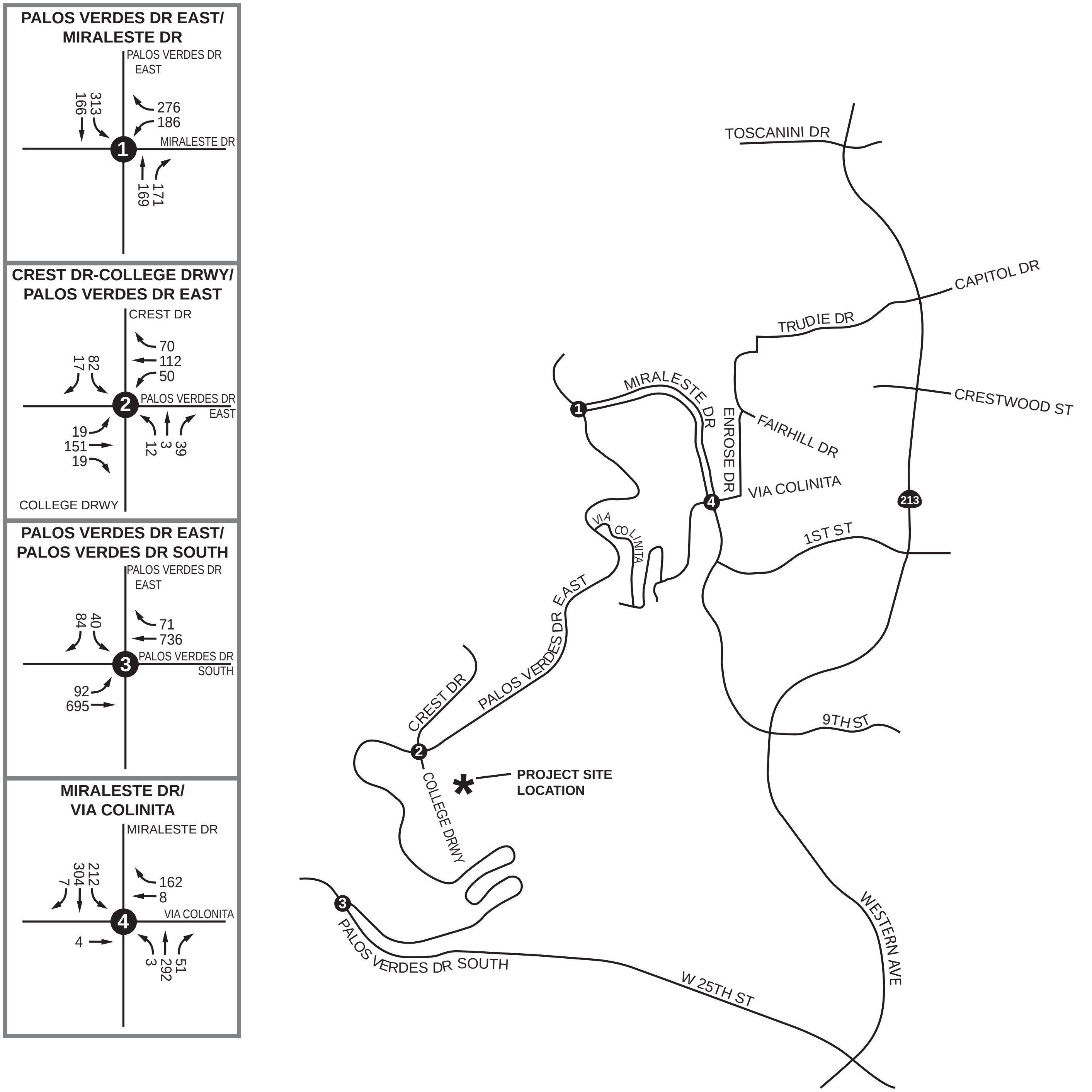
Not to Scale

RBF

# Forecast Year 2012 With Project Conditions Weekday Mid-Day 11:00 AM-1:00 PM & Afternoon 2:00-4:00 PM Peak Hour Intersection Volumes

H:\pdata\10104089\Traffic\Exhibits\DEC_2009\ExhA-08.ai DEC/2009

Exhibit A-8




Legend:

XX Saturday Mid-Day Peak Hour Volumes

Not to Scale

RBF

# Forecast Year 2012 With Project Conditions
# Saturday Mid-Day Peak Hour Intersection Volumes

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Exhibit A-9

# APPENDIX B
# LOS Analysis Sheets

# Existing Conditions

```
----------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                          EXISTING CONDITIONS
                             AM PEAK HOUR
----------------------------------------------------------------------------------
                    Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
**********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
**********************************************************************************
Average Delay (sec/veh):     90.7       Worst Case Level Of Service: F[287.9]
**********************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign         Stop Sign
Rights:           Include          Include          Include           Include
Lanes:        0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  397   180   379  351     0     0    0     0   156    0   416
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  397   180   379  351     0     0    0     0   156    0   416
Added Vol:      0    0     2     0    1     0     0    0     0     8    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  397   182   379  352     0     0    0     0   164    0   416
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  432   198   412  383     0     0    0     0   178    0   452
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  432   198   412  383     0     0    0     0   178    0   452
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   629 xxxx xxxxx  xxxx xxxx xxxxx  1737 xxxx   530
Potent Cap.: xxxx xxxx xxxxx   963 xxxx xxxxx  xxxx xxxx xxxxx    97 xxxx   553
Move Cap.:   xxxx xxxx xxxxx   963 xxxx xxxxx  xxxx xxxx xxxxx    65 xxxx   553
Volume/Cap:  xxxx xxxx  xxxx  0.43 xxxx  xxxx  xxxx xxxx  xxxx  2.76 xxxx  0.82
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   2.2 xxxx xxxxx  xxxx xxxx xxxxx  17.9 xxxx   8.2
Control Del:xxxxx xxxx xxxxx  11.5 xxxx xxxxx xxxxx xxxx xxxxx 930.9 xxxx  34.4
LOS by Move:    *    *     *     B    *     *     *    *     *     F    *     D
Movement:    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            287.9
ApproachLOS:        *                *                *                F
**********************************************************************************
Note: Queue reported is the number of cars per lane.
**********************************************************************************
```





```
----------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                          EXISTING CONDITIONS
                             AM PEAK HOUR
----------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
**********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
**********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.436
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         30               Level Of Service:                  A
**********************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted         Permitted
Rights:          Include          Include          Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    0  1  0  0  1    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       6    0    15   214    6    37    48  185    31   139  117   208
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    6    0    15   214    6    37    48  185    31   139  117   208
Added Vol:      1    0     2     0    0     0     0    0     3    10    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    7    0    17   214    6    37    48  185    34   149  117   208
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     8    0    18   233    7    40    52  201    37   162  127   226
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    8    0    18   233    7    40    52  201    37   162  127   226
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    8    0    18   233    7    40    52  201    37   162  127   226
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.29 0.00  0.71  0.97 0.03  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:   467    0  1133  1556   44  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.02  0.15 0.15  0.03  0.03 0.06  0.02  0.10 0.04  0.14
Crit Moves:             ****  ****             ****                         ****
**********************************************************************************
```

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                            EXISTING CONDITIONS
                               AM PEAK HOUR
-------------------------------------------------------------------------------

                    Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
*******************************************************************************
Average Delay (sec/veh):      3.1       Worst Case Level Of Service: C[ 19.0]
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  0  0  0   1  0  0  0  1   1  0  1  0  0   0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   27    0    74  188  384     0     0  466    52
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0   27    0    74  188  384     0     0  466    52
Added Vol:      0    0     0    1    0     0    1    0     0     0    0     3
PasserByVol:    0    0     0    0    0     0    0    0     0     0    0     0
Initial Fut:    0    0     0   28    0    74  189  384     0     0  466    55
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0   30    0    80  205  417     0     0  507    60
Reduct Vol:     0    0     0    0    0     0    0    0     0     0    0     0
FinalVolume:    0    0     0   30    0    80  205  417     0     0  507    60
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1335 xxxx   507   566 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   171 xxxx   570  1016 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   145 xxxx   570  1016 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.21 xxxx  0.14  0.20 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.8 xxxx   0.5   0.8 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  36.4 xxxx  12.4   9.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     E    *     B     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      xxxxxx            19.0            xxxxxx            xxxxxx
ApproachLOS:        *                 C                 *                 *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```





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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                            EXISTING CONDITIONS
                               AM PEAK HOUR
-------------------------------------------------------------------------------

                    Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #5 MIRALESTE DRIVE/1ST STREET
*******************************************************************************
Average Delay (sec/veh):      5.6       Worst Case Level Of Service: B[ 14.7]
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:       0  0  1  0  1   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  284   103  342  163     0    0    0     0    26    0   164
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  284   103  342  163     0    0    0     0    26    0   164
Added Vol:      0    1     0    1    0     0    0    0     0     0    0     3
PasserByVol:    0    0     0    0    0     0    0    0     0     0    0     0
Initial Fut:    0  285   103  343  163     0    0    0     0    26    0   167
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  310   112  373  177     0    0    0     0    28    0   182
Reduct Vol:     0    0     0    0    0     0    0    0     0     0    0     0
FinalVolume:    0  310   112  373  177     0    0    0     0    28    0   182
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   422 xxxx xxxxx  xxxx xxxx xxxxx  1233 xxxx   310
Potent Cap.: xxxx xxxx xxxxx  1148 xxxx xxxxx  xxxx xxxx xxxxx   197 xxxx   735
Move Cap.:   xxxx xxxx xxxxx  1148 xxxx xxxxx  xxxx xxxx xxxxx   148 xxxx   735
Volume/Cap:  xxxx xxxx  xxxx  0.32 xxxx  xxxx  xxxx xxxx  xxxx  0.19 xxxx  0.25
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.4 xxxx xxxxx  xxxx xxxx xxxxx   0.7 xxxx   1.0
Control Del:xxxxx xxxx xxxxx   9.6 xxxx xxxxx xxxxx xxxx xxxxx  35.1 xxxx  11.5
LOS by Move:    *    *     *     A    *     *     *    *     *     E    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      xxxxxx            xxxxxx            xxxxxx             14.7
ApproachLOS:        *                 *                 *                 B
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

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                HCS+: Unsignalized Intersections Release 5.2

_______________________TWO-WAY STOP CONTROL SUMMARY___________________________

Analyst:              DK
Agency/Co.:           RBF
Date Performed:       7/23/2007
Analysis Time Period: AM Peak Hour
Intersection:         Miraleste/Via Colinita
Jurisdiction:         RPV
Units: U. S. Customary
Analysis Year:        Existing
Project ID:  Marymount
East/West Street:     Via Colinita
North/South Street:   Miraleste Dr
Intersection Orientation: NS               Study period (hrs):  0.25

______________________Vehicle Volumes and Adjustments__________________________
Major Street:  Approach       Northbound              Southbound
               Movement     1      2      3     |  4      5      6
                            L      T      R     |  L      T      R
_______________________________________________________________________________
Volume                      17     381    130      173    410    3
Peak-Hour Factor, PHF       0.92   0.92   0.92     0.92   0.92   0.92
Hourly Flow Rate, HFR       18     414    141      188    445    3
Percent Heavy Vehicles      0      --     --       0      --     --
Median Type/Storage         Raised curb          / 2
RT Channelized?                          No
Lanes                          0   1    1             1   1    0
Configuration                   LT     R               L      TR
Upstream Signal?                   No                     No
_______________________________________________________________________________
Minor Street:  Approach       Westbound               Eastbound
               Movement     7      8      9     |  10     11     12
                            L      T      R     |  L      T      R
_______________________________________________________________________________
Volume                      40     14     237      4      4      15
Peak Hour Factor, PHF       0.92   0.92   0.92     0.92   0.92   0.92
Hourly Flow Rate, HFR       43     15     257      4      4      16
Percent Heavy Vehicles      0      0      0        0      0      0
Percent Grade (%)                  0                      0
Flared Approach:  Exists?/Storage               /              No     /
Lanes                          0   1    1            0    1    0
Configuration                   LT     R                 LTR
_______________________________________________________________________________

__________________Delay, Queue Length, and Level of Service____________________
Approach             NB     SB          Westbound             Eastbound
Movement             1      4    |  7      8      9    |  10     11     12
Lane Config          LT     L    |  LT            R    |         LTR
_______________________________________________________________________________
v (vph)              18     188     58            257           24
C(m) (vph)           1123   1026    251           643           239
v/c                  0.02   0.18    0.23          0.40          0.10
95% queue length     0.05   0.67    0.87          1.92          0.33
Control Delay        8.3    9.3     23.6          14.3          21.7
LOS                   A      A      C              B             C
Approach Delay                             16.0                 21.7
Approach LOS                                C                    C
_______________________________________________________________________________
```

```
                HCS+: Unsignalized Intersections Release 5.2

Phone:                                        Fax:
E-Mail:

______________________TWO-WAY STOP CONTROL(TWSC) ANALYSIS_____________________

Analyst:              DK
Agency/Co.:           RBF
Date Performed:       7/23/2007
Analysis Time Period: AM Peak Hour
Intersection:         Miraleste/Via Colinita
Jurisdiction:         RPV
Units: U. S. Customary
Analysis Year:        Existing
Project ID:  Marymount
East/West Street:     Via Colinita
North/South Street:   Miraleste Dr
Intersection Orientation: NS               Study period (hrs):  0.25

________________________Vehicle Volumes and Adjustments________________________
Major Street Movements      1      2      3      4      5      6
                            L      T      R      L      T      R
_______________________________________________________________________________
Volume                      17     381    130    173    410    3
Peak-Hour Factor, PHF       0.92   0.92   0.92   0.92   0.92   0.92
Peak-15 Minute Volume       5      104    35     47     111    1
Hourly Flow Rate, HFR       18     414    141    188    445    3
Percent Heavy Vehicles      0      --     --     0      --     --
Median Type/Storage          Raised curb          / 2
RT Channelized?                          No
Lanes                          0   1    1           1   1    0
Configuration                   LT     R             L      TR
Upstream Signal?                   No                   No
_______________________________________________________________________________
Minor Street Movements      7      8      9      10     11     12
                            L      T      R      L      T      R
_______________________________________________________________________________
Volume                      40     14     237    4      4      15
Peak Hour Factor, PHF       0.92   0.92   0.92   0.92   0.92   0.92
Peak-15 Minute Volume       11     4      64     1      1      4
Hourly Flow Rate, HFR       43     15     257    4      4      16
Percent Heavy Vehicles      0      0      0      0      0      0
Percent Grade (%)                  0                    0
Flared Approach:  Exists?/Storage               /              No     /
RT Channelized?                          No
Lanes                          0   1    1           0   1    0
Configuration                   LT     R               LTR
_______________________________________________________________________________

______________________Pedestrian Volumes and Adjustments_______________________
Movements                     13     14     15     16
_______________________________________________________________________________
Flow (ped/hr)                 0      0      0      0
Lane Width (ft)               12.0   12.0   12.0   12.0
Walking Speed (ft/sec)        4.0    4.0    4.0    4.0
Percent Blockage              0      0      0      0
_______________________________________________________________________________
```

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 414 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5
Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 448 | 555 | 1282 | 1274 | 414 | 1478 | 1413 | 446 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 450 | 832 | 450 | 824 | 822 | 656 | 822 | 591 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 414 | 446 |
| Potential Capacity | 643 | 617 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 643 | 617 |
| Probability of Queue free St. | 0.60 | 0.97 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 555 | 448 |
| Potential Capacity | 1026 | 1123 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1026 | 1123 |
| Probability of Queue free St. | 0.82 | 0.98 |
| Maj L-Shared Prob Q free St. | | 0.98 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1274 | 1413 |
| Potential Capacity | 169 | 139 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.80 | 0.80 |
| Movement Capacity | 135 | 111 |
| Probability of Queue free St. | 0.94 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1282 | 1478 |
| Potential Capacity | 144 | 105 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.79 | 0.76 |
| Maj. L, Min T Adj. Imp Factor. | 0.83 | 0.81 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.49 |
| Movement Capacity | 117 | 51 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 450 | 822 |
| Potential Capacity | 575 | 391 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.98 | 0.82 |
| Movement Capacity | 563 | 319 |
| Probability of Queue free St. | 0.97 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 824 | 591 |
| Potential Capacity | 390 | 498 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.98 |
| Movement Capacity | 319 | 487 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1274 | 1413 |
| Potential Capacity | 169 | 139 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.80 | 0.80 |
| Movement Capacity | 135 | 111 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.58 | 1.11 |
| C t | 270 | 230 |
| Probability of Queue free St. | 0.94 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 450 | 822 |
| Potential Capacity | 592 | 371 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.98 | 0.82 |
| Movement Capacity | 579 | 303 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 832 | 656 |
| Potential Capacity | 366 | 458 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.57 |
| Movement Capacity | 288 | 262 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1282 | 1478 |
| Potential Capacity | 144 | 105 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.79 | 0.76 |
| Maj. L, Min T Adj. Imp Factor. | 0.83 | 0.81 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.49 |
| Movement Capacity | 117 | 51 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.02 | 10.96 |
| C t | 245 | 70 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | 43 | 15 | 257 | 4 | 4 | 16 |
| Movement Capacity (vph) | 245 | 270 | 643 | 70 | 230 | 617 |
| Shared Lane Capacity (vph) | 251 | | | | 239 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | 245 | 270 | 643 | 70 | 230 | 617 |
| Volume | 43 | 15 | 257 | 4 | 4 | 16 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 251 | | | | 239 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 18 | 188 | 58 | | 257 | | 24 | |
| C(m) (vph) | 1123 | 1026 | 251 | | 643 | | 239 | |
| v/c | 0.02 | 0.18 | 0.23 | | 0.40 | | 0.10 | |
| 95% queue length | 0.05 | 0.67 | 0.87 | | 1.92 | | 0.33 | |
| Control Delay | 8.3 | 9.3 | 23.6 | | 14.3 | | 21.7 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 16.0 | | | 21.7 | |
| Approach LOS | | | | C | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.98 | 0.82 |
| v(il), Volume for stream 2 or 5 | 414 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.98 | |
| d(M,LT), Delay for stream 1 or 4 | 8.3 | 9.3 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.2 | |

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.812
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        69              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  1  1  0   1  0  1  1  0   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     59 1382    21    16  878    15    65   21   249    81   47    46
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  59 1382    21    16  878    15    65   21   249    81   47    46
Added Vol:     0    1     0     0    5     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  59 1383    21    16  883    15    65   21   249    81   47    46
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   64 1503    23    17  960    16    71   23   271    88   51    50
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  64 1503    23    17  960    16    71   23   271    88   51    50
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  64 1503    23    17  960    16    71   23   271    88   51    50
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.97  0.03  1.00 1.97  0.03  0.76 0.24  1.00  0.63 0.37  1.00
Final Sat.:  1600 3152    48  1600 3147    53  1209  391  1600  1012  588  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.48  0.48  0.01 0.31  0.31  0.04 0.06  0.17  0.06 0.09  0.03
Crit Moves:       ****        ****                            ****  ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.913
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       107              Level Of Service:                  E
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  2  0  1   0  1  0  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     13 1332   208   132  907    85   132   74    44   190   53   165
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  13 1332   208   132  907    85   132   74    44   190   53   165
Added Vol:     0    0     0     0    1     4     1    0     0     1    1     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  13 1332   208   132  908    89   133   74    44   191   54   165
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   14 1448   226   143  987    97   145   80    48   208   59   179
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  14 1448   226   143  987    97   145   80    48   208   59   179
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  14 1448   226   143  987    97   145   80    48   208   59   179
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.64 0.36  1.00  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1028  572  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.45  0.14  0.09 0.31  0.06  0.09 0.14  0.03  0.13 0.04  0.11
Crit Moves:       ****        ****                  ****        ****
********************************************************************************
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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                                AM PEAK HOUR
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
*******************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        0.859
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       83              Level Of Service:                 D
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   0  0  1! 0  0   1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      93 1394   149    23 1107   128   179   31   104    83   10    25
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   93 1394   149    23 1107   128   179   31   104    83   10    25
Added Vol:      0    0     0     0    2     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   93 1394   149    23 1109   128   179   31   104    83   10    25
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   101 1515   162    25 1205   139   195   34   113    90   11    27
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  101 1515   162    25 1205   139   195   34   113    90   11    27
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  101 1515   162    25 1205   139   195   34   113    90   11    27
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.57 0.10  0.33  1.00 0.29  0.71
Final Sat.:  1600 3200  1600  1600 3200  1600   912  158   530  1600  457  1143
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.47  0.10  0.02 0.38  0.09  0.12 0.21  0.21  0.06 0.02  0.02
Crit Moves:       ****        ****                  ****        ****
*******************************************************************************
```





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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                                AM PEAK HOUR
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
            Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
*******************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        1.414
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180              Level Of Service:                 F
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted       Prot+Permit       Permitted       Prot+Permit
Rights:            Ovl            Include          Include            Ovl
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  1  1  0   1  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       6 1612   635   189 1193    20    60  402    32   360  211   176
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    6 1612   635   189 1193    20    60  402    32   360  211   176
Added Vol:      0    0     0     0    0     2     0    0     0     0    1     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    6 1612   635   189 1193    22    60  402    32   360  212   176
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     7 1752   690   205 1297    24    65  437    35   391  230   191
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    7 1752   690   205 1297    24    65  437    35   391  230   191
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    7 1752   690   205 1297    24    65  437    35   391  230   191
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 1.96  0.04  1.00 0.93  0.07  1.00 1.00  1.00
Final Sat.:  1375 2750  1375  1375 2700    50  1375 1274   101  1375 1375  1375
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.64  0.50  0.15 0.48  0.48  0.05 0.34  0.34  0.28 0.17  0.14
Crit Volume:       876         205                         472   391
Crit Moves:       ****        ****                        ****  ****
*******************************************************************************
```

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                              EXISTING CONDITIONS
                                 AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.607
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       51              Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     172  902   103     75  760    29     16  116   115    128  174    76
Growth Adj:  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Initial Bse:  172  902   103     75  760    29     16  116   115    128  174    76
Added Vol:      0    0     0      0    0     0      0    0     0      0    1     0
PasserByVol:    0    0     0      0    0     0      0    0     0      0    0     0
Initial Fut:  172  902   103     75  760    29     16  116   115    128  175    76
User Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92   0.92 0.92  0.92   0.92 0.92  0.92   0.92 0.92  0.92
PHF Volume:   187  980   112     82  826    32     17  126   125    139  190    83
Reduct Vol:     0    0     0      0    0     0      0    0     0      0    0     0
Reduced Vol:  187  980   112     82  826    32     17  126   125    139  190    83
PCE Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
FinalVolume:  187  980   112     82  826    32     17  126   125    139  190    83
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425   1425 1425  1425   1425 1425  1425   1425 1425  1425
Adjustment:  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Lanes:       1.00 2.00  1.00   1.00 2.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Final Sat.:  1425 2850  1425   1425 2850  1425   1425 1425  1425   1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.34  0.08   0.06 0.29  0.02   0.01 0.09  0.09   0.10 0.13  0.06
Crit Volume:  187                   413               126          139
Crit Moves:  ****                  ****              ****         ****
********************************************************************************
```





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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                              EXISTING CONDITIONS
                                 AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.681
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       63              Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Protected        Protected
Rights:           Include            Ovl            Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    2  0  2  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      27  156    24    112  131   508    544  215    34     48  355   274
Growth Adj:  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Initial Bse:   27  156    24    112  131   508    544  215    34     48  355   274
Added Vol:      0    0     0      0    0     0      0    1     0      0    3     0
PasserByVol:    0    0     0      0    0     0      0    0     0      0    0     0
Initial Fut:   27  156    24    112  131   508    544  216    34     48  358   274
User Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92   0.92 0.92  0.92   0.92 0.92  0.92   0.92 0.92  0.92
PHF Volume:    29  170    26    122  142   552    591  235    37     52  389   298
Reduct Vol:     0    0     0      0    0     0      0    0     0      0    0     0
Reduced Vol:   29  170    26    122  142   552    591  235    37     52  389   298
PCE Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.10 1.00  1.00   1.00 1.00  1.00
FinalVolume:   29  170    26    122  142   552    650  235    37     52  389   298
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425   1425 1425  1425   1425 1425  1425   1425 1425  1425
Adjustment:  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Lanes:       1.00 2.00  1.00   1.00 2.00  1.00   2.00 2.00  1.00   1.00 1.00  1.00
Final Sat.:  1425 2850  1425   1425 2850  1425   2850 2850  1425   1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.06  0.02   0.09 0.05  0.39   0.23 0.08  0.03   0.04 0.27  0.21
Crit Volume:   29                         552      0                     389
Crit Moves:  ****                        ****   ****                   ****
********************************************************************************
```

```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                                PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
*******************************************************************************
Average Delay (sec/veh):    174.6      Worst Case Level Of Service: F[414.9]
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  138   157   419  200     0     0    0     0   293    0   351
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  138   157   419  200     0     0    0     0   293    0   351
Added Vol:       0    1     3     0    1     0     0    0     0     7    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0  139   160   419  201     0     0    0     0   300    0   351
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  151   174   455  218     0     0    0     0   326    0   382
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  151   174   455  218     0     0    0     0   326    0   382
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   325 xxxx xxxxx  xxxx xxxx xxxxx  1367 xxxx   238
Potent Cap.: xxxx xxxx xxxxx  1246 xxxx xxxxx  xxxx xxxx xxxxx   164 xxxx   806
Move Cap.:   xxxx xxxx xxxxx  1246 xxxx xxxxx  xxxx xxxx xxxxx   117 xxxx   806
Volume/Cap:  xxxx xxxx  xxxx  0.37 xxxx  xxxx  xxxx xxxx  xxxx  2.79 xxxx  0.47
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.7 xxxx xxxxx  xxxx xxxx xxxxx  30.2 xxxx   2.6
Control Del:xxxxx xxxx xxxxx   9.5 xxxx xxxxx xxxxx xxxx xxxxx 884.6 xxxx  13.4
LOS by Move:    *    *     *     A    *     *     *    *     *     F    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            414.9
ApproachLOS:        *                *                *                F
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```





```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                                PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
*******************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):        0.326
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        26               Level Of Service:                 A
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0   0  1  0  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       33    2    97    71    1    24    22  103    10    30  187   103
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    33    2    97    71    1    24    22  103    10    30  187   103
Added Vol:       1    0     4     0    0     0     0    0     3     8    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    34    2   101    71    1    24    22  103    13    38  187   103
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     37    2   110    77    1    26    24  112    14    41  203   112
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    37    2   110    77    1    26    24  112    14    41  203   112
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    37    2   110    77    1    26    24  112    14    41  203   112
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.25 0.01  0.74  0.99 0.01  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:    397   23  1180  1578   22  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.02 0.09  0.09  0.05 0.05  0.02  0.01 0.03  0.01  0.03 0.06  0.07
Crit Moves:        ****        ****             ****                        ****
*******************************************************************************
```

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                                PM PEAK HOUR
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      2.9       Worst Case Level Of Service: C[ 17.8]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   1  0  0  0  1   1  0  1  0  0   0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0     0    40    0   106   111  549     0     0  391    49
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    0     0    40    0   106   111  549     0     0  391    49
Added Vol:       0    0     0     1    0     0     1    0     0     0    0     2
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0    0     0    41    0   106   112  549     0     0  391    51
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0    0     0    45    0   115   122  597     0     0  425    55
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0    0     0    45    0   115   122  597     0     0  425    55
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1265 xxxx   425   480 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   189 xxxx   634  1093 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   172 xxxx   634  1093 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.26 xxxx  0.18  0.11 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.0 xxxx   0.7   0.4 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  33.0 xxxx  11.9   8.7 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     D    *     B     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             17.8            xxxxxx           xxxxxx
ApproachLOS:        *                 C                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```





```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                                PM PEAK HOUR
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #5 MIRALESTE DRIVE/1ST STREET
********************************************************************************
Average Delay (sec/veh):      4.5       Worst Case Level Of Service: B[ 14.6]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:        0  0  1  0  1   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  251    44   199  372     0     0    0     0    44    0   174
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  251    44   199  372     0     0    0     0    44    0   174
Added Vol:       0    1     0     1    0     0     0    0     0     0    0     2
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0  252    44   200  372     0     0    0     0    44    0   176
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  274    48   217  404     0     0    0     0    48    0   191
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  274    48   217  404     0     0    0     0    48    0   191
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   322 xxxx xxxxx  xxxx xxxx xxxxx  1113 xxxx   274
Potent Cap.: xxxx xxxx xxxxx  1250 xxxx xxxxx  xxxx xxxx xxxxx   233 xxxx   770
Move Cap.:   xxxx xxxx xxxxx  1250 xxxx xxxxx  xxxx xxxx xxxxx   202 xxxx   770
Volume/Cap:  xxxx xxxx  xxxx  0.17 xxxx  xxxx  xxxx xxxx  xxxx  0.24 xxxx  0.25
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.6 xxxx xxxxx  xxxx xxxx xxxxx   0.9 xxxx   1.0
Control Del:xxxxx xxxx xxxxx   8.5 xxxx xxxxx xxxxx xxxx xxxxx  28.3 xxxx  11.2
LOS by Move:     *    *     *     A    *     *     *    *     *     D    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx             14.6
ApproachLOS:        *                *                *                 B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.2

## TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: PM PEAK HOUR
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: Existing
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 7 | 392 | 69 | 156 | 467 | 2 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 7 | 426 | 74 | 169 | 507 | 2 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 47 | 6 | 211 | 2 | 5 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 51 | 6 | 229 | 2 | 5 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 7 | 169 | 57 | | 229 | | 13 | |
| C(m) (vph) | 1066 | 1075 | 260 | | 633 | | 284 | |
| v/c | 0.01 | 0.16 | 0.22 | | 0.36 | | 0.05 | |
| 95% queue length | 0.02 | 0.56 | 0.82 | | 1.65 | | 0.14 | |
| Control Delay | 8.4 | 9.0 | 22.7 | | 13.9 | | 18.3 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 15.6 | | | 18.3 | |
| Approach LOS | | | | C | | | C | |

HCS+: Unsignalized Intersections Release 5.2
Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: PM PEAK HOUR
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: Existing
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 7 | 392 | 69 | 156 | 467 | 2 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 2 | 107 | 19 | 42 | 127 | 1 |
| Hourly Flow Rate, HFR | 7 | 426 | 74 | 169 | 507 | 2 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 47 | 6 | 211 | 2 | 5 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 13 | 2 | 57 | 1 | 1 | 2 |
| Hourly Flow Rate, HFR | 51 | 6 | 229 | 2 | 5 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|
| S2 Left-Turn | | | | | | | |
| Through | | | | | | | |
| S5 Left-Turn | | | | | | | |
| Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 426 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | 0.000 | | 0.000 | |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5
Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 509 | 500 | 1292 | 1287 | 426 | 1440 | 1360 | 508 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 440 | 852 | 440 | 847 | 846 | 594 | 846 | 514 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 426 | 508 |
| Potential Capacity | 633 | 569 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 633 | 569 |
| Probability of Queue free St. | 0.64 | 0.99 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 500 | 509 |
| Potential Capacity | 1075 | 1066 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1075 | 1066 |
| Probability of Queue free St. | 0.84 | 0.99 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1287 | 1360 |
| Potential Capacity | 166 | 150 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.84 |
| Movement Capacity | 139 | 125 |
| Probability of Queue free St. | 0.98 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1292 | 1440 |
| Potential Capacity | 141 | 112 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.82 | 0.82 |
| Maj. L, Min T Adj. Imp Factor. | 0.86 | 0.86 |
| Cap. Adj. factor due to Impeding mvmnt | 0.85 | 0.55 |
| Movement Capacity | 120 | 61 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 440 | 846 |
| Potential Capacity | 581 | 381 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.84 |
| Movement Capacity | 576 | 321 |
| Probability of Queue free St. | 0.99 | 0.98 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 847 | 514 |
| Potential Capacity | 381 | 539 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.99 |
| Movement Capacity | 321 | 534 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1287 | 1360 |
| Potential Capacity | 166 | 150 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.84 |
| Movement Capacity | 139 | 125 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.50 | 0.82 |
| C t | 281 | 255 |
| Probability of Queue free St. | 0.98 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 440 | 846 |
| Potential Capacity | 600 | 360 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.84 |
| Movement Capacity | 595 | 303 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 852 | 594 |
| Potential Capacity | 357 | 495 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.63 |
| Movement Capacity | 293 | 310 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1292 | 1440 |
| Potential Capacity | 141 | 112 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.82 | 0.82 |
| Maj. L, Min T Adj. Imp Factor. | 0.86 | 0.86 |
| Cap. Adj. factor due to Impeding mvmnt | 0.85 | 0.55 |
| Movement Capacity | 120 | 61 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.86 | 3.03 |
| C t | 258 | 128 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | 51 | 6 | 229 | 2 | 5 | 6 |
| Movement Capacity (vph) | 258 | 281 | 633 | 128 | 255 | 569 |
| Shared Lane Capacity (vph) | 260 | | | | 284 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | 258 | 281 | 633 | 128 | 255 | 569 |
| Volume | 51 | 6 | 229 | 2 | 5 | 6 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 260 | | | | 284 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 7 | 169 | 57 | | 229 | | 13 | |
| C(m) (vph) | 1066 | 1075 | 260 | | 633 | | 284 | |
| v/c | 0.01 | 0.16 | 0.22 | | 0.36 | | 0.05 | |
| 95% queue length | 0.02 | 0.56 | 0.82 | | 1.65 | | 0.14 | |
| Control Delay | 8.4 | 9.0 | 22.7 | | 13.9 | | 18.3 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 15.6 | | | 18.3 | |
| Approach LOS | | | | C | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.99 | 0.84 |
| v(il), Volume for stream 2 or 5 | 426 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.4 | 9.0 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.1 | |

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                                PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        0.701
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       50             Level Of Service:                 C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  1  1  0   1  0  1  1  0   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       62 1239    63    49 1375    16    31   13    72    53    4    19
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    62 1239    63    49 1375    16    31   13    72    53    4    19
Added Vol:       0    2     0     0    4     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    62 1241    63    49 1379    16    31   13    72    53    4    19
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     67 1349    68    53 1499    17    34   14    78    58    4    21
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    67 1349    68    53 1499    17    34   14    78    58    4    21
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    67 1349    68    53 1499    17    34   14    78    58    4    21
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        1.00 1.90  0.10  1.00 1.98  0.02  0.70 0.30  1.00  0.93 0.07  1.00
Final Sat.:   1600 3045   155  1600 3163    37  1127  473  1600  1488  112  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.04 0.44  0.44  0.03 0.47  0.47  0.02 0.03  0.05  0.04 0.04  0.01
Crit Moves:   ****                  ****                    ****  ****
********************************************************************************
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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                                PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        0.801
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       67             Level Of Service:                 D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   0  1  0  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       75 1098    86   185 1294    50    76   65    30   153  104   162
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    75 1098    86   185 1294    50    76   65    30   153  104   162
Added Vol:       0    1     0     0    1     3     2    1     0     1    1     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    75 1099    86   185 1295    53    78   66    30   154  105   162
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     82 1195    93   201 1408    58    85   72    33   167  114   176
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    82 1195    93   201 1408    58    85   72    33   167  114   176
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    82 1195    93   201 1408    58    85   72    33   167  114   176
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        1.00 2.00  1.00  1.00 2.00  1.00  0.54 0.46  1.00  1.00 1.00  1.00
Final Sat.:   1600 3200  1600  1600 3200  1600   867  733  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.05 0.37  0.06  0.13 0.44  0.04  0.05 0.10  0.02  0.10 0.07  0.11
Crit Moves:        ****        ****                  ****        ****
********************************************************************************
```

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 WESTERN AVENUE/CRESTWOOD STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 0.812
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 69 Level Of Service: D

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Permitted | | | Permitted | | | Permitted | | | Permitted | |
| Rights: | | Include | | | Include | | | Include | | | Include | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 0 0 1! 0 0 | | | 1 0 0 1 0 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 47 | 1197 | 302 | 50 | 1246 | 117 | 89 | 49 | 45 | 194 | 82 | 61 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 47 | 1197 | 302 | 50 | 1246 | 117 | 89 | 49 | 45 | 194 | 82 | 61 |
| Added Vol: | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 47 | 1198 | 302 | 50 | 1248 | 117 | 89 | 49 | 45 | 194 | 82 | 61 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 51 | 1302 | 328 | 54 | 1357 | 127 | 97 | 53 | 49 | 211 | 89 | 66 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 51 | 1302 | 328 | 54 | 1357 | 127 | 97 | 53 | 49 | 211 | 89 | 66 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 51 | 1302 | 328 | 54 | 1357 | 127 | 97 | 53 | 49 | 211 | 89 | 66 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.49 | 0.27 | 0.24 | 1.00 | 0.57 | 0.43 |
| Final Sat.: | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 778 | 428 | 393 | 1600 | 917 | 683 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.41 | 0.21 | 0.03 | 0.42 | 0.08 | 0.06 | 0.12 | 0.12 | 0.13 | 0.10 | 0.10 |
| Crit Moves: | **** | | | | **** | | | **** | | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #9 WESTERN AVENUE/1ST STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 1.317
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Permitted | | | Prot+Permit | | | Permitted | | | Prot+Permit | |
| Rights: | | Ovl | | | Include | | | Include | | | Ovl | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | | 1 0 2 0 1 | | | 1 0 1 1 0 | | | 1 0 0 1 0 | | | 1 0 1 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 36 | 1259 | 215 | 178 | 1458 | 61 | 42 | 184 | 21 | 714 | 276 | 156 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 36 | 1259 | 215 | 178 | 1458 | 61 | 42 | 184 | 21 | 714 | 276 | 156 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 36 | 1259 | 215 | 178 | 1458 | 63 | 43 | 184 | 21 | 714 | 277 | 156 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 39 | 1368 | 234 | 193 | 1585 | 68 | 47 | 200 | 23 | 776 | 301 | 170 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 39 | 1368 | 234 | 193 | 1585 | 68 | 47 | 200 | 23 | 776 | 301 | 170 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 39 | 1368 | 234 | 193 | 1585 | 68 | 47 | 200 | 23 | 776 | 301 | 170 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.92 | 0.08 | 1.00 | 0.90 | 0.10 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2732 | 118 | 1425 | 1279 | 146 | 1425 | 1425 | 1425 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.48 | 0.16 | 0.14 | 0.58 | 0.58 | 0.03 | 0.16 | 0.16 | 0.54 | 0.21 | 0.12 |
| Crit Volume: | | 684 | | 193 | | | | 223 | | 776 | | |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                              EXISTING CONDITIONS
                                 PM PEAK HOUR
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.804
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      102              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     144  640    62    72 1076    51    38  164   213   159  117    50
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  144  640    62    72 1076    51    38  164   213   159  117    50
Added Vol:      0    0     0     0    0     0     0    0     0     0    1     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  144  640    62    72 1076    51    38  164   213   159  118    50
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   157  696    67    78 1170    55    41  178   232   173  128    54
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  157  696    67    78 1170    55    41  178   232   173  128    54
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  157  696    67    78 1170    55    41  178   232   173  128    54
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1425  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.24  0.05  0.05 0.41  0.04  0.03 0.13  0.16  0.12 0.09  0.04
Crit Volume:  157                    585                    232   173
Crit Moves:  ****                   ****                   ****  ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                              EXISTING CONDITIONS
                                 PM PEAK HOUR
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.622
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       53              Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Protected        Protected
Rights:          Include            Ovl             Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   2  0  2  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54  106    55   206  215   369   477  306    35    71  290   176
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   54  106    55   206  215   369   477  306    35    71  290   176
Added Vol:      0    0     0     0    0     0     0    1     0     0    2     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   54  106    55   206  215   369   477  307    35    71  292   176
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    59  115    60   224  234   401   518  334    38    77  317   191
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   59  115    60   224  234   401   518  334    38    77  317   191
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
FinalVolume:   59  115    60   224  234   401   570  334    38    77  317   191
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  2.00 2.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  2850 2850  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.04  0.04  0.16 0.08  0.28  0.20 0.12  0.03  0.05 0.22  0.13
Crit Volume:                60   224               285                     317
Crit Moves:               ****  ****              ****                    ****
********************************************************************************
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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS
WEEKDAY (11:00-1:00) PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE

Average Delay (sec/veh): 64.3 Worst Case Level Of Service: F[169.3]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 0 1 0 | | | 1 0 1 0 0 | | | 0 0 0 0 0 | | | 1 0 0 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 0 | 144 | 161 | 283 | 232 | 0 | 0 | 0 | 0 | 254 | 0 | 220 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 144 | 161 | 283 | 232 | 0 | 0 | 0 | 0 | 254 | 0 | 220 |
| Added Vol: | 0 | 1 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 7 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 145 | 164 | 283 | 233 | 0 | 0 | 0 | 0 | 261 | 0 | 220 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 158 | 178 | 308 | 253 | 0 | 0 | 0 | 0 | 284 | 0 | 239 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 158 | 178 | 308 | 253 | 0 | 0 | 0 | 0 | 284 | 0 | 239 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | xxxx | 6.2 |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | xxxx | 3.3 |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 336 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1115 | xxxx | 247 |
| Potent Cap.: | xxxx | xxxx | xxxxx | 1235 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 232 | xxxx | 797 |
| Move Cap.: | xxxx | xxxx | xxxxx | 1235 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 187 | xxxx | 797 |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.25 | xxxx | xxxx | xxxx | xxxx | xxxx | 1.51 | xxxx | 0.30 |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 1.0 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 18.0 | xxxx | 1.3 |
| Control Del: | xxxxx | xxxx | xxxxx | 8.9 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 302.3 | xxxx | 11.4 |
| LOS by Move: | * | * | * | A | * | * | * | * | * | F | * | B |
| Movement: | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | | xxxxxx | | | xxxxxx | | | xxxxxx | | | 169.3 | |
| ApproachLOS: | | * | | | * | | | * | | | F | |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS
WEEKDAY (11:00-1:00) PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST

Cycle (sec): 100 Critical Vol./Cap.(X): 0.314
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 1! 0 0 | | | 0 1 0 0 1 | | | 1 0 2 0 1 | | | 1 0 2 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 21 | 15 | 76 | 68 | 6 | 8 | 13 | 94 | 30 | 75 | 126 | 82 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 21 | 15 | 76 | 68 | 6 | 8 | 13 | 94 | 30 | 75 | 126 | 82 |
| Added Vol: | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 22 | 15 | 80 | 68 | 6 | 8 | 13 | 94 | 33 | 83 | 126 | 82 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 24 | 16 | 87 | 74 | 7 | 9 | 14 | 102 | 36 | 90 | 137 | 89 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 24 | 16 | 87 | 74 | 7 | 9 | 14 | 102 | 36 | 90 | 137 | 89 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 24 | 16 | 87 | 74 | 7 | 9 | 14 | 102 | 36 | 90 | 137 | 89 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.19 | 0.13 | 0.68 | 0.92 | 0.08 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 301 | 205 | 1094 | 1470 | 130 | 1600 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.08 | 0.08 | 0.05 | 0.05 | 0.01 | 0.01 | 0.03 | 0.02 | 0.06 | 0.04 | 0.06 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                              EXISTING CONDITIONS
                        WEEKDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      2.4       Worst Case Level Of Service: B[ 13.5]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    47    0    73    51  336     0     0  315    23
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    47    0    73    51  336     0     0  315    23
Added Vol:      0    0     0     1    0     0     1    0     0     0    0     2
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    48    0    73    52  336     0     0  315    25
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0    52    0    79    57  365     0     0  342    27
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    52    0    79    57  365     0     0  342    27
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   821 xxxx   342   370 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   347 xxxx   705  1200 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   335 xxxx   705  1200 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.16 xxxx  0.11  0.05 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.5 xxxx   0.4   0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  17.7 xxxx  10.8   8.1 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     C    *     B     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx             13.5            xxxxxx           xxxxxx
ApproachLOS:         *                B                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                HCS+: Unsignalized Intersections Release 5.2

_______________________TWO-WAY STOP CONTROL SUMMARY___________________________

Analyst:              DK
Agency/Co.:           RBF
Date Performed:       7/23/2007
Analysis Time Period: Weekday Mid-day Peak Hour
Intersection:         Miraleste/Via Colinita
Jurisdiction:         RPV
Units: U. S. Customary
Analysis Year:        Existing
Project ID:  Marymount
East/West Street:     Via Colinita
North/South Street:   Miraleste Dr
Intersection Orientation: NS                Study period (hrs):  0.25

______________________Vehicle Volumes and Adjustments_________________________
Major Street:  Approach       Northbound              Southbound
               Movement     1      2      3     |  4      5      6
                            L      T      R     |  L      T      R
______________________________________________________________________________
Volume                      6      264    53       173    319    7
Peak-Hour Factor, PHF       0.92   0.92   0.92     0.92   0.92   0.92
Hourly Flow Rate, HFR       6      286    57       188    346    7
Percent Heavy Vehicles      0      --     --       0      --     --
Median Type/Storage         Raised curb           / 2
RT Channelized?                          No
Lanes                          0   1    1             1   1    0
Configuration                   LT     R               L      TR
Upstream Signal?                   No                     No
______________________________________________________________________________
Minor Street:  Approach       Westbound               Eastbound
               Movement     7      8      9     |  10     11     12
                            L      T      R     |  L      T      R
______________________________________________________________________________
Volume                      36     18     213      4      3      6
Peak Hour Factor, PHF       0.92   0.92   0.92     0.92   0.92   0.92
Hourly Flow Rate, HFR       39     19     231      4      3      6
Percent Heavy Vehicles      0      0      0        0      0      0
Percent Grade (%)                  0                      0
Flared Approach:  Exists?/Storage                /              No     /
Lanes                          0   1    1             0   1    0
Configuration                   LT     R                  LTR
______________________________________________________________________________

__________________Delay, Queue Length, and Level of Service___________________
Approach          NB     SB   |      Westbound        |       Eastbound
Movement          1      4    |  7      8      9      |  10     11     12
Lane Config       LT     L    |  LT            R      |         LTR
______________________________________________________________________________
v (vph)           6      188     58            231              13
C(m) (vph)        1217   1227    319           758              327
v/c               0.00   0.15    0.18          0.30             0.04
95% queue length  0.01   0.54    0.65          1.29             0.12
Control Delay     8.0    8.5     18.8          11.8             16.5
LOS                A      A       C             B                C
Approach Delay                          13.2                    16.5
Approach LOS                             B                       C
______________________________________________________________________________
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                HCS+: Unsignalized Intersections Release 5.2

Phone:                                      Fax:
E-Mail:

______________________TWO-WAY STOP CONTROL(TWSC) ANALYSIS_____________________

Analyst:              DK
Agency/Co.:           RBF
Date Performed:       7/23/2007
Analysis Time Period: Weekday Mid-day Peak Hour
Intersection:         Miraleste/Via Colinita
Jurisdiction:         RPV
Units: U. S. Customary
Analysis Year:        Existing
Project ID:  Marymount
East/West Street:     Via Colinita
North/South Street:   Miraleste Dr
Intersection Orientation: NS                Study period (hrs):  0.25

________________________Vehicle Volumes and Adjustments_______________________
Major Street Movements      1      2      3      4      5      6
                            L      T      R      L      T      R
______________________________________________________________________________
Volume                      6      264    53     173    319    7
Peak-Hour Factor, PHF       0.92   0.92   0.92   0.92   0.92   0.92
Peak-15 Minute Volume       2      72     14     47     87     2
Hourly Flow Rate, HFR       6      286    57     188    346    7
Percent Heavy Vehicles      0      --     --     0      --     --
Median Type/Storage         Raised curb           / 2
RT Channelized?                          No
Lanes                          0   1    1             1   1    0
Configuration                   LT     R               L      TR
Upstream Signal?                   No                     No
______________________________________________________________________________
Minor Street Movements      7      8      9      10     11     12
                            L      T      R      L      T      R
______________________________________________________________________________
Volume                      36     18     213    4      3      6
Peak Hour Factor, PHF       0.92   0.92   0.92   0.92   0.92   0.92
Peak-15 Minute Volume       10     5      58     1      1      2
Hourly Flow Rate, HFR       39     19     231    4      3      6
Percent Heavy Vehicles      0      0      0      0      0      0
Percent Grade (%)                  0                    0
Flared Approach:  Exists?/Storage                /              No     /
RT Channelized?                          No
Lanes                          0   1    1             0   1    0
Configuration                   LT     R                  LTR
______________________________________________________________________________

______________________Pedestrian Volumes and Adjustments______________________
Movements                     13     14     15     16
______________________________________________________________________________
Flow (ped/hr)                 0      0      0      0
Lane Width (ft)               12.0   12.0   12.0   12.0
Walking Speed (ft/sec)        4.0    4.0    4.0    4.0
Percent Blockage              0      0      0      0
______________________________________________________________________________
```

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 286 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | 0.000 | | 0.000 | |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 353 | 343 | 1028 | 1027 | 286 | 1178 | 1081 | 350 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 298 | 730 | 298 | 729 | 726 | 452 | 726 | 355 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 286 | 350 |
| Potential Capacity | 758 | 698 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 758 | 698 |
| Probability of Queue free St. | 0.70 | 0.99 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 343 | 353 |
| Potential Capacity | 1227 | 1217 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1227 | 1217 |
| Probability of Queue free St. | 0.85 | 1.00 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1027 | 1081 |
| Potential Capacity | 236 | 220 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.84 |
| Movement Capacity | 199 | 185 |
| Probability of Queue free St. | 0.94 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1028 | 1178 |
| Potential Capacity | 214 | 169 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.83 | 0.79 |
| Maj. L, Min T Adj. Imp Factor. | 0.87 | 0.84 |
| Cap. Adj. factor due to Impeding mvmnt | 0.86 | 0.58 |
| Movement Capacity | 185 | 99 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 298 | 726 |
| Potential Capacity | 671 | 433 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.85 |
| Movement Capacity | 667 | 367 |
| Probability of Queue free St. | 0.97 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 729 | 355 |
| Potential Capacity | 431 | 633 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.85 | 0.99 |
| Movement Capacity | 365 | 629 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1027 | 1081 |
| Potential Capacity | 236 | 220 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.84 |
| Movement Capacity | 199 | 185 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.92 | 0.71 |
| C t | 329 | 309 |
| Probability of Queue free St. | 0.94 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 298 | 726 |
| Potential Capacity | 715 | 419 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.85 |
| Movement Capacity | 711 | 355 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 730 | 452 |
| Potential Capacity | 417 | 591 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.67 |
| Movement Capacity | 347 | 397 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1028 | 1178 |
| Potential Capacity | 214 | 169 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.83 | 0.79 |
| Maj. L, Min T Adj. Imp Factor. | 0.87 | 0.84 |
| Cap. Adj. factor due to Impeding mvmnt | 0.86 | 0.58 |
| Movement Capacity | 185 | 99 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.37 | 2.33 |
| C t | 314 | 186 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | 39 | 19 | 231 | 4 | 3 | 6 |
| Movement Capacity (vph) | 314 | 329 | 758 | 186 | 309 | 698 |
| Shared Lane Capacity (vph) | 319 | | | | 327 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | 314 | 329 | 758 | 186 | 309 | 698 |
| Volume | 39 | 19 | 231 | 4 | 3 | 6 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 319 | | | | 327 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 6 | 188 | 58 | | 231 | | 13 | |
| C(m) (vph) | 1217 | 1227 | 319 | | 758 | | 327 | |
| v/c | 0.00 | 0.15 | 0.18 | | 0.30 | | 0.04 | |
| 95% queue length | 0.01 | 0.54 | 0.65 | | 1.29 | | 0.12 | |
| Control Delay | 8.0 | 8.5 | 18.8 | | 11.8 | | 16.5 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 13.2 | | | 16.5 | |
| Approach LOS | | | | B | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 1.00 | 0.85 |
| v(il), Volume for stream 2 or 5 | 286 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.0 | 8.5 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.0 | |

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                        WEEKDAY (2:00-4:00) PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Average Delay (sec/veh):     82.2       Worst Case Level Of Service: F[250.5]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  242   197   342  262     0     0    0     0   208    0   278
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  242   197   342  262     0     0    0     0   208    0   278
Added Vol:       0    1     5     0    1     0     0    0     0     6    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0  243   202   342  263     0     0    0     0   214    0   278
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  264   220   372  286     0     0    0     0   233    0   302
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  264   220   372  286     0     0    0     0   233    0   302
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   484 xxxx xxxxx  xxxx xxxx xxxxx  1403 xxxx   374
Potent Cap.: xxxx xxxx xxxxx  1090 xxxx xxxxx  xxxx xxxx xxxxx   156 xxxx   677
Move Cap.:   xxxx xxxx xxxxx  1090 xxxx xxxxx  xxxx xxxx xxxxx   114 xxxx   677
Volume/Cap:  xxxx xxxx  xxxx  0.34 xxxx  xxxx  xxxx xxxx  xxxx  2.03 xxxx  0.45
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.5 xxxx xxxxx  xxxx xxxx xxxxx  19.3 xxxx   2.3
Control Del:xxxxx xxxx xxxxx  10.0 xxxx xxxxx xxxxx xxxx xxxxx 557.1 xxxx  14.5
LOS by Move:    *    *     *     B    *     *     *    *     *     F    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            250.5
ApproachLOS:        *                *                *                F
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```





```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                             EXISTING CONDITIONS
                        WEEKDAY (2:00-4:00) PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.477
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         32               Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0   0  1  0  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       21    7   116   229    4    52    32  141    21    58  135   143
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    21    7   116   229    4    52    32  141    21    58  135   143
Added Vol:       2    0     5     0    0     0     0    0     2     7    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    23    7   121   229    4    52    32  141    23    65  135   143
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     25    8   132   249    4    57    35  153    25    71  147   155
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    25    8   132   249    4    57    35  153    25    71  147   155
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    25    8   132   249    4    57    35  153    25    71  147   155
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.15 0.05  0.80  0.98 0.02  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:    244   74  1282  1573   27  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.02 0.10  0.10  0.16 0.16  0.04  0.02 0.05  0.02  0.04 0.05  0.10
Crit Moves:        ****        ****             ****                        ****
********************************************************************************
```

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS
WEEKDAY (2:00-4:00) PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: C[ 20.4]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 0 | 0 0 | 1 0 | 0 | 0 1 | 1 0 | 1 | 0 0 | 0 0 | 1 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 45 | 0 | 128 | 198 | 510 | 0 | 0 | 350 | 47 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 0 | 45 | 0 | 128 | 198 | 510 | 0 | 0 | 350 | 47 |
| Added Vol: | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 46 | 0 | 128 | 198 | 510 | 0 | 0 | 350 | 49 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 0 | 0 | 50 | 0 | 139 | 215 | 554 | 0 | 0 | 380 | 53 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 0 | 0 | 50 | 0 | 139 | 215 | 554 | 0 | 0 | 380 | 53 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 6.4 | xxxx | 6.2 | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 3.5 | xxxx | 3.3 | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 1365 | xxxx | 380 | 434 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 164 | xxxx | 671 | 1137 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | 140 | xxxx | 671 | 1137 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.36 | xxxx | 0.21 | 0.19 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 1.5 | xxxx | 0.8 | 0.7 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | 44.3 | xxxx | 11.8 | 8.9 | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | E | * | B | A | * | * | * | * | * |
| Movement: | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | xxxxxx | | | 20.4 | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | * | | | C | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

HCS+: Unsignalized Intersections Release 5.2

## TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Weekday Afternoon Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: Existing
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 11 | 281 | 42 | 253 | 399 | 5 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 11 | 305 | 45 | 274 | 433 | 5 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 52 | 20 | 199 | 1 | 2 | 14 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 56 | 21 | 216 | 1 | 2 | 15 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 11 | 274 | 77 | | 216 | | 18 | |
| C(m) (vph) | 1133 | 1220 | 206 | | 740 | | 424 | |
| v/c | 0.01 | 0.22 | 0.37 | | 0.29 | | 0.04 | |
| 95% queue length | 0.03 | 0.86 | 1.63 | | 1.21 | | 0.13 | |
| Control Delay | 8.2 | 8.8 | 32.5 | | 11.9 | | 13.9 | |
| LOS | A | A | D | | B | | B | |
| Approach Delay | | | | 17.3 | | | 13.9 | |
| Approach LOS | | | | C | | | B | |

HCS+: Unsignalized Intersections Release 5.2

Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Weekday Afternoon Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: Existing
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 11 | 281 | 42 | 253 | 399 | 5 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 3 | 76 | 11 | 69 | 108 | 1 |
| Hourly Flow Rate, HFR | 11 | 305 | 45 | 274 | 433 | 5 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 52 | 20 | 199 | 1 | 2 | 14 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 14 | 5 | 54 | 0 | 1 | 4 |
| Hourly Flow Rate, HFR | 56 | 21 | 216 | 1 | 2 | 15 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 305 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1<br>L | 4<br>L | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1<br>L | 4<br>L | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5
Single-Stage Process

| Movement | 1<br>L | 4<br>L | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 438 | 350 | 1319 | 1313 | 305 | 1452 | 1356 | 436 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 327 | 992 | 327 | 986 | 984 | 468 | 984 | 372 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 305 | 436 |
| Potential Capacity | 740 | 625 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 740 | 625 |
| Probability of Queue free St. | 0.71 | 0.98 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 350 | 438 |
| Potential Capacity | 1220 | 1133 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1220 | 1133 |
| Probability of Queue free St. | 0.78 | 0.99 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1313 | 1356 |
| Potential Capacity | 160 | 151 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.77 | 0.77 |
| Movement Capacity | 123 | 116 |
| Probability of Queue free St. | 0.91 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1319 | 1452 |
| Potential Capacity | 135 | 110 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.76 | 0.70 |
| Maj. L, Min T Adj. Imp Factor. | 0.81 | 0.76 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.54 |
| Movement Capacity | 107 | 60 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| **Part 1 - First Stage** | | |
| Conflicting Flows | 327 | 984 |
| Potential Capacity | 651 | 329 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.78 |
| Movement Capacity | 643 | 255 |
| Probability of Queue free St. | 0.97 | 0.99 |
| **Part 2 - Second Stage** | | |
| Conflicting Flows | 986 | 372 |
| Potential Capacity | 328 | 622 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.99 |
| Movement Capacity | 254 | 615 |
| **Part 3 - Single Stage** | | |
| Conflicting Flows | 1313 | 1356 |
| Potential Capacity | 160 | 151 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.77 | 0.77 |
| Movement Capacity | 123 | 116 |
| **Result for 2 stage process:** | | |
| a | 0.95 | 0.95 |
| y | 4.33 | 0.62 |
| C t | 226 | 217 |
| Probability of Queue free St. | 0.91 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| **Part 1 - First Stage** | | |
| Conflicting Flows | 327 | 984 |
| Potential Capacity | 690 | 302 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.78 |
| Movement Capacity | 682 | 234 |
| **Part 2 - Second Stage** | | |
| Conflicting Flows | 992 | 468 |
| Potential Capacity | 299 | 579 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 0.68 |
| Movement Capacity | 225 | 392 |
| **Part 3 - Single Stage** | | |
| Conflicting Flows | 1319 | 1452 |
| Potential Capacity | 135 | 110 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.76 | 0.70 |
| Maj. L, Min T Adj. Imp Factor. | 0.81 | 0.76 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.54 |
| Movement Capacity | 107 | 60 |
| **Results for Two-stage process:** | | |
| a | 0.95 | 0.95 |
| y | 5.37 | 3.00 |
| C t | 200 | 108 |

Worksheet 8-Shared Lane Calculations

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume (vph) | 56 | 21 | 216 | 1 | 2 | 15 |
| Movement Capacity (vph) | 200 | 226 | 740 | 108 | 217 | 625 |
| Shared Lane Capacity (vph) | 206 | | | | 424 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| C sep | 200 | 226 | 740 | 108 | 217 | 625 |
| Volume | 56 | 21 | 216 | 1 | 2 | 15 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 206 | | | | 424 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 11 | 274 | 77 | | 216 | | 18 | |
| C(m) (vph) | 1133 | 1220 | 206 | | 740 | | 424 | |
| v/c | 0.01 | 0.22 | 0.37 | | 0.29 | | 0.04 | |
| 95% queue length | 0.03 | 0.86 | 1.63 | | 1.21 | | 0.13 | |
| Control Delay | 8.2 | 8.8 | 32.5 | | 11.9 | | 13.9 | |
| LOS | A | A | D | | B | | B | |
| Approach Delay | | | | 17.3 | | | 13.9 | |
| Approach LOS | | | | C | | | B | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.99 | 0.78 |
| v(il), Volume for stream 2 or 5 | 305 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.2 | 8.8 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.1 | |

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                           EXISTING CONDITIONS
                     SATURDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Average Delay (sec/veh):     11.2       Worst Case Level Of Service: D[ 25.9]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  161   123   296  158     0     0    0     0   127    0   259
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  161   123   296  158     0     0    0     0   127    0   259
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  175   134   322  172     0     0    0     0   138    0   282
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  175   134   322  172     0     0    0     0   138    0   282
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   309 xxxx xxxxx  xxxx xxxx xxxxx  1057 xxxx   242
Potent Cap.: xxxx xxxx xxxxx  1263 xxxx xxxxx  xxxx xxxx xxxxx   251 xxxx   802
Move Cap.:   xxxx xxxx xxxxx  1263 xxxx xxxxx  xxxx xxxx xxxxx   202 xxxx   802
Volume/Cap:  xxxx xxxx  xxxx  0.25 xxxx  xxxx  xxxx xxxx  xxxx  0.68 xxxx  0.35
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.0 xxxx xxxxx  xxxx xxxx xxxxx   4.2 xxxx   1.6
Control Del:xxxxx xxxx xxxxx   8.8 xxxx xxxxx xxxxx xxxx xxxxx  54.3 xxxx  11.9
LOS by Move:    *    *     *     A    *     *     *    *     *     F    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx             25.9
ApproachLOS:        *                *                *                 D
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```





```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                           EXISTING CONDITIONS
                     SATURDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.198
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        22              Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:      0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  0  1  0   0  1  0  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    3     4    65    0    17    19  143     3     1  106    53
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    3     4    65    0    17    19  143     3     1  106    53
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0    3     4    71    0    18    21  155     3     1  115    58
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:     0    3     4    71    0    18    21  155     3     1  115    58
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:     0    3     4    71    0    18    21  155     3     1  115    58
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.00 0.43  0.57  1.00 0.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:      0  686   914  1600    0  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.00 0.00  0.00  0.04 0.00  0.01  0.01 0.05  0.00  0.00 0.04  0.04
Crit Moves:        ****        ****              ****                   ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                              EXISTING CONDITIONS
                        SATURDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      2.0       Worst Case Level Of Service: B[ 14.9]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   1  0  0  0  1   1  0  1  0  0   0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    30    0    70    75  406     0     0  412    55
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    30    0    70    75  406     0     0  412    55
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0    33    0    76    82  441     0     0  448    60
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    33    0    76    82  441     0     0  448    60
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1052 xxxx   448   508 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   253 xxxx   615  1068 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   238 xxxx   615  1068 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.14 xxxx  0.12  0.08 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.5 xxxx   0.4   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  22.5 xxxx  11.7   8.7 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     C    *     B     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx            14.9            xxxxxx           xxxxxx
ApproachLOS:         *               B               *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.2

## TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Saturday Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: Existing
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS    Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 3 | 259 | 51 | 176 | 275 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 3 | 281 | 55 | 191 | 298 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 0 | 8 | 119 | 0 | 4 | 0 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 0 | 8 | 129 | 0 | 4 | 0 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 3 | 191 | 8 | | 129 | | 4 | |
| C(m) (vph) | 1267 | 1235 | 345 | | 763 | | 322 | |
| v/c | 0.00 | 0.15 | 0.02 | | 0.17 | | 0.01 | |
| 95% queue length | 0.01 | 0.55 | 0.07 | | 0.61 | | 0.04 | |
| Control Delay | 7.8 | 8.4 | 15.7 | | 10.7 | | 16.3 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 11.0 | | | 16.3 | |
| Approach LOS | | | | B | | | C | |

HCS+: Unsignalized Intersections Release 5.2

Phone:    Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Saturday Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: Existing
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS    Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 3 | 259 | 51 | 176 | 275 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 1 | 70 | 14 | 48 | 75 | 2 |
| Hourly Flow Rate, HFR | 3 | 281 | 55 | 191 | 298 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 0 | 8 | 119 | 0 | 4 | 0 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 0 | 2 | 32 | 0 | 1 | 0 |
| Hourly Flow Rate, HFR | 0 | 8 | 129 | 0 | 4 | 0 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 281 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5
Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 305 | 336 | 973 | 974 | 281 | 1067 | 1026 | 302 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 287 | 686 | 287 | 687 | 684 | 383 | 684 | 342 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 281 | 302 |
| Potential Capacity | 763 | 742 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 763 | 742 |
| Probability of Queue free St. | 0.83 | 1.00 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 336 | 305 |
| Potential Capacity | 1235 | 1267 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1235 | 1267 |
| Probability of Queue free St. | 0.85 | 1.00 |
| Maj L-Shared Prob Q free St. | | 1.00 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 974 | 1026 |
| Potential Capacity | 254 | 237 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.84 |
| Movement Capacity | 214 | 200 |
| Probability of Queue free St. | 0.98 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 973 | 1067 |
| Potential Capacity | 233 | 202 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.83 | 0.82 |
| Maj. L, Min T Adj. Imp Factor. | 0.87 | 0.86 |
| Cap. Adj. factor due to Impeding mvmnt | 0.87 | 0.72 |
| Movement Capacity | 203 | 145 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 287 | 684 |
| Potential Capacity | 678 | 452 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.85 |
| Movement Capacity | 676 | 382 |
| Probability of Queue free St. | 0.99 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 687 | 342 |
| Potential Capacity | 450 | 642 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.85 | 1.00 |
| Movement Capacity | 380 | 640 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 974 | 1026 |
| Potential Capacity | 254 | 237 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.84 |
| Movement Capacity | 214 | 200 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.83 | 0.73 |
| C t | 345 | 322 |
| Probability of Queue free St. | 0.98 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 287 | 684 |
| Potential Capacity | 725 | 442 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.85 |
| Movement Capacity | 723 | 374 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 686 | 383 |
| Potential Capacity | 441 | 644 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.82 |
| Movement Capacity | 369 | 527 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 973 | 1067 |
| Potential Capacity | 233 | 202 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.83 | 0.82 |
| Maj. L, Min T Adj. Imp Factor. | 0.87 | 0.86 |
| Cap. Adj. factor due to Impeding mvmnt | 0.87 | 0.72 |
| Movement Capacity | 203 | 145 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.19 | 1.20 |
| C t | 337 | 269 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | 0 | 8 | 129 | 0 | 4 | 0 |
| Movement Capacity (vph) | 337 | 345 | 763 | 269 | 322 | 742 |
| Shared Lane Capacity (vph) | 345 | | | | 322 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | 337 | 345 | 763 | 269 | 322 | 742 |
| Volume | 0 | 8 | 129 | 0 | 4 | 0 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 345 | | | | 322 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 3 | 191 | 8 | | 129 | | 4 | |
| C(m) (vph) | 1267 | 1235 | 345 | | 763 | | 322 | |
| v/c | 0.00 | 0.15 | 0.02 | | 0.17 | | 0.01 | |
| 95% queue length | 0.01 | 0.55 | 0.07 | | 0.61 | | 0.04 | |
| Control Delay | 7.8 | 8.4 | 15.7 | | 10.7 | | 16.3 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 11.0 | | | 16.3 | |
| Approach LOS | | | | B | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 1.00 | 0.85 |
| v(il), Volume for stream 2 or 5 | 281 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 1.00 | |
| d(M,LT), Delay for stream 1 or 4 | 7.8 | 8.4 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.0 | |

```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                  EXISTING CONDITIONS - CITY OF LOS ANGELES
                                AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
*******************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):         0.912
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180             Level Of Service:                  E
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1    1  0  2  0  1    0  1  0  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      13 1332   208   132  907    85   132   74    44   190   53   165
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   13 1332   208   132  907    85   132   74    44   190   53   165
Added Vol:      0    0     0     0    1     4     1    0     0     1    1     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   13 1332   208   132  908    89   133   74    44   191   54   165
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    14 1448   226   143  987    97   145   80    48   208   59   179
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   14 1448   226   143  987    97   145   80    48   208   59   179
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   14 1448   226   143  987    97   145   80    48   208   59   179
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.64 0.36  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425   916  509  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.51  0.16  0.10 0.35  0.07  0.16 0.16  0.03  0.15 0.04  0.13
Crit Volume:       724         143                    225          208
Crit Moves:       ****        ****                   ****         ****
*******************************************************************************
```





```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                  EXISTING CONDITIONS - CITY OF LOS ANGELES
                                AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
*******************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):         0.809
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      105             Level Of Service:                  D
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1    1  0  2  0  1    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      93 1394   149    23 1107   128   179   31   104    83   10    25
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   93 1394   149    23 1107   128   179   31   104    83   10    25
Added Vol:      0    0     0     0    2     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   93 1394   149    23 1109   128   179   31   104    83   10    25
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   101 1515   162    25 1205   139   195   34   113    90   11    27
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  101 1515   162    25 1205   139   195   34   113    90   11    27
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  101 1515   162    25 1205   139   195   34   113    90   11    27
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.57 0.10  0.33  1.00 0.29  0.71
Final Sat.:  1500 3000  1500  1500 3000  1500   855  148   497  1500  429  1071
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.51  0.11  0.02 0.40  0.09  0.23 0.23  0.23  0.06 0.03  0.03
Crit Volume:       758          25                    341           90
Crit Moves:       ****        ****                   ****         ****
*******************************************************************************
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------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                  EXISTING CONDITIONS - CITY OF LOS ANGELES
                                AM PEAK HOUR
------------------------------------------------------------------------------
                    Level Of Service Computation Report
         Circular 212 Planning Method (Future Volume Alternative)
******************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
******************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):         1.414
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:      180             Level Of Service:                  F
******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted       Prot+Permit       Permitted       Prot+Permit
Rights:            Ovl            Include          Include            Ovl
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  1  1  0    1  0  0  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      6 1612   635   189 1193    20    60  402    32   360  211   176
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   6 1612   635   189 1193    20    60  402    32   360  211   176
Added Vol:     0    0     0     0    0     2     0    0     0     0    1     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   6 1612   635   189 1193    22    60  402    32   360  212   176
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    7 1752   690   205 1297    24    65  437    35   391  230   191
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   7 1752   690   205 1297    24    65  437    35   391  230   191
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   7 1752   690   205 1297    24    65  437    35   391  230   191
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 1.96  0.04  1.00 0.93  0.07  1.00 1.00  1.00
Final Sat.:  1375 2750  1375  1375 2700    50  1375 1274   101  1375 1375  1375
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.64  0.50  0.15 0.48  0.48  0.05 0.34  0.34  0.28 0.17  0.14
Crit Volume:       876         205                           472   391
Crit Moves:       ****        ****                          ****  ****
******************************************************************************
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------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                  EXISTING CONDITIONS - CITY OF LOS ANGELES
                                AM PEAK HOUR
------------------------------------------------------------------------------
                    Level Of Service Computation Report
         Circular 212 Planning Method (Future Volume Alternative)
******************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
******************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):         0.607
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       51             Level Of Service:                  B
******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    172  902   103    75  760    29    16  116   115   128  174    76
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 172  902   103    75  760    29    16  116   115   128  174    76
Added Vol:     0    0     0     0    0     0     0    0     0     0    1     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 172  902   103    75  760    29    16  116   115   128  175    76
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:  187  980   112    82  826    32    17  126   125   139  190    83
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 187  980   112    82  826    32    17  126   125   139  190    83
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 187  980   112    82  826    32    17  126   125   139  190    83
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1425  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.34  0.08  0.06 0.29  0.02  0.01 0.09  0.09  0.10 0.13  0.06
Crit Volume: 187                    413              126         139
Crit Moves:  ****                  ****             ****        ****
******************************************************************************
```

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CITY OF LOS ANGELES
AM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #11 WESTERN AVENUE/WEST 25TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.681 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 63 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Ovl | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 2 0 2 0 1 | | | 1 0 1 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 27 | 156 | 24 | 112 | 131 | 508 | 544 | 215 | 34 | 48 | 355 | 274 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 27 | 156 | 24 | 112 | 131 | 508 | 544 | 215 | 34 | 48 | 355 | 274 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 27 | 156 | 24 | 112 | 131 | 508 | 544 | 216 | 34 | 48 | 358 | 274 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 29 | 170 | 26 | 122 | 142 | 552 | 591 | 235 | 37 | 52 | 389 | 298 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 29 | 170 | 26 | 122 | 142 | 552 | 591 | 235 | 37 | 52 | 389 | 298 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 29 | 170 | 26 | 122 | 142 | 552 | 650 | 235 | 37 | 52 | 389 | 298 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 2850 | 2850 | 1425 | 1425 | 1425 | 1425 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.06 | 0.02 | 0.09 | 0.05 | 0.39 | 0.23 | 0.08 | 0.03 | 0.04 | 0.27 | 0.21 |
| Crit Volume: | 29 | | | | | 552 | 0 | | | | 389 | |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                  EXISTING CONDITIONS - CITY OF LOS ANGELES
                                PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.788
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         94              Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1    1  0  2  0  1    0  1  0  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      75 1098    86   185 1294    50    76   65    30   153  104   162
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   75 1098    86   185 1294    50    76   65    30   153  104   162
Added Vol:      0    1     0     0    1     3     2    1     0     1    1     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   75 1099    86   185 1295    53    78   66    30   154  105   162
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    82 1195    93   201 1408    58    85   72    33   167  114   176
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   82 1195    93   201 1408    58    85   72    33   167  114   176
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   82 1195    93   201 1408    58    85   72    33   167  114   176
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.54 0.46  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425   772  653  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.42  0.07  0.14 0.49  0.04  0.11 0.11  0.02  0.12 0.08  0.12
Crit Volume:       597         201                   157         167
Crit Moves:        ****        ****                  ****        ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                  EXISTING CONDITIONS - CITY OF LOS ANGELES
                                PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.759
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         83              Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1    1  0  2  0  1    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      47 1197   302    50 1246   117    89   49    45   194   82    61
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   47 1197   302    50 1246   117    89   49    45   194   82    61
Added Vol:      0    1     0     0    2     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   47 1198   302    50 1248   117    89   49    45   194   82    61
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    51 1302   328    54 1357   127    97   53    49   211   89    66
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   51 1302   328    54 1357   127    97   53    49   211   89    66
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   51 1302   328    54 1357   127    97   53    49   211   89    66
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.49 0.27  0.24  1.00 0.57  0.43
Final Sat.:  1500 3000  1500  1500 3000  1500   730  402   369  1500  860   640
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.43  0.22  0.04 0.45  0.08  0.13 0.13  0.13  0.14 0.10  0.10
Crit Volume:   51                    678              199        211
Crit Moves:  ****                    ****             ****       ****
********************************************************************************
```

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CITY OF LOS ANGELES
PM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #9 WESTERN AVENUE/1ST STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.317 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 180 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Prot+Permit | | | Permitted | | | Prot+Permit | | |
| Rights: | Ovl | | | Include | | | Include | | | Ovl | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 1 1 0 | | | 1 0 0 1 0 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 36 | 1259 | 215 | 178 | 1458 | 61 | 42 | 184 | 21 | 714 | 276 | 156 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 36 | 1259 | 215 | 178 | 1458 | 61 | 42 | 184 | 21 | 714 | 276 | 156 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 36 | 1259 | 215 | 178 | 1458 | 63 | 43 | 184 | 21 | 714 | 277 | 156 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 39 | 1368 | 234 | 193 | 1585 | 68 | 47 | 200 | 23 | 776 | 301 | 170 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 39 | 1368 | 234 | 193 | 1585 | 68 | 47 | 200 | 23 | 776 | 301 | 170 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 39 | 1368 | 234 | 193 | 1585 | 68 | 47 | 200 | 23 | 776 | 301 | 170 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.92 | 0.08 | 1.00 | 0.90 | 0.10 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2732 | 118 | 1425 | 1279 | 146 | 1425 | 1425 | 1425 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.48 | 0.16 | 0.14 | 0.58 | 0.58 | 0.03 | 0.16 | 0.16 | 0.54 | 0.21 | 0.12 |
| Crit Volume: | | 684 | | 193 | | | | 223 | | 776 | | |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CITY OF LOS ANGELES
PM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.804 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 102 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 1 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 118 | 50 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 178 | 232 | 173 | 128 | 54 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 178 | 232 | 173 | 128 | 54 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 178 | 232 | 173 | 128 | 54 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.24 | 0.05 | 0.05 | 0.41 | 0.04 | 0.03 | 0.13 | 0.16 | 0.12 | 0.09 | 0.04 |
| Crit Volume: | 157 | | | | 585 | | | | 232 | 173 | | |
| Crit Moves: | **** | | | | **** | | | | **** | **** | | |

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                  EXISTING CONDITIONS - CITY OF LOS ANGELES
                                PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.622
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        53              Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1   1  0  2  0  1   2  0  2  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54  106    55   206  215   369   477  306    35    71  290   176
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   54  106    55   206  215   369   477  306    35    71  290   176
Added Vol:      0    0     0     0    0     0     0    1     0     0    2     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   54  106    55   206  215   369   477  307    35    71  292   176
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    59  115    60   224  234   401   518  334    38    77  317   191
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   59  115    60   224  234   401   518  334    38    77  317   191
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
FinalVolume:   59  115    60   224  234   401   570  334    38    77  317   191
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  2.00 2.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  2850 2850  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.04  0.04  0.16 0.08  0.28  0.20 0.12  0.03  0.05 0.22  0.13
Crit Volume:              60   224              285                    317
Crit Moves:             ****  ****             ****                   ****
********************************************************************************
```

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.668 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 17.5 |
| Optimal Cycle: | 50 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 1 1 0 | | | 1 0 1 1 0 | | | 0 1 0 0 1 | | | 0 1 0 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 59 | 1382 | 21 | 16 | 878 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 59 | 1382 | 21 | 16 | 878 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| Added Vol: | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 59 | 1383 | 21 | 16 | 883 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 64 | 1503 | 23 | 17 | 960 | 16 | 71 | 23 | 271 | 88 | 51 | 50 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 64 | 1503 | 23 | 17 | 960 | 16 | 71 | 23 | 271 | 88 | 51 | 50 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 64 | 1503 | 23 | 17 | 960 | 16 | 71 | 23 | 271 | 88 | 51 | 50 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.70 | 0.70 | 0.85 | 0.76 | 0.76 | 0.85 |
| Lanes: | 1.00 | 1.97 | 0.03 | 1.00 | 1.97 | 0.03 | 0.76 | 0.24 | 1.00 | 0.63 | 0.37 | 1.00 |
| Final Sat.: | 1805 | 3549 | 54 | 1805 | 3539 | 60 | 1011 | 327 | 1615 | 913 | 530 | 1615 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.42 | 0.42 | 0.01 | 0.27 | 0.27 | 0.07 | 0.07 | 0.17 | 0.10 | 0.10 | 0.03 |
| Crit Moves: | | **** | | **** | | | | | **** | | | |
| Green/Cycle: | 0.08 | 0.63 | 0.63 | 0.01 | 0.57 | 0.57 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| Volume/Cap: | 0.47 | 0.67 | 0.67 | 0.67 | 0.47 | 0.47 | 0.28 | 0.28 | 0.67 | 0.38 | 0.38 | 0.12 |
| Delay/Veh: | 46.9 | 12.4 | 12.4 | 99.6 | 12.6 | 12.6 | 30.6 | 30.6 | 37.9 | 31.7 | 31.7 | 29.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 46.9 | 12.4 | 12.4 | 99.6 | 12.6 | 12.6 | 30.6 | 30.6 | 37.9 | 31.7 | 31.7 | 29.1 |
| LOS by Move: | D | B | B | F | B | B | C | C | D | C | C | C |
| HCM2kAvgQ: | 3 | 16 | 16 | 2 | 9 | 9 | 2 | 2 | 9 | 4 | 4 | 1 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 WESTERN AVENUE/CAPITOL DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.792 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 23.0 |
| Optimal Cycle: | 70 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 0 1 0 0 1 | | | 1 0 1 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 13 | 1332 | 208 | 132 | 907 | 85 | 132 | 74 | 44 | 190 | 53 | 165 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 13 | 1332 | 208 | 132 | 907 | 85 | 132 | 74 | 44 | 190 | 53 | 165 |
| Added Vol: | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 1 | 1 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 13 | 1332 | 208 | 132 | 908 | 89 | 133 | 74 | 44 | 191 | 54 | 165 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 14 | 1448 | 226 | 143 | 987 | 97 | 145 | 80 | 48 | 208 | 59 | 179 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 14 | 1448 | 226 | 143 | 987 | 97 | 145 | 80 | 48 | 208 | 59 | 179 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 14 | 1448 | 226 | 143 | 987 | 97 | 145 | 80 | 48 | 208 | 59 | 179 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.76 | 0.76 | 0.85 | 0.47 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.64 | 0.36 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 930 | 518 | 1615 | 893 | 1900 | 1615 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.40 | 0.14 | 0.08 | 0.27 | 0.06 | 0.16 | 0.16 | 0.03 | 0.23 | 0.03 | 0.11 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.02 | 0.51 | 0.51 | 0.10 | 0.59 | 0.59 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 |
| Volume/Cap: | 0.46 | 0.79 | 0.28 | 0.79 | 0.46 | 0.10 | 0.53 | 0.53 | 0.10 | 0.79 | 0.11 | 0.38 |
| Delay/Veh: | 59.5 | 22.8 | 14.4 | 64.7 | 11.7 | 9.0 | 30.8 | 30.8 | 25.8 | 47.6 | 25.8 | 28.6 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 59.5 | 22.8 | 14.4 | 64.7 | 11.7 | 9.0 | 30.8 | 30.8 | 25.8 | 47.6 | 25.8 | 28.6 |
| LOS by Move: | E | C | B | E | B | A | C | C | C | D | C | C |
| HCM2kAvgQ: | 1 | 21 | 4 | 6 | 9 | 1 | 6 | 6 | 1 | 8 | 1 | 5 |

Note: Queue reported is the number of cars per lane.

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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 WESTERN AVENUE/CRESTWOOD STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 0.730
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 17.4
Optimal Cycle: 58 Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 0 0 1! 0 0 | | | 1 0 0 1 0 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 93 | 1394 | 149 | 23 | 1107 | 128 | 179 | 31 | 104 | 83 | 10 | 25 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 93 | 1394 | 149 | 23 | 1107 | 128 | 179 | 31 | 104 | 83 | 10 | 25 |
| Added Vol: | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 93 | 1394 | 149 | 23 | 1109 | 128 | 179 | 31 | 104 | 83 | 10 | 25 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 101 | 1515 | 162 | 25 | 1205 | 139 | 195 | 34 | 113 | 90 | 11 | 27 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 101 | 1515 | 162 | 25 | 1205 | 139 | 195 | 34 | 113 | 90 | 11 | 27 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 101 | 1515 | 162 | 25 | 1205 | 139 | 195 | 34 | 113 | 90 | 11 | 27 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.16 | 0.95 | 0.85 | 0.09 | 0.95 | 0.85 | 0.76 | 0.76 | 0.76 | 0.73 | 0.89 | 0.89 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.57 | 0.10 | 0.33 | 1.00 | 0.29 | 0.71 |
| Final Sat.: | 304 | 3610 | 1615 | 162 | 3610 | 1615 | 820 | 142 | 477 | 1391 | 485 | 1212 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.33 | 0.42 | 0.10 | 0.15 | 0.33 | 0.09 | 0.24 | 0.24 | 0.24 | 0.06 | 0.02 | 0.02 |
| Crit Moves: | | **** | | | | | | **** | | | | |
| Green/Cycle: | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 |
| Volume/Cap: | 0.58 | 0.73 | 0.17 | 0.27 | 0.58 | 0.15 | 0.73 | 0.73 | 0.73 | 0.20 | 0.07 | 0.07 |
| Delay/Veh: | 18.3 | 16.9 | 10.1 | 12.2 | 14.0 | 10.0 | 35.6 | 35.6 | 35.6 | 24.6 | 23.4 | 23.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 18.3 | 16.9 | 10.1 | 12.2 | 14.0 | 10.0 | 35.6 | 35.6 | 35.6 | 24.6 | 23.4 | 23.4 |
| LOS by Move: | B | B | B | B | B | A | D | D | D | C | C | C |
| HCM2kAvgQ: | 3 | 19 | 2 | 1 | 13 | 2 | 11 | 11 | 11 | 2 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 WESTERN AVENUE/1ST STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 1.128
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 68.9
Optimal Cycle: 180 Level Of Service: E

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Prot+Permit | | | Permitted | | | Prot+Permit | | |
| Rights: | Ovl | | | Include | | | Include | | | Ovl | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 1 1 0 | | | 1 0 0 1 0 | | | 1 0 1 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 6 | 1612 | 635 | 189 | 1193 | 20 | 60 | 402 | 32 | 360 | 211 | 176 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 6 | 1612 | 635 | 189 | 1193 | 20 | 60 | 402 | 32 | 360 | 211 | 176 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 6 | 1612 | 635 | 189 | 1193 | 22 | 60 | 402 | 32 | 360 | 212 | 176 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 7 | 1752 | 690 | 205 | 1297 | 24 | 65 | 437 | 35 | 391 | 230 | 191 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 7 | 1752 | 690 | 205 | 1297 | 24 | 65 | 437 | 35 | 391 | 230 | 191 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 7 | 1752 | 690 | 205 | 1297 | 24 | 65 | 437 | 35 | 391 | 230 | 191 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.40 | 0.95 | 0.95 | 0.95 | 0.99 | 0.99 | 0.73 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.96 | 0.04 | 1.00 | 0.93 | 0.07 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 769 | 3534 | 65 | 1805 | 1741 | 139 | 1395 | 1900 | 1615 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.49 | 0.43 | 0.27 | 0.37 | 0.37 | 0.04 | 0.25 | 0.25 | 0.28 | 0.12 | 0.12 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.00 | 0.41 | 0.59 | 0.50 | 0.50 | 0.50 | 0.09 | 0.21 | 0.21 | 0.30 | 0.30 | 0.40 |
| Volume/Cap: | 0.73 | 1.19 | 0.72 | 0.82 | 0.73 | 0.73 | 0.40 | 1.19 | 1.19 | 0.96 | 0.40 | 0.30 |
| Delay/Veh: | 196.4 | 120 | 17.2 | 33.6 | 21.3 | 21.3 | 44.5 | 146 | 145.6 | 67.2 | 28.0 | 20.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 196.4 | 120 | 17.2 | 33.6 | 21.3 | 21.3 | 44.5 | 146 | 145.6 | 67.2 | 28.0 | 20.7 |
| LOS by Move: | F | F | B | C | C | C | D | F | F | E | C | C |
| HCM2kAvgQ: | 1 | 49 | 16 | 8 | 18 | 18 | 2 | 27 | 27 | 17 | 6 | 4 |

Note: Queue reported is the number of cars per lane.

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                       EXISTING CONDITIONS - CALTRANS
                                AM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):        0.504
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):       21.8
Optimal Cycle:        37             Level Of Service:                 C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     172  902   103    75  760    29    16  116   115   128  174    76
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  172  902   103    75  760    29    16  116   115   128  174    76
Added Vol:      0    0     0     0    0     0     0    0     0     0    1     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  172  902   103    75  760    29    16  116   115   128  175    76
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   187  980   112    82  826    32    17  126   125   139  190    83
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  187  980   112    82  826    32    17  126   125   139  190    83
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  187  980   112    82  826    32    17  126   125   139  190    83
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.95  0.85  0.95 0.95  0.85  0.48 1.00  0.85  0.61 1.00  0.85
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1805 3610  1615  1805 3610  1615   918 1900  1615  1150 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.27  0.07  0.05 0.23  0.02  0.02 0.07  0.08  0.12 0.10  0.05
Crit Moves:  ****                  ****                          ****
Green/Cycle: 0.21 0.57  0.57  0.09 0.45  0.45  0.24 0.24  0.24  0.24 0.24  0.24
Volume/Cap:  0.50 0.48  0.12  0.48 0.50  0.04  0.08 0.28  0.32  0.50 0.42  0.21
Delay/Veh:   36.3 13.1  10.2  45.1 19.6  15.2  29.6 31.2  31.8  34.3 32.7  30.7
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  36.3 13.1  10.2  45.1 19.6  15.2  29.6 31.2  31.8  34.3 32.7  30.7
LOS by Move:    D    B     B     D    B     B     C    C     C     C    C     C
HCM2kAvgQ:      6    9     2     3   10     1     0    3     3     4    5     2
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                       EXISTING CONDITIONS - CALTRANS
                                AM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):        0.607
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):       25.6
Optimal Cycle:        44             Level Of Service:                 C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Protected        Protected
Rights:           Include            Ovl          Include          Include
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   2  0  2  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      27  156    24   112  131   508   544  215    34    48  355   274
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   27  156    24   112  131   508   544  215    34    48  355   274
Added Vol:      0    0     0     0    0     0     0    1     0     0    3     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   27  156    24   112  131   508   544  216    34    48  358   274
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    29  170    26   122  142   552   591  235    37    52  389   298
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   29  170    26   122  142   552   591  235    37    52  389   298
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   29  170    26   122  142   552   591  235    37    52  389   298
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.66 0.95  0.85  0.64 0.95  0.85  0.92 0.95  0.85  0.95 1.00  0.85
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  2.00 2.00  1.00  1.00 1.00  1.00
Final Sat.:  1246 3610  1615  1212 3610  1615  3502 3610  1615  1805 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.05  0.02  0.10 0.04  0.34  0.17 0.07  0.02  0.03 0.20  0.18
Crit Moves:                              ****  ****                   ****
Green/Cycle: 0.28 0.28  0.28  0.28 0.28  0.56  0.28 0.43  0.43  0.19 0.34  0.34
Volume/Cap:  0.08 0.16  0.06  0.35 0.14  0.61  0.61 0.15  0.05  0.15 0.61  0.55
Delay/Veh:   26.3 26.9  26.0  29.0 26.7  15.7  32.5 17.7  16.9  34.1 29.3  28.1
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  26.3 26.9  26.0  29.0 26.7  15.7  32.5 17.7  16.9  34.1 29.3  28.1
LOS by Move:    C    C     C     C    C     B     C    B     B     C    C     C
HCM2kAvgQ:      1    2     1     3    2    12     9    2     1     1   10     8
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                       EXISTING CONDITIONS - CALTRANS
                                PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
*******************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        0.563
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):       9.8
Optimal Cycle:       41             Level Of Service:                 A
*******************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected         Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  1  1  0    1  0  1  1  0    0  1  0  0  1    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      62 1239    63    49 1375    16    31   13    72    53    4    19
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   62 1239    63    49 1375    16    31   13    72    53    4    19
Added Vol:      0    2     0     0    4     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   62 1241    63    49 1379    16    31   13    72    53    4    19
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    67 1349    68    53 1499    17    34   14    78    58    4    21
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   67 1349    68    53 1499    17    34   14    78    58    4    21
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   67 1349    68    53 1499    17    34   14    78    58    4    21
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.94  0.94  0.95 0.95  0.95  0.74 0.74  0.85  0.69 0.69  0.85
Lanes:       1.00 1.90  0.10  1.00 1.98  0.02  0.70 0.30  1.00  0.93 0.07  1.00
Final Sat.:  1805 3412   173  1805 3561    41   995  417  1615  1228   93  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.40  0.40  0.03 0.42  0.42  0.03 0.03  0.05  0.05 0.05  0.01
Crit Moves:  ****                   ****                    ****
Green/Cycle: 0.07 0.76  0.76  0.06 0.75  0.75  0.09 0.09  0.09  0.09 0.09  0.09
Volume/Cap:  0.56 0.52  0.52  0.52 0.56  0.56  0.39 0.39  0.56  0.55 0.55  0.15
Delay/Veh:   51.3  5.1   5.1  50.7  5.8   5.8  45.3 45.3  49.1  49.2 49.2  42.8
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  51.3  5.1   5.1  50.7  5.8   5.8  45.3 45.3  49.1  49.2 49.2  42.8
LOS by Move:    D    A     A     D    A     A     D    D     D     D    D     D
HCM2kAvgQ:      3    9     9     2   11    11     2    2     3     3    3     1
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
                       EXISTING CONDITIONS - CALTRANS
                                PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
*******************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        0.671
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):      22.4
Optimal Cycle:       51             Level Of Service:                 C
*******************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected         Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1    1  0  2  0  1    0  1  0  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      75 1098    86   185 1294    50    76   65    30   153  104   162
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   75 1098    86   185 1294    50    76   65    30   153  104   162
Added Vol:      0    1     0     0    1     3     2    1     0     1    1     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   75 1099    86   185 1295    53    78   66    30   154  105   162
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    82 1195    93   201 1408    58    85   72    33   167  114   176
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   82 1195    93   201 1408    58    85   72    33   167  114   176
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   82 1195    93   201 1408    58    85   72    33   167  114   176
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.95  0.85  0.95 0.95  0.85  0.76 0.76  0.85  0.55 1.00  0.85
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.54 0.46  1.00  1.00 1.00  1.00
Final Sat.:  1805 3610  1615  1805 3610  1615   781  661  1615  1036 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.33  0.06  0.11 0.39  0.04  0.11 0.11  0.02  0.16 0.06  0.11
Crit Moves:       ****        ****                              ****
Green/Cycle: 0.07 0.49  0.49  0.17 0.59  0.59  0.24 0.24  0.24  0.24 0.24  0.24
Volume/Cap:  0.66 0.67  0.12  0.67 0.66  0.06  0.45 0.45  0.08  0.67 0.25  0.45
Delay/Veh:   57.9 20.2  13.7  45.0 14.5   8.7  33.3 33.3  29.5  41.3 30.9  33.2
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  57.9 20.2  13.7  45.0 14.5   8.7  33.3 33.3  29.5  41.3 30.9  33.2
LOS by Move:    E    C     B     D    B     A     C    C     C     D    C     C
HCM2kAvgQ:      4   15     2     7   16     1     4    4     1     6    3     5
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 WESTERN AVENUE/CRESTWOOD STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 0.585
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 13.6
Optimal Cycle: 42 Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 0 0 1! 0 0 | | | 1 0 0 1 0 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 47 | 1197 | 302 | 50 | 1246 | 117 | 89 | 49 | 45 | 194 | 82 | 61 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 47 | 1197 | 302 | 50 | 1246 | 117 | 89 | 49 | 45 | 194 | 82 | 61 |
| Added Vol: | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 47 | 1198 | 302 | 50 | 1248 | 117 | 89 | 49 | 45 | 194 | 82 | 61 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 51 | 1302 | 328 | 54 | 1357 | 127 | 97 | 53 | 49 | 211 | 89 | 66 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 51 | 1302 | 328 | 54 | 1357 | 127 | 97 | 53 | 49 | 211 | 89 | 66 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 51 | 1302 | 328 | 54 | 1357 | 127 | 97 | 53 | 49 | 211 | 89 | 66 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.14 | 0.95 | 0.85 | 0.16 | 0.95 | 0.85 | 0.70 | 0.70 | 0.70 | 0.75 | 0.94 | 0.94 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.49 | 0.27 | 0.24 | 1.00 | 0.57 | 0.43 |
| Final Sat.: | 272 | 3610 | 1615 | 296 | 3610 | 1615 | 642 | 354 | 325 | 1417 | 1020 | 759 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.36 | 0.20 | 0.18 | 0.38 | 0.08 | 0.15 | 0.15 | 0.15 | 0.15 | 0.09 | 0.09 |
| Crit Moves: | | | | | **** | | | **** | | | | |
| Green/Cycle: | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| Volume/Cap: | 0.29 | 0.56 | 0.32 | 0.29 | 0.58 | 0.12 | 0.58 | 0.58 | 0.58 | 0.58 | 0.34 | 0.34 |
| Delay/Veh: | 8.8 | 10.3 | 8.2 | 8.7 | 10.6 | 7.0 | 35.1 | 35.1 | 35.1 | 34.7 | 30.7 | 30.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 8.8 | 10.3 | 8.2 | 8.7 | 10.6 | 7.0 | 35.1 | 35.1 | 35.1 | 34.7 | 30.7 | 30.7 |
| LOS by Move: | A | B | A | A | B | A | D | D | D | C | C | C |
| HCM2kAvgQ: | 1 | 12 | 5 | 1 | 13 | 2 | 6 | 6 | 6 | 6 | 4 | 4 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 WESTERN AVENUE/1ST STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 1.093
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 86.6
Optimal Cycle: 180 Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Prot+Permit | | | Permitted | | | Prot+Permit | | |
| Rights: | Ovl | | | Include | | | Include | | | Ovl | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 1 1 0 | | | 1 0 0 1 0 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 36 | 1259 | 215 | 178 | 1458 | 61 | 42 | 184 | 21 | 714 | 276 | 156 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 36 | 1259 | 215 | 178 | 1458 | 61 | 42 | 184 | 21 | 714 | 276 | 156 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 36 | 1259 | 215 | 178 | 1458 | 63 | 43 | 184 | 21 | 714 | 277 | 156 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 39 | 1368 | 234 | 193 | 1585 | 68 | 47 | 200 | 23 | 776 | 301 | 170 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 39 | 1368 | 234 | 193 | 1585 | 68 | 47 | 200 | 23 | 776 | 301 | 170 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 39 | 1368 | 234 | 193 | 1585 | 68 | 47 | 200 | 23 | 776 | 301 | 170 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.52 | 0.94 | 0.94 | 0.57 | 0.99 | 0.99 | 0.80 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.92 | 0.08 | 1.00 | 0.90 | 0.10 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 985 | 3440 | 149 | 1085 | 1680 | 192 | 1516 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.38 | 0.14 | 0.20 | 0.46 | 0.46 | 0.04 | 0.12 | 0.12 | 0.51 | 0.16 | 0.10 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.02 | 0.33 | 0.70 | 0.40 | 0.40 | 0.40 | 0.10 | 0.10 | 0.10 | 0.48 | 0.48 | 0.57 |
| Volume/Cap: | 1.14 | 1.15 | 0.21 | 0.79 | 1.14 | 1.14 | 0.42 | 1.15 | 1.15 | 1.03 | 0.33 | 0.18 |
| Delay/Veh: | 248.0 | 111 | 5.2 | 36.0 | 102 | 102.2 | 44.5 | 156 | 155.8 | 65.2 | 16.5 | 10.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 248.0 | 111 | 5.2 | 36.0 | 102 | 102.2 | 44.5 | 156 | 155.8 | 65.2 | 16.5 | 10.4 |
| LOS by Move: | F | F | A | D | F | F | D | F | F | E | B | B |
| HCM2kAvgQ: | 4 | 37 | 3 | 7 | 43 | 43 | 2 | 14 | 14 | 33 | 6 | 2 |

Note: Queue reported is the number of cars per lane.

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.648 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 23.4 |
| Optimal Cycle: | 48 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 1 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 118 | 50 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 178 | 232 | 173 | 128 | 54 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 178 | 232 | 173 | 128 | 54 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 178 | 232 | 173 | 128 | 54 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.61 | 1.00 | 0.85 | 0.53 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1165 | 1900 | 1615 | 999 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.19 | 0.04 | 0.04 | 0.32 | 0.03 | 0.04 | 0.09 | 0.14 | 0.17 | 0.07 | 0.03 |
| Crit Moves: | **** | | | | **** | | | | | **** | | |
| Green/Cycle: | 0.13 | 0.52 | 0.52 | 0.12 | 0.50 | 0.50 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| Volume/Cap: | 0.65 | 0.37 | 0.08 | 0.37 | 0.65 | 0.07 | 0.13 | 0.35 | 0.54 | 0.65 | 0.25 | 0.13 |
| Delay/Veh: | 47.1 | 14.6 | 12.2 | 41.9 | 19.4 | 13.0 | 28.1 | 30.1 | 32.7 | 38.0 | 29.1 | 28.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 47.1 | 14.6 | 12.2 | 41.9 | 19.4 | 13.0 | 28.1 | 30.1 | 32.7 | 38.0 | 29.1 | 28.0 |
| LOS by Move: | D | B | B | D | B | B | C | C | C | D | C | C |
| HCM2kAvgQ: | 6 | 7 | 1 | 3 | 14 | 1 | 1 | 5 | 7 | 6 | 3 | 1 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 WESTERN AVENUE/WEST 25TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.544 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 24.9 |
| Optimal Cycle: | 39 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Ovl | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 2 0 2 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 54 | 106 | 55 | 206 | 215 | 369 | 477 | 306 | 35 | 71 | 290 | 176 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 54 | 106 | 55 | 206 | 215 | 369 | 477 | 306 | 35 | 71 | 290 | 176 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 54 | 106 | 55 | 206 | 215 | 369 | 477 | 307 | 35 | 71 | 292 | 176 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 59 | 115 | 60 | 224 | 234 | 401 | 518 | 334 | 38 | 77 | 317 | 191 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 59 | 115 | 60 | 224 | 234 | 401 | 518 | 334 | 38 | 77 | 317 | 191 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 59 | 115 | 60 | 224 | 234 | 401 | 518 | 334 | 38 | 77 | 317 | 191 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.57 | 0.95 | 0.85 | 0.68 | 0.95 | 0.85 | 0.92 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1079 | 3610 | 1615 | 1283 | 3610 | 1615 | 3502 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.03 | 0.04 | 0.17 | 0.06 | 0.25 | 0.15 | 0.09 | 0.02 | 0.04 | 0.17 | 0.12 |
| Crit Moves: | | | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.59 | 0.27 | 0.40 | 0.40 | 0.18 | 0.31 | 0.31 |
| Volume/Cap: | 0.17 | 0.10 | 0.12 | 0.54 | 0.20 | 0.42 | 0.54 | 0.23 | 0.06 | 0.23 | 0.54 | 0.39 |
| Delay/Veh: | 24.6 | 23.9 | 24.0 | 29.4 | 24.7 | 11.3 | 31.7 | 20.2 | 18.7 | 35.2 | 29.9 | 27.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 24.6 | 23.9 | 24.0 | 29.4 | 24.7 | 11.3 | 31.7 | 20.2 | 18.7 | 35.2 | 29.9 | 27.7 |
| LOS by Move: | C | C | C | C | C | B | C | C | B | D | C | C |
| HCM2kAvgQ: | 1 | 1 | 1 | 6 | 3 | 7 | 7 | 4 | 1 | 2 | 8 | 5 |

Note: Queue reported is the number of cars per lane.

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CMP
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.812 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 69 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 1 1 0 | | | 1 0 1 1 0 | | | 0 1 0 0 1 | | | 0 1 0 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 59 | 1382 | 21 | 16 | 878 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 59 | 1382 | 21 | 16 | 878 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| Added Vol: | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 59 | 1383 | 21 | 16 | 883 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 64 | 1503 | 23 | 17 | 960 | 16 | 71 | 23 | 271 | 88 | 51 | 50 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 64 | 1503 | 23 | 17 | 960 | 16 | 71 | 23 | 271 | 88 | 51 | 50 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 64 | 1503 | 23 | 17 | 960 | 16 | 71 | 23 | 271 | 88 | 51 | 50 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.97 | 0.03 | 1.00 | 1.97 | 0.03 | 0.76 | 0.24 | 1.00 | 0.63 | 0.37 | 1.00 |
| Final Sat.: | 1600 | 3152 | 48 | 1600 | 3147 | 53 | 1209 | 391 | 1600 | 1012 | 588 | 1600 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.48 | 0.48 | 0.01 | 0.31 | 0.31 | 0.04 | 0.06 | 0.17 | 0.06 | 0.09 | 0.03 |
| Crit Moves: | | **** | | **** | | | | | **** | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CMP
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.641 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 44 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 1 0 1 | | | 1 0 1 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 172 | 902 | 103 | 75 | 760 | 29 | 16 | 116 | 115 | 128 | 174 | 76 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 172 | 902 | 103 | 75 | 760 | 29 | 16 | 116 | 115 | 128 | 174 | 76 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 172 | 902 | 103 | 75 | 760 | 29 | 16 | 116 | 115 | 128 | 175 | 76 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 187 | 980 | 112 | 82 | 826 | 32 | 17 | 126 | 125 | 139 | 190 | 83 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 187 | 980 | 112 | 82 | 826 | 32 | 17 | 126 | 125 | 139 | 190 | 83 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 187 | 980 | 112 | 82 | 826 | 32 | 17 | 126 | 125 | 139 | 190 | 83 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.12 | 0.31 | 0.07 | 0.05 | 0.26 | 0.02 | 0.01 | 0.08 | 0.08 | 0.09 | 0.12 | 0.05 |
| Crit Moves: | **** | | | | **** | | | **** | | **** | | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CMP
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.701 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 50 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 1 1 0 | | | 1 0 1 1 0 | | | 0 1 0 0 1 | | | 0 1 0 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 62 | 1239 | 63 | 49 | 1375 | 16 | 31 | 13 | 72 | 53 | 4 | 19 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 62 | 1239 | 63 | 49 | 1375 | 16 | 31 | 13 | 72 | 53 | 4 | 19 |
| Added Vol: | 0 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 62 | 1241 | 63 | 49 | 1379 | 16 | 31 | 13 | 72 | 53 | 4 | 19 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 67 | 1349 | 68 | 53 | 1499 | 17 | 34 | 14 | 78 | 58 | 4 | 21 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 67 | 1349 | 68 | 53 | 1499 | 17 | 34 | 14 | 78 | 58 | 4 | 21 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 67 | 1349 | 68 | 53 | 1499 | 17 | 34 | 14 | 78 | 58 | 4 | 21 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.90 | 0.10 | 1.00 | 1.98 | 0.02 | 0.70 | 0.30 | 1.00 | 0.93 | 0.07 | 1.00 |
| Final Sat.: | 1600 | 3045 | 155 | 1600 | 3163 | 37 | 1127 | 473 | 1600 | 1488 | 112 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.44 | 0.44 | 0.03 | 0.47 | 0.47 | 0.02 | 0.03 | 0.05 | 0.04 | 0.04 | 0.01 |
| Crit Moves: | **** | | | | **** | | | | **** | **** | | |

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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING CONDITIONS - CMP
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.816 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 70 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 1 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 118 | 50 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 178 | 232 | 173 | 128 | 54 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 178 | 232 | 173 | 128 | 54 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 178 | 232 | 173 | 128 | 54 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.22 | 0.04 | 0.05 | 0.37 | 0.03 | 0.03 | 0.11 | 0.14 | 0.11 | 0.08 | 0.03 |
| Crit Moves: | **** | | | | **** | | | | **** | **** | | |

# Forecast Existing With Project Conditions

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                 AM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Average Delay (sec/veh):    242.5       Worst Case Level Of Service: F[724.1]
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  397   180   379  351     0     0    0     0   156    0   416
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  397   180   379  351     0     0    0     0   156    0   416
Added Vol:       0    5    35     0   16     0     0    0     0   105    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0  402   215   379  367     0     0    0     0   261    0   416
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  437   234   412  399     0     0    0     0   284    0   452
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  437   234   412  399     0     0    0     0   284    0   452
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   671 xxxx xxxxx  xxxx xxxx xxxxx  1777 xxxx   554
Potent Cap.: xxxx xxxx xxxxx   929 xxxx xxxxx  xxxx xxxx xxxxx    92 xxxx   536
Move Cap.:   xxxx xxxx xxxxx   929 xxxx xxxxx  xxxx xxxx xxxxx    60 xxxx   536
Volume/Cap:  xxxx xxxx  xxxx  0.44 xxxx  xxxx  xxxx xxxx  xxxx  4.73 xxxx  0.84
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   2.3 xxxx xxxxx  xxxx xxxx xxxxx  31.4 xxxx   8.8
Control Del:xxxxx xxxx xxxxx  11.9 xxxx xxxxx xxxxx xxxx xxxxx  1817 xxxx  38.1
LOS by Move:     *    *     *     B    *     *     *    *     *     F    *     E
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            724.1
ApproachLOS:        *                *                *                F
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```





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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                 AM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.536
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        35              Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:      0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    0  1  0  0  1    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        6    0    15   214    6    37    48  185    31   139  117   208
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     6    0    15   214    6    37    48  185    31   139  117   208
Added Vol:      14    0    40     0    0     0     0    0    41   122    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    20    0    55   214    6    37    48  185    72   261  117   208
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     22    0    60   233    7    40    52  201    78   284  127   226
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    22    0    60   233    7    40    52  201    78   284  127   226
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    22    0    60   233    7    40    52  201    78   284  127   226
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.27 0.00  0.73  0.97 0.03  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:    427    0  1173  1556   44  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.01 0.00  0.05  0.15 0.15  0.03  0.03 0.06  0.05  0.18 0.04  0.14
Crit Moves:                ****  ****                  ****        ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                 AM PEAK HOUR
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      3.5       Worst Case Level Of Service: C[ 21.9]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0   1  0  0  0  1   1  0  1  0  0   0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0    0   27    0   74  188  384    0    0  466   52
Growth Adj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:     0    0    0   27    0   74  188  384    0    0  466   52
Added Vol:       0    0    0   11    0    3    8    0    0    0    0   32
PasserByVol:     0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:     0    0    0   38    0   77  196  384    0    0  466   84
User Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume:      0    0    0   41    0   84  213  417    0    0  507   91
Reduct Vol:      0    0    0    0    0    0    0    0    0    0    0    0
FinalVolume:     0    0    0   41    0   84  213  417    0    0  507   91
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1350 xxxx   507   598 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   168 xxxx   570   989 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   140 xxxx   570   989 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.30 xxxx  0.15  0.22 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.2 xxxx   0.5   0.8 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  41.2 xxxx  12.4   9.6 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *    *     E    *     B     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *    *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             21.9            xxxxxx           xxxxxx
ApproachLOS:        *                 C                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```





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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                 AM PEAK HOUR
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #5 MIRALESTE DRIVE/1ST STREET
********************************************************************************
Average Delay (sec/veh):      5.9       Worst Case Level Of Service: B[ 14.9]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled       Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  284  103  342  163    0    0    0    0   26    0  164
Growth Adj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:     0  284  103  342  163    0    0    0    0   26    0  164
Added Vol:       0    8    0   11    3    0    0    0    0    0    0   32
PasserByVol:     0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:     0  292  103  353  166    0    0    0    0   26    0  196
User Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume:      0  317  112  384  180    0    0    0    0   28    0  213
Reduct Vol:      0    0    0    0    0    0    0    0    0    0    0    0
FinalVolume:     0  317  112  384  180    0    0    0    0   28    0  213
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   429 xxxx xxxxx  xxxx xxxx xxxxx  1265 xxxx   317
Potent Cap.: xxxx xxxx xxxxx  1141 xxxx xxxxx  xxxx xxxx xxxxx   189 xxxx   728
Move Cap.:   xxxx xxxx xxxxx  1141 xxxx xxxxx  xxxx xxxx xxxxx   139 xxxx   728
Volume/Cap:  xxxx xxxx  xxxx  0.34 xxxx  xxxx  xxxx xxxx  xxxx  0.20 xxxx  0.29
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.5 xxxx xxxxx  xxxx xxxx xxxxx   0.7 xxxx   1.2
Control Del:xxxxx xxxx xxxxx   9.7 xxxx xxxxx xxxxx xxxx xxxxx  37.3 xxxx  12.0
LOS by Move:     *    *    *     A    *     *     *    *     *     E    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *    *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx             14.9
ApproachLOS:        *                *                *                 B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.2

## TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: AM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS    Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 17 | 385 | 130 | 177 | 414 | 3 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 18 | 418 | 141 | 192 | 449 | 3 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 40 | 14 | 241 | 4 | 4 | 15 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 43 | 15 | 261 | 4 | 4 | 16 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 18 | 192 | 58 | | 261 | | 24 | |
| C(m) (vph) | 1119 | 1022 | 246 | | 639 | | 219 | |
| v/c | 0.02 | 0.19 | 0.24 | | 0.41 | | 0.11 | |
| 95% queue length | 0.05 | 0.69 | 0.89 | | 1.99 | | 0.36 | |
| Control Delay | 8.3 | 9.3 | 24.1 | | 14.5 | | 23.5 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 16.2 | | | 23.5 | |
| Approach LOS | | | | C | | | C | |

HCS+: Unsignalized Intersections Release 5.2

Phone:    Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: AM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS    Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 17 | 385 | 130 | 177 | 414 | 3 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 5 | 105 | 35 | 48 | 112 | 1 |
| Hourly Flow Rate, HFR | 18 | 418 | 141 | 192 | 449 | 3 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 40 | 14 | 241 | 4 | 4 | 15 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 11 | 4 | 65 | 1 | 1 | 4 |
| Hourly Flow Rate, HFR | 43 | 15 | 261 | 4 | 4 | 16 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 418 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5
Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 452 | 559 | 1298 | 1290 | 418 | 1496 | 1429 | 450 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 454 | 844 | 454 | 836 | 834 | 662 | 834 | 595 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 418 | 450 |
| Potential Capacity | 639 | 613 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 639 | 613 |
| Probability of Queue free St. | 0.59 | 0.97 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 559 | 452 |
| Potential Capacity | 1022 | 1119 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1022 | 1119 |
| Probability of Queue free St. | 0.81 | 0.98 |
| Maj L-Shared Prob Q free St. | | 0.98 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1290 | 1429 |
| Potential Capacity | 165 | 136 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.79 |
| Movement Capacity | 131 | 108 |
| Probability of Queue free St. | 0.96 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1298 | 1496 |
| Potential Capacity | 140 | 102 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.78 | 0.76 |
| Maj. L, Min T Adj. Imp Factor. | 0.83 | 0.82 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.48 |
| Movement Capacity | 114 | 49 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| **Part 1 - First Stage** | | |
| Conflicting Flows | 454 | 834 |
| Potential Capacity | 573 | 386 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.98 | 0.81 |
| Movement Capacity | 561 | 313 |
| Probability of Queue free St. | 0.97 | 0.99 |
| **Part 2 - Second Stage** | | |
| Conflicting Flows | 836 | 595 |
| Potential Capacity | 385 | 496 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.98 |
| Movement Capacity | 313 | 485 |
| **Part 3 - Single Stage** | | |
| Conflicting Flows | 1290 | 1429 |
| Potential Capacity | 165 | 136 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.79 |
| Movement Capacity | 131 | 108 |
| **Result for 2 stage process:** | | |
| a | 0.95 | 0.95 |
| y | 2.62 | 1.11 |
| C t | 265 | 225 |
| Probability of Queue free St. | 0.96 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| **Part 1 - First Stage** | | |
| Conflicting Flows | 454 | 834 |
| Potential Capacity | 589 | 365 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.98 | 0.81 |
| Movement Capacity | 576 | 296 |
| **Part 2 - Second Stage** | | |
| Conflicting Flows | 844 | 662 |
| Potential Capacity | 361 | 454 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.56 |
| Movement Capacity | 282 | 256 |
| **Part 3 - Single Stage** | | |
| Conflicting Flows | 1298 | 1496 |
| Potential Capacity | 140 | 102 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.78 | 0.76 |
| Maj. L, Min T Adj. Imp Factor. | 0.83 | 0.82 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.48 |
| Movement Capacity | 114 | 49 |
| **Results for Two-stage process:** | | |
| a | 0.95 | 0.95 |
| y | 3.08 | 16.47 |
| C t | 240 | 61 |

Worksheet 8-Shared Lane Calculations

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume (vph) | 43 | 15 | 261 | 4 | 4 | 16 |
| Movement Capacity (vph) | 240 | 265 | 639 | 61 | 225 | 613 |
| Shared Lane Capacity (vph) | 246 | | | | 219 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| C sep | 240 | 265 | 639 | 61 | 225 | 613 |
| Volume | 43 | 15 | 261 | 4 | 4 | 16 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 246 | | | | 219 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 18 | 192 | 58 | | 261 | | 24 | |
| C(m) (vph) | 1119 | 1022 | 246 | | 639 | | 219 | |
| v/c | 0.02 | 0.19 | 0.24 | | 0.41 | | 0.11 | |
| 95% queue length | 0.05 | 0.69 | 0.89 | | 1.99 | | 0.36 | |
| Control Delay | 8.3 | 9.3 | 24.1 | | 14.5 | | 23.5 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 16.2 | | | 23.5 | |
| Approach LOS | | | | C | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.98 | 0.81 |
| v(il), Volume for stream 2 or 5 | 418 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.98 | |
| d(M,LT), Delay for stream 1 or 4 | 8.3 | 9.3 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.2 | |

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.819
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       71              Level Of Service:                  D
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0     0     0     0     0     0     0     0     0     0     0     0
Lanes:       1  0  1  1  0    1  0  1  1  0    0  1  0  0  1    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      59 1382    21    16  878    15    65   21   249    81   47    46
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   59 1382    21    16  878    15    65   21   249    81   47    46
Added Vol:      0   22     0     0   65     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   59 1404    21    16  943    15    65   21   249    81   47    46
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    64 1526    23    17 1025    16    71   23   271    88   51    50
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   64 1526    23    17 1025    16    71   23   271    88   51    50
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   64 1526    23    17 1025    16    71   23   271    88   51    50
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.97  0.03  1.00 1.97  0.03  0.76 0.24  1.00  0.63 0.37  1.00
Final Sat.:  1600 3153    47  1600 3150    50  1209  391  1600  1012  588  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.48  0.48  0.01 0.33  0.33  0.04 0.06  0.17  0.06 0.09  0.03
Crit Moves:       ****        ****                           ****  ****
********************************************************************************
```





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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.933
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      119              Level Of Service:                  E
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0     0     0     0     0     0     0     0     0     0     0     0
Lanes:       1  0  2  0  1    1  0  2  0  1    0  1  0  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      13 1332   208   132  907    85   132   74    44   190   53   165
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   13 1332   208   132  907    85   132   74    44   190   53   165
Added Vol:      0    5     3     0   16    49    16    5     0     8   16     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   13 1337   211   132  923   134   148   79    44   198   69   165
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    14 1453   229   143 1003   146   161   86    48   215   75   179
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   14 1453   229   143 1003   146   161   86    48   215   75   179
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   14 1453   229   143 1003   146   161   86    48   215   75   179
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.65 0.35  1.00  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1043  557  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.45  0.14  0.09 0.31  0.09  0.10 0.15  0.03  0.13 0.05  0.11
Crit Moves:       ****        ****                  ****        ****
********************************************************************************
```

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 WESTERN AVENUE/CRESTWOOD STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.862 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 84 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 0 0 | 1! 0 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 93 | 1394 | 149 | 23 | 1107 | 128 | 179 | 31 | 104 | 83 | 10 | 25 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 93 | 1394 | 149 | 23 | 1107 | 128 | 179 | 31 | 104 | 83 | 10 | 25 |
| Added Vol: | 0 | 8 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 93 | 1402 | 149 | 23 | 1131 | 128 | 179 | 31 | 104 | 83 | 10 | 25 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 101 | 1524 | 162 | 25 | 1229 | 139 | 195 | 34 | 113 | 90 | 11 | 27 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 101 | 1524 | 162 | 25 | 1229 | 139 | 195 | 34 | 113 | 90 | 11 | 27 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 101 | 1524 | 162 | 25 | 1229 | 139 | 195 | 34 | 113 | 90 | 11 | 27 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.57 | 0.10 | 0.33 | 1.00 | 0.29 | 0.71 |
| Final Sat.: | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 912 | 158 | 530 | 1600 | 457 | 1143 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.48 | 0.10 | 0.02 | 0.38 | 0.09 | 0.12 | 0.21 | 0.21 | 0.06 | 0.02 | 0.02 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
AM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #9 WESTERN AVENUE/1ST STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.367 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 180 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Prot+Permit | | | Permitted | | | Prot+Permit | | |
| Rights: | Ovl | | | Include | | | Include | | | Ovl | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 6 | 1612 | 635 | 189 | 1193 | 20 | 60 | 402 | 32 | 360 | 211 | 176 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 6 | 1612 | 635 | 189 | 1193 | 20 | 60 | 402 | 32 | 360 | 211 | 176 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 24 | 8 | 3 | 0 | 0 | 8 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 6 | 1612 | 635 | 189 | 1193 | 44 | 68 | 405 | 32 | 360 | 219 | 176 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 7 | 1752 | 690 | 205 | 1297 | 48 | 74 | 440 | 35 | 391 | 238 | 191 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 7 | 1752 | 690 | 205 | 1297 | 48 | 74 | 440 | 35 | 391 | 238 | 191 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 7 | 1752 | 690 | 205 | 1297 | 48 | 74 | 440 | 35 | 391 | 238 | 191 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.93 | 0.07 | 1.00 | 0.93 | 0.07 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2749 | 101 | 1425 | 1321 | 104 | 1425 | 1425 | 1425 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.61 | 0.48 | 0.14 | 0.47 | 0.47 | 0.05 | 0.33 | 0.33 | 0.27 | 0.17 | 0.13 |
| Crit Volume: | | 876 | | 205 | | | | 475 | | 391 | | |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.609
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        51              Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     172  902   103    75  760    29    16  116   115   128  174    76
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  172  902   103    75  760    29    16  116   115   128  174    76
Added Vol:      0    0     0     0    0     0     0    3     0     0    8     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  172  902   103    75  760    29    16  119   115   128  182    76
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   187  980   112    82  826    32    17  129   125   139  198    83
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  187  980   112    82  826    32    17  129   125   139  198    83
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  187  980   112    82  826    32    17  129   125   139  198    83
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1425  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.34  0.08  0.06 0.29  0.02  0.01 0.09  0.09  0.10 0.14  0.06
Crit Volume:  187                    413              129         139
Crit Moves:  ****                   ****             ****        ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.703
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        67              Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Protected        Protected
Rights:           Include            Ovl            Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1   1  0  2  0  1   2  0  2  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      27  156    24   112  131   508   544  215    34    48  355   274
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   27  156    24   112  131   508   544  215    34    48  355   274
Added Vol:      0    0     0     0    0     0     0   11     0     0   32     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   27  156    24   112  131   508   544  226    34    48  387   274
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    29  170    26   122  142   552   591  246    37    52  421   298
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   29  170    26   122  142   552   591  246    37    52  421   298
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
FinalVolume:   29  170    26   122  142   552   650  246    37    52  421   298
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  2.00 2.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  2850 2850  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.06  0.02  0.09 0.05  0.39  0.23 0.09  0.03  0.04 0.30  0.21
Crit Volume:   29                          552     0                   421
Crit Moves:  ****                         ****  ****                  ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                  PM PEAK HOUR
---------------------------------------------------------------------------------
                        Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
*********************************************************************************
Average Delay (sec/veh):    269.0       Worst Case Level Of Service: F[643.0]
*********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:       0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  138   157   419  200     0     0    0     0   293    0   351
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  138   157   419  200     0     0    0     0   293    0   351
Added Vol:      0   10    63     0    9     0     0    0     0    61    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  148   220   419  209     0     0    0     0   354    0   351
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  161   239   455  227     0     0    0     0   385    0   382
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  161   239   455  227     0     0    0     0   385    0   382
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   400 xxxx xxxxx  xxxx xxxx xxxxx  1418 xxxx   280
Potent Cap.: xxxx xxxx xxxxx  1170 xxxx xxxxx  xxxx xxxx xxxxx   152 xxxx   763
Move Cap.:   xxxx xxxx xxxxx  1170 xxxx xxxxx  xxxx xxxx xxxxx   106 xxxx   763
Volume/Cap:  xxxx xxxx  xxxx  0.39 xxxx  xxxx  xxxx xxxx  xxxx  3.63 xxxx  0.50
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.9 xxxx xxxxx  xxxx xxxx xxxxx  38.6 xxxx   2.8
Control Del:xxxxx xxxx xxxxx  10.0 xxxx xxxxx xxxxx xxxx xxxxx  1266 xxxx  14.3
LOS by Move:    *    *     *     B    *     *     *    *     *     F    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            643.0
ApproachLOS:        *                *                *                F
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                  PM PEAK HOUR
---------------------------------------------------------------------------------
                        Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
*********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.407
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         29               Level Of Service:                  A
*********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       0  0  1! 0  0   0  1  0  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      33    2    97    71    1    24    22  103    10    30  187   103
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   33    2    97    71    1    24    22  103    10    30  187   103
Added Vol:     24    0    73     0    0     0     0    0    24    70    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   57    2   170    71    1    24    22  103    34   100  187   103
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    62    2   185    77    1    26    24  112    37   109  203   112
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   62    2   185    77    1    26    24  112    37   109  203   112
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   62    2   185    77    1    26    24  112    37   109  203   112
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.25 0.01  0.74  0.99 0.01  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:   398   14  1188  1578   22  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.16  0.16  0.05 0.05  0.02  0.01 0.03  0.02  0.07 0.06  0.07
Crit Moves:       ****        ****                   ****        ****
*********************************************************************************
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---------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                 PM PEAK HOUR
---------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
*********************************************************************************
Average Delay (sec/veh):      3.6       Worst Case Level Of Service: C[ 21.2]
*********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    40    0   106   111  549     0     0  391    49
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    40    0   106   111  549     0     0  391    49
Added Vol:      0    0     0    19    0     5     5    0     0     0    0    19
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    59    0   111   116  549     0     0  391    68
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0    64    0   121   126  597     0     0  425    74
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    64    0   121   126  597     0     0  425    74
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1274 xxxx   425   499 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   186 xxxx   634  1076 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   170 xxxx   634  1076 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.38 xxxx  0.19  0.12 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.6 xxxx   0.7   0.4 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  38.6 xxxx  12.0   8.8 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     E    *     B     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx            21.2           xxxxxx           xxxxxx
ApproachLOS:        *                C               *                *
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
```





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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                 PM PEAK HOUR
---------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #5 MIRALESTE DRIVE/1ST STREET
*********************************************************************************
Average Delay (sec/veh):      4.8       Worst Case Level Of Service: C[ 15.1]
*********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled       Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  251    44   199  372     0     0    0     0    44    0   174
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  251    44   199  372     0     0    0     0    44    0   174
Added Vol:      0    5     0    19    5     0     0    0     0     0    0    19
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  256    44   218  377     0     0    0     0    44    0   193
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  278    48   237  410     0     0    0     0    48    0   210
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  278    48   237  410     0     0    0     0    48    0   210
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   326 xxxx xxxxx  xxxx xxxx xxxxx  1162 xxxx   278
Potent Cap.: xxxx xxxx xxxxx  1245 xxxx xxxxx  xxxx xxxx xxxxx   218 xxxx   765
Move Cap.:   xxxx xxxx xxxxx  1245 xxxx xxxxx  xxxx xxxx xxxxx   186 xxxx   765
Volume/Cap:  xxxx xxxx  xxxx  0.19 xxxx  xxxx  xxxx xxxx  xxxx  0.26 xxxx  0.27
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.7 xxxx xxxxx  xxxx xxxx xxxxx   1.0 xxxx   1.1
Control Del:xxxxx xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx  31.0 xxxx  11.5
LOS by Move:    *    *     *     A    *     *     *    *     *     D    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            15.1
ApproachLOS:        *                *                *                C
*********************************************************************************
Note: Queue reported is the number of cars per lane.
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HCS+: Unsignalized Intersections Release 5.2

TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: PM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 7 | 402 | 69 | 166 | 477 | 2 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 7 | 436 | 74 | 180 | 518 | 2 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | TR | |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 47 | 6 | 221 | 2 | 5 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 51 | 6 | 240 | 2 | 5 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 7 | 180 | 57 | | 240 | | 13 | |
| C(m) (vph) | 1056 | 1065 | 247 | | 625 | | 258 | |
| v/c | 0.01 | 0.17 | 0.23 | | 0.38 | | 0.05 | |
| 95% queue length | 0.02 | 0.61 | 0.87 | | 1.80 | | 0.16 | |
| Control Delay | 8.4 | 9.1 | 23.9 | | 14.3 | | 19.7 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 16.1 | | | 19.7 | |
| Approach LOS | | | | C | | | C | |

HCS+: Unsignalized Intersections Release 5.2

Phone: Fax:
E-Mail:

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: PM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 7 | 402 | 69 | 166 | 477 | 2 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 2 | 109 | 19 | 45 | 130 | 1 |
| Hourly Flow Rate, HFR | 7 | 436 | 74 | 180 | 518 | 2 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | TR | |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 47 | 6 | 221 | 2 | 5 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 13 | 2 | 60 | 1 | 1 | 2 |
| Hourly Flow Rate, HFR | 51 | 6 | 240 | 2 | 5 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 436 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 520 | 510 | 1334 | 1330 | 436 | 1489 | 1403 | 519 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 450 | 884 | 450 | 880 | 879 | 610 | 879 | 524 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 436 | 519 |
| Potential Capacity | 625 | 561 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 625 | 561 |
| Probability of Queue free St. | 0.62 | 0.99 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 510 | 520 |
| Potential Capacity | 1065 | 1056 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1065 | 1056 |
| Probability of Queue free St. | 0.83 | 0.99 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1330 | 1403 |
| Potential Capacity | 156 | 141 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.82 |
| Movement Capacity | 128 | 116 |
| Probability of Queue free St. | 0.98 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1334 | 1489 |
| Potential Capacity | 132 | 103 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.81 | 0.81 |
| Maj. L, Min T Adj. Imp Factor. | 0.85 | 0.85 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.53 |
| Movement Capacity | 111 | 54 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 450 | 879 |
| Potential Capacity | 575 | 368 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.83 |
| Movement Capacity | 570 | 306 |
| Probability of Queue free St. | 0.99 | 0.98 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 880 | 524 |
| Potential Capacity | 368 | 533 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.99 |
| Movement Capacity | 306 | 528 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1330 | 1403 |
| Potential Capacity | 156 | 141 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.82 |
| Movement Capacity | 128 | 116 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.58 | 0.82 |
| C t | 268 | 242 |
| Probability of Queue free St. | 0.98 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 450 | 879 |
| Potential Capacity | 592 | 345 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.83 |
| Movement Capacity | 587 | 287 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 884 | 610 |
| Potential Capacity | 343 | 485 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.60 |
| Movement Capacity | 277 | 293 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1334 | 1489 |
| Potential Capacity | 132 | 103 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.81 | 0.81 |
| Maj. L, Min T Adj. Imp Factor. | 0.85 | 0.85 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.53 |
| Movement Capacity | 111 | 54 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.99 | 3.95 |
| C t | 245 | 105 |

Worksheet 8-Shared Lane Calculations

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume (vph) | 51 | 6 | 240 | 2 | 5 | 6 |
| Movement Capacity (vph) | 245 | 268 | 625 | 105 | 242 | 561 |
| Shared Lane Capacity (vph) | 247 | | | | 258 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| C sep | 245 | 268 | 625 | 105 | 242 | 561 |
| Volume | 51 | 6 | 240 | 2 | 5 | 6 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 247 | | | | 258 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 7 | 180 | 57 | | 240 | | 13 | |
| C(m) (vph) | 1056 | 1065 | 247 | | 625 | | 258 | |
| v/c | 0.01 | 0.17 | 0.23 | | 0.38 | | 0.05 | |
| 95% queue length | 0.02 | 0.61 | 0.87 | | 1.80 | | 0.16 | |
| Control Delay | 8.4 | 9.1 | 23.9 | | 14.3 | | 19.7 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 16.1 | | | 19.7 | |
| Approach LOS | | | | C | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.99 | 0.83 |
| v(il), Volume for stream 2 or 5 | 436 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.4 | 9.1 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.1 | |

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                 PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):          0.712
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        52             Level Of Service:                   C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  1  1  0    1  0  1  1  0    0  1  0  0  1    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      62 1239    63    49 1375    16    31   13    72    53    4    19
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   62 1239    63    49 1375    16    31   13    72    53    4    19
Added Vol:      0   39     0     0   38     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   62 1278    63    49 1413    16    31   13    72    53    4    19
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    67 1389    68    53 1536    17    34   14    78    58    4    21
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   67 1389    68    53 1536    17    34   14    78    58    4    21
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   67 1389    68    53 1536    17    34   14    78    58    4    21
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.91  0.09  1.00 1.98  0.02  0.70 0.30  1.00  0.93 0.07  1.00
Final Sat.:  1600 3050   150  1600 3164    36  1127  473  1600  1488  112  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.46  0.46  0.03 0.49  0.49  0.02 0.03  0.05  0.04 0.04  0.01
Crit Moves:  ****                  ****                   ****  ****
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                 PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):          0.832
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        75             Level Of Service:                   D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    0  1  0  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      75 1098    86   185 1294    50    76   65    30   153  104   162
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   75 1098    86   185 1294    50    76   65    30   153  104   162
Added Vol:      0   10     5     0    9    28    29   10     0     5    9     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   75 1108    91   185 1303    78   105   75    30   158  113   162
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    82 1204    99   201 1416    85   114   82    33   172  123   176
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   82 1204    99   201 1416    85   114   82    33   172  123   176
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   82 1204    99   201 1416    85   114   82    33   172  123   176
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.58 0.42  1.00  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600   933  667  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.38  0.06  0.13 0.44  0.05  0.07 0.12  0.02  0.11 0.08  0.11
Crit Moves:       ****        ****                   ****        ****
********************************************************************************
```

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                 PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        0.816
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       70             Level Of Service:                 D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      47 1197   302    50 1246   117    89   49    45   194   82    61
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   47 1197   302    50 1246   117    89   49    45   194   82    61
Added Vol:      0   15     0     0   14     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   47 1212   302    50 1260   117    89   49    45   194   82    61
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    51 1317   328    54 1370   127    97   53    49   211   89    66
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   51 1317   328    54 1370   127    97   53    49   211   89    66
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   51 1317   328    54 1370   127    97   53    49   211   89    66
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.49 0.27  0.24  1.00 0.57  0.43
Final Sat.:  1600 3200  1600  1600 3200  1600   778  428   393  1600  917   683
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.41  0.21  0.03 0.43  0.08  0.06 0.12  0.12  0.13 0.10  0.10
Crit Moves:  ****                 ****              ****        ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                 PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        1.321
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:      180             Level Of Service:                 F
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted       Prot+Permit       Permitted       Prot+Permit
Rights:            Ovl            Include          Include            Ovl
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  1  1  0    1  0  0  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      36 1259   215   178 1458    61    42  184    21   714  276   156
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   36 1259   215   178 1458    61    42  184    21   714  276   156
Added Vol:      0    0     0     0    0    14    15    5     0     0    5     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   36 1259   215   178 1458    75    57  189    21   714  281   156
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    39 1368   234   193 1585    82    62  205    23   776  305   170
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   39 1368   234   193 1585    82    62  205    23   776  305   170
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   39 1368   234   193 1585    82    62  205    23   776  305   170
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 1.90  0.10  1.00 0.90  0.10  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2711   139  1425 1282   143  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.48  0.16  0.14 0.58  0.58  0.04 0.16  0.16  0.54 0.21  0.12
Crit Volume:       684         193                      228         776
Crit Moves:       ****        ****                      ****        ****
********************************************************************************
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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         0.804
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       102             Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     144  640    62    72 1076    51    38  164   213   159  117    50
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  144  640    62    72 1076    51    38  164   213   159  117    50
Added Vol:      0    0     0     0    0     0     0    5     0     0    5     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  144  640    62    72 1076    51    38  169   213   159  122    50
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   157  696    67    78 1170    55    41  184   232   173  133    54
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  157  696    67    78 1170    55    41  184   232   173  133    54
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  157  696    67    78 1170    55    41  184   232   173  133    54
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1425  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.24  0.05  0.05 0.41  0.04  0.03 0.13  0.16  0.12 0.09  0.04
Crit Volume:  157                    585                     232   173
Crit Moves:  ****                   ****                    ****  ****
********************************************************************************
```

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                                PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         0.635
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        55             Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   2  0  2  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54  106    55   206  215   369   477  306    35    71  290   176
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   54  106    55   206  215   369   477  306    35    71  290   176
Added Vol:      0    0     0     0    0     0     0   19     0     0   19     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   54  106    55   206  215   369   477  325    35    71  309   176
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    59  115    60   224  234   401   518  353    38    77  336   191
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   59  115    60   224  234   401   518  353    38    77  336   191
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
FinalVolume:   59  115    60   224  234   401   570  353    38    77  336   191
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  2.00 2.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  2850 2850  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.04  0.04  0.16 0.08  0.28  0.20 0.12  0.03  0.05 0.24  0.13
Crit Volume:               60   224              285                     336
Crit Moves:              ****  ****             ****                    ****
********************************************************************************
```

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                         WEEKDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------

                       Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Average Delay (sec/veh):    132.7       Worst Case Level Of Service: F[345.5]
********************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign         Stop Sign
Rights:           Include          Include          Include           Include
Lanes:        0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  144   161   283  232     0     0    0     0   254    0   220
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  144   161   283  232     0     0    0     0   254    0   220
Added Vol:       0   10    64     0   12     0     0    0     0    79    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0  154   225   283  244     0     0    0     0   333    0   220
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  167   245   308  265     0     0    0     0   362    0   239
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  167   245   308  265     0     0    0     0   362    0   239
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   412 xxxx xxxxx  xxxx xxxx xxxxx  1170 xxxx   290
Potent Cap.: xxxx xxxx xxxxx  1158 xxxx xxxxx  xxxx xxxx xxxxx   215 xxxx   754
Move Cap.:   xxxx xxxx xxxxx  1158 xxxx xxxxx  xxxx xxxx xxxxx   171 xxxx   754
Volume/Cap:  xxxx xxxx  xxxx  0.27 xxxx  xxxx  xxxx xxxx  xxxx  2.12 xxxx  0.32
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.1 xxxx xxxxx  xxxx xxxx xxxxx  28.6 xxxx   1.4
Control Del:xxxxx xxxx xxxxx   9.2 xxxx xxxxx xxxxx xxxx xxxxx 565.8 xxxx  12.0
LOS by Move:    *    *     *     A    *     *     *    *     *     F    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            345.5
ApproachLOS:        *                *                *                 F
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                         WEEKDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------

                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.443
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         30               Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted         Permitted
Rights:           Include          Include          Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0   0  1  0  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       21   15    76    68    6     8    13   94    30    75  126    82
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    21   15    76    68    6     8    13   94    30    75  126    82
Added Vol:      25    0    74     0    0     0     0    0    30    91    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    46   15   150    68    6     8    13   94    60   166  126    82
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     50   16   163    74    7     9    14  102    65   180  137    89
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    50   16   163    74    7     9    14  102    65   180  137    89
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    50   16   163    74    7     9    14  102    65   180  137    89
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.22 0.07  0.71  0.92 0.08  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:    349  114  1137  1470  130  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.03 0.14  0.14  0.05 0.05  0.01  0.01 0.03  0.04  0.11 0.04  0.06
Crit Moves:        ****        ****                          ****  ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                      WEEKDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      2.9       Worst Case Level Of Service: B[ 14.6]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    47    0    73    51  336     0     0  315    23
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    47    0    73    51  336     0     0  315    23
Added Vol:      0    0     0    20    0     5     6    0     0     0    0    24
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    67    0    78    57  336     0     0  315    47
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0    73    0    85    62  365     0     0  342    51
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    73    0    85    62  365     0     0  342    51
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   832 xxxx   342   393 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   342 xxxx   705  1176 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   328 xxxx   705  1176 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.22 xxxx  0.12  0.05 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.8 xxxx   0.4   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  19.1 xxxx  10.8   8.2 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     C    *     B     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx              14.6            xxxxxx           xxxxxx
ApproachLOS:         *                 B                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.2

## TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Weekday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS    Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 6 | 274 | 53 | 184 | 330 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 6 | 297 | 57 | 199 | 358 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 36 | 18 | 223 | 4 | 3 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 39 | 19 | 242 | 4 | 3 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 6 | 199 | 58 | | 242 | | 13 | |
| C(m) (vph) | 1205 | 1216 | 302 | | 747 | | 298 | |
| v/c | 0.00 | 0.16 | 0.19 | | 0.32 | | 0.04 | |
| 95% queue length | 0.02 | 0.58 | 0.70 | | 1.41 | | 0.14 | |
| Control Delay | 8.0 | 8.5 | 19.7 | | 12.1 | | 17.6 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 13.6 | | | 17.6 | |
| Approach LOS | | | | B | | | C | |

HCS+: Unsignalized Intersections Release 5.2

Phone:    Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Weekday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS    Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 6 | 274 | 53 | 184 | 330 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 2 | 74 | 14 | 50 | 90 | 2 |
| Hourly Flow Rate, HFR | 6 | 297 | 57 | 199 | 358 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 36 | 18 | 223 | 4 | 3 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 10 | 5 | 61 | 1 | 1 | 2 |
| Hourly Flow Rate, HFR | 39 | 19 | 242 | 4 | 3 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 297 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | 0.000 | | 0.000 | |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5
Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 365 | 354 | 1073 | 1072 | 297 | 1228 | 1126 | 362 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 309 | 764 | 309 | 763 | 760 | 468 | 760 | 366 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 297 | 362 |
| Potential Capacity | 747 | 687 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 747 | 687 |
| Probability of Queue free St. | 0.68 | 0.99 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 354 | 365 |
| Potential Capacity | 1216 | 1205 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1216 | 1205 |
| Probability of Queue free St. | 0.84 | 1.00 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1072 | 1126 |
| Potential Capacity | 222 | 207 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.83 |
| Movement Capacity | 185 | 172 |
| Probability of Queue free St. | 0.95 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1073 | 1228 |
| Potential Capacity | 200 | 156 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.82 | 0.79 |
| Maj. L, Min T Adj. Imp Factor. | 0.86 | 0.84 |
| Cap. Adj. factor due to Impeding mvmnt | 0.86 | 0.57 |
| Movement Capacity | 171 | 89 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 309 | 760 |
| Potential Capacity | 663 | 417 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.84 |
| Movement Capacity | 659 | 349 |
| Probability of Queue free St. | 0.97 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 763 | 366 |
| Potential Capacity | 416 | 626 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.99 |
| Movement Capacity | 348 | 622 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1072 | 1126 |
| Potential Capacity | 222 | 207 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.83 |
| Movement Capacity | 185 | 172 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.02 | 0.71 |
| C t | 313 | 293 |
| Probability of Queue free St. | 0.95 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 309 | 760 |
| Potential Capacity | 705 | 401 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.84 |
| Movement Capacity | 701 | 335 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 764 | 468 |
| Potential Capacity | 399 | 579 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.65 |
| Movement Capacity | 328 | 378 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1073 | 1228 |
| Potential Capacity | 200 | 156 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.82 | 0.79 |
| Maj. L, Min T Adj. Imp Factor. | 0.86 | 0.84 |
| Cap. Adj. factor due to Impeding mvmnt | 0.86 | 0.57 |
| Movement Capacity | 171 | 89 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.51 | 2.73 |
| C t | 297 | 162 |

Worksheet 8-Shared Lane Calculations

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume (vph) | 39 | 19 | 242 | 4 | 3 | 6 |
| Movement Capacity (vph) | 297 | 313 | 747 | 162 | 293 | 687 |
| Shared Lane Capacity (vph) | 302 | | | | 298 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| C sep | 297 | 313 | 747 | 162 | 293 | 687 |
| Volume | 39 | 19 | 242 | 4 | 3 | 6 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 302 | | | | 298 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 6 | 199 | 58 | | 242 | | 13 | |
| C(m) (vph) | 1205 | 1216 | 302 | | 747 | | 298 | |
| v/c | 0.00 | 0.16 | 0.19 | | 0.32 | | 0.04 | |
| 95% queue length | 0.02 | 0.58 | 0.70 | | 1.41 | | 0.14 | |
| Control Delay | 8.0 | 8.5 | 19.7 | | 12.1 | | 17.6 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 13.6 | | | 17.6 | |
| Approach LOS | | | | B | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 1.00 | 0.84 |
| v(il), Volume for stream 2 or 5 | 297 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.0 | 8.5 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.0 | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
WEEKDAY (2:00-4:00) PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE

Average Delay (sec/veh): 141.8 Worst Case Level Of Service: F[437.4]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 0 1 0 | | | 1 0 1 0 0 | | | 0 0 0 0 0 | | | 1 0 0 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 242 | 197 | 342 | 262 | 0 | 0 | 0 | 0 | 208 | 0 | 278 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 242 | 197 | 342 | 262 | 0 | 0 | 0 | 0 | 208 | 0 | 278 |
| Added Vol: | 0 | 13 | 81 | 0 | 8 | 0 | 0 | 0 | 0 | 51 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 255 | 278 | 342 | 270 | 0 | 0 | 0 | 0 | 259 | 0 | 278 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 277 | 302 | 372 | 293 | 0 | 0 | 0 | 0 | 282 | 0 | 302 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 277 | 302 | 372 | 293 | 0 | 0 | 0 | 0 | 282 | 0 | 302 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | xxxx | 6.2 |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | xxxx | 3.3 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 579 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1465 | xxxx | 428 |
| Potent Cap.: | xxxx | xxxx | xxxxx | 1004 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 143 | xxxx | 631 |
| Move Cap.: | xxxx | xxxx | xxxxx | 1004 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 102 | xxxx | 631 |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.37 | xxxx | xxxx | xxxx | xxxx | xxxx | 2.77 | xxxx | 0.48 |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 1.7 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 26.5 | xxxx | 2.6 |
| Control Del: | xxxxx | xxxx | xxxxx | 10.7 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 889.9 | xxxx | 15.8 |
| LOS by Move: | * | * | * | B | * | * | * | * | * | F | * | C |
| Movement: | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | 437.4 | | |
| ApproachLOS: | * | | | * | | | * | | | F | | |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
WEEKDAY (2:00-4:00) PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.566 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 37 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 1! 0 0 | | | 0 1 0 0 1 | | | 1 0 2 0 1 | | | 1 0 2 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 21 | 7 | 116 | 229 | 4 | 52 | 32 | 141 | 21 | 58 | 135 | 143 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 21 | 7 | 116 | 229 | 4 | 52 | 32 | 141 | 21 | 58 | 135 | 143 |
| Added Vol: | 31 | 0 | 94 | 0 | 0 | 0 | 0 | 0 | 20 | 59 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 52 | 7 | 210 | 229 | 4 | 52 | 32 | 141 | 41 | 117 | 135 | 143 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 57 | 8 | 228 | 249 | 4 | 57 | 35 | 153 | 45 | 127 | 147 | 155 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 57 | 8 | 228 | 249 | 4 | 57 | 35 | 153 | 45 | 127 | 147 | 155 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 57 | 8 | 228 | 249 | 4 | 57 | 35 | 153 | 45 | 127 | 147 | 155 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.19 | 0.03 | 0.78 | 0.98 | 0.02 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 309 | 42 | 1249 | 1573 | 27 | 1600 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.18 | 0.18 | 0.16 | 0.16 | 0.04 | 0.02 | 0.05 | 0.03 | 0.08 | 0.05 | 0.10 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
WEEKDAY (2:00-4:00) PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH

Average Delay (sec/veh): 5.7 Worst Case Level Of Service: D[ 28.2]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 0 0 0 | | | 1 0 0 0 1 | | | 1 0 1 0 0 | | | 0 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 45 | 0 | 128 | 198 | 510 | 0 | 0 | 350 | 47 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 0 | 45 | 0 | 128 | 198 | 510 | 0 | 0 | 350 | 47 |
| Added Vol: | 0 | 0 | 0 | 25 | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 16 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 70 | 0 | 134 | 202 | 510 | 0 | 0 | 350 | 63 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 0 | 0 | 76 | 0 | 146 | 220 | 554 | 0 | 0 | 380 | 68 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 0 | 0 | 76 | 0 | 146 | 220 | 554 | 0 | 0 | 380 | 68 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 6.4 | xxxx | 6.2 | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 3.5 | xxxx | 3.3 | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 1374 | xxxx | 380 | 449 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 162 | xxxx | 671 | 1122 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | 138 | xxxx | 671 | 1122 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.55 | xxxx | 0.22 | 0.20 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 2.7 | xxxx | 0.8 | 0.7 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | 59.5 | xxxx | 11.8 | 9.0 | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | F | * | B | A | * | * | * | * | * |
| Movement: | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | | xxxxxx | | | 28.2 | | | xxxxxx | | | xxxxxx | |
| ApproachLOS: | | * | | | D | | | * | | | * | |

Note: Queue reported is the number of cars per lane.

HCS+: Unsignalized Intersections Release 5.2

TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Afternoon Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 11 | 294 | 42 | 267 | 413 | 5 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 11 | 319 | 45 | 290 | 448 | 5 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 52 | 20 | 212 | 1 | 2 | 14 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 56 | 21 | 230 | 1 | 2 | 15 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 11 | 290 | 77 | | 230 | | 18 | |
| C(m) (vph) | 1118 | 1206 | 190 | | 726 | | 374 | |
| v/c | 0.01 | 0.24 | 0.41 | | 0.32 | | 0.05 | |
| 95% queue length | 0.03 | 0.94 | 1.81 | | 1.36 | | 0.15 | |
| Control Delay | 8.3 | 8.9 | 36.3 | | 12.2 | | 15.1 | |
| LOS | A | A | E | | B | | C | |
| Approach Delay | | | | 18.3 | | | 15.1 | |
| Approach LOS | | | | C | | | C | |

HCS+: Unsignalized Intersections Release 5.2
Phone: Fax:
E-Mail:

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Afternoon Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 11 | 294 | 42 | 267 | 413 | 5 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 3 | 80 | 11 | 73 | 112 | 1 |
| Hourly Flow Rate, HFR | 11 | 319 | 45 | 290 | 448 | 5 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 52 | 20 | 212 | 1 | 2 | 14 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 14 | 5 | 58 | 0 | 1 | 4 |
| Hourly Flow Rate, HFR | 56 | 21 | 230 | 1 | 2 | 15 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 319 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 453 | 364 | 1380 | 1374 | 319 | 1519 | 1416 | 450 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 341 | 1039 | 341 | 1033 | 1030 | 489 | 1030 | 386 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 319 | 450 |
| Potential Capacity | 726 | 613 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 726 | 613 |
| Probability of Queue free St. | 0.68 | 0.98 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 364 | 453 |
| Potential Capacity | 1206 | 1118 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1206 | 1118 |
| Probability of Queue free St. | 0.76 | 0.99 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1374 | 1416 |
| Potential Capacity | 147 | 139 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 0.75 |
| Movement Capacity | 110 | 104 |
| Probability of Queue free St. | 0.93 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1380 | 1519 |
| Potential Capacity | 123 | 98 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.74 | 0.70 |
| Maj. L, Min T Adj. Imp Factor. | 0.80 | 0.77 |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.52 |
| Movement Capacity | 96 | 51 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 341 | 1030 |
| Potential Capacity | 642 | 313 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.76 |
| Movement Capacity | 634 | 238 |
| Probability of Queue free St. | 0.97 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 1033 | 386 |
| Potential Capacity | 312 | 614 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.76 | 0.99 |
| Movement Capacity | 237 | 607 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1374 | 1416 |
| Potential Capacity | 147 | 139 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 0.75 |
| Movement Capacity | 110 | 104 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 4.52 | 0.63 |
| C t | 210 | 201 |
| Probability of Queue free St. | 0.93 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 341 | 1030 |
| Potential Capacity | 678 | 284 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.76 |
| Movement Capacity | 670 | 216 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 1039 | 489 |
| Potential Capacity | 281 | 564 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.73 | 0.65 |
| Movement Capacity | 206 | 368 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1380 | 1519 |
| Potential Capacity | 123 | 98 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.74 | 0.70 |
| Maj. L, Min T Adj. Imp Factor. | 0.80 | 0.77 |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.52 |
| Movement Capacity | 96 | 51 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 5.80 | 6.11 |
| C t | 183 | 73 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | 56 | 21 | 230 | 1 | 2 | 15 |
| Movement Capacity (vph) | 183 | 210 | 726 | 73 | 201 | 613 |
| Shared Lane Capacity (vph) | 190 | | | | 374 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | 183 | 210 | 726 | 73 | 201 | 613 |
| Volume | 56 | 21 | 230 | 1 | 2 | 15 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 190 | | | | 374 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 11 | 290 | 77 | | 230 | | 18 | |
| C(m) (vph) | 1118 | 1206 | 190 | | 726 | | 374 | |
| v/c | 0.01 | 0.24 | 0.41 | | 0.32 | | 0.05 | |
| 95% queue length | 0.03 | 0.94 | 1.81 | | 1.36 | | 0.15 | |
| Control Delay | 8.3 | 8.9 | 36.3 | | 12.2 | | 15.1 | |
| LOS | A | A | E | | B | | C | |
| Approach Delay | | | | 18.3 | | | 15.1 | |
| Approach LOS | | | | C | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.99 | 0.76 |
| v(il), Volume for stream 2 or 5 | 319 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.3 | 8.9 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.1 | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
SATURDAY (11:00-1:00) PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE

Average Delay (sec/veh): 19.4 Worst Case Level Of Service: E[ 48.5]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 0 1 0 | | | 1 0 1 0 0 | | | 0 0 0 0 0 | | | 1 0 0 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 161 | 123 | 296 | 158 | 0 | 0 | 0 | 0 | 127 | 0 | 259 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 161 | 123 | 296 | 158 | 0 | 0 | 0 | 0 | 127 | 0 | 259 |
| Added Vol: | 0 | 5 | 31 | 0 | 7 | 0 | 0 | 0 | 0 | 42 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 166 | 154 | 296 | 165 | 0 | 0 | 0 | 0 | 169 | 0 | 259 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 180 | 167 | 322 | 179 | 0 | 0 | 0 | 0 | 184 | 0 | 282 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 180 | 167 | 322 | 179 | 0 | 0 | 0 | 0 | 184 | 0 | 282 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | xxxx | 6.2 |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | xxxx | 3.3 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 348 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1087 | xxxx | 264 |
| Potent Cap.: | xxxx | xxxx | xxxxx | 1222 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 241 | xxxx | 779 |
| Move Cap.: | xxxx | xxxx | xxxxx | 1222 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 192 | xxxx | 779 |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.26 | xxxx | xxxx | xxxx | xxxx | xxxx | 0.96 | xxxx | 0.36 |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 1.1 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 7.8 | xxxx | 1.7 |
| Control Del: | xxxxx | xxxx | xxxxx | 9.0 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 104.1 | xxxx | 12.2 |
| LOS by Move: | * | * | * | A | * | * | * | * | * | F | * | B |
| Movement: | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | | xxxxxx | | | xxxxxx | | | xxxxxx | | | 48.5 | |
| ApproachLOS: | | * | | | * | | | * | | | E | |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
SATURDAY (11:00-1:00) PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST

Cycle (sec): 100 Critical Vol./Cap.(X): 0.263
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 1! 0 0 | | | 0 1 0 0 1 | | | 1 0 2 0 1 | | | 1 0 2 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 3 | 4 | 65 | 0 | 17 | 19 | 143 | 3 | 1 | 106 | 53 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 3 | 4 | 65 | 0 | 17 | 19 | 143 | 3 | 1 | 106 | 53 |
| Added Vol: | 12 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 16 | 49 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 12 | 3 | 39 | 65 | 0 | 17 | 19 | 143 | 19 | 50 | 106 | 53 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 13 | 3 | 42 | 71 | 0 | 18 | 21 | 155 | 21 | 54 | 115 | 58 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 13 | 3 | 42 | 71 | 0 | 18 | 21 | 155 | 21 | 54 | 115 | 58 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 13 | 3 | 42 | 71 | 0 | 18 | 21 | 155 | 21 | 54 | 115 | 58 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.22 | 0.06 | 0.72 | 1.00 | 0.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 356 | 89 | 1156 | 1600 | 0 | 1600 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.04 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | 0.05 | 0.01 | 0.03 | 0.04 | 0.04 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - RANCHO PALOS VERDES
                        SATURDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      2.3       Worst Case Level Of Service: C[ 15.9]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    30    0    70    75  406     0     0  412    55
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    30    0    70    75  406     0     0  412    55
Added Vol:      0    0     0     9    0     2     3    0     0     0    0    13
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    39    0    72    78  406     0     0  412    68
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0    42    0    78    85  441     0     0  448    74
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    42    0    78    85  441     0     0  448    74
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1059 xxxx   448   522 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   251 xxxx   615  1055 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   235 xxxx   615  1055 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.18 xxxx  0.13  0.08 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.6 xxxx   0.4   0.3 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  23.6 xxxx  11.7   8.7 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     C    *     B     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx             15.9            xxxxxx           xxxxxx
ApproachLOS:         *                C                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.2

TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Saturday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 3 | 276 | 51 | 193 | 292 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 3 | 299 | 55 | 209 | 317 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 0 | 8 | 136 | 0 | 4 | 0 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 0 | 8 | 147 | 0 | 4 | 0 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 3 | 209 | 8 | | 147 | | 4 | |
| C(m) (vph) | 1247 | 1216 | 320 | | 745 | | 297 | |
| v/c | 0.00 | 0.17 | 0.03 | | 0.20 | | 0.01 | |
| 95% queue length | 0.01 | 0.62 | 0.08 | | 0.73 | | 0.04 | |
| Control Delay | 7.9 | 8.6 | 16.5 | | 11.0 | | 17.3 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 11.3 | | | 17.3 | |
| Approach LOS | | | | B | | | C | |

HCS+: Unsignalized Intersections Release 5.2
Phone: Fax:
E-Mail:

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Saturday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 3 | 276 | 51 | 193 | 292 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 1 | 75 | 14 | 52 | 79 | 2 |
| Hourly Flow Rate, HFR | 3 | 299 | 55 | 209 | 317 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 0 | 8 | 136 | 0 | 4 | 0 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 0 | 2 | 37 | 0 | 1 | 0 |
| Hourly Flow Rate, HFR | 0 | 8 | 147 | 0 | 4 | 0 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 299 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 324 | 354 | 1045 | 1047 | 299 | 1148 | 1098 | 320 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 305 | 740 | 305 | 742 | 738 | 410 | 738 | 360 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 299 | 320 |
| Potential Capacity | 745 | 725 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 745 | 725 |
| Probability of Queue free St. | 0.80 | 1.00 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 354 | 324 |
| Potential Capacity | 1216 | 1247 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1216 | 1247 |
| Probability of Queue free St. | 0.83 | 1.00 |
| Maj L-Shared Prob Q free St. | | 1.00 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1047 | 1098 |
| Potential Capacity | 230 | 215 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.83 |
| Movement Capacity | 190 | 178 |
| Probability of Queue free St. | 0.98 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1045 | 1148 |
| Potential Capacity | 209 | 177 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.81 | 0.81 |
| Maj. L, Min T Adj. Imp Factor. | 0.86 | 0.85 |
| Cap. Adj. factor due to Impeding mvmnt | 0.86 | 0.68 |
| Movement Capacity | 179 | 121 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 305 | 738 |
| Potential Capacity | 666 | 427 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.83 |
| Movement Capacity | 664 | 354 |
| Probability of Queue free St. | 0.99 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 742 | 360 |
| Potential Capacity | 425 | 630 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 1.00 |
| Movement Capacity | 352 | 628 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1047 | 1098 |
| Potential Capacity | 230 | 215 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.83 |
| Movement Capacity | 190 | 178 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.98 | 0.73 |
| C t | 320 | 297 |
| Probability of Queue free St. | 0.98 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 305 | 738 |
| Potential Capacity | 709 | 413 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.83 |
| Movement Capacity | 707 | 342 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 740 | 410 |
| Potential Capacity | 412 | 623 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.79 |
| Movement Capacity | 337 | 493 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1045 | 1148 |
| Potential Capacity | 209 | 177 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.81 | 0.81 |
| Maj. L, Min T Adj. Imp Factor. | 0.86 | 0.85 |
| Cap. Adj. factor due to Impeding mvmnt | 0.86 | 0.68 |
| Movement Capacity | 179 | 121 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.41 | 1.36 |
| C t | 308 | 233 |

Worksheet 8-Shared Lane Calculations

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume (vph) | 0 | 8 | 147 | 0 | 4 | 0 |
| Movement Capacity (vph) | 308 | 320 | 745 | 233 | 297 | 725 |
| Shared Lane Capacity (vph) | 320 | | | | 297 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| C sep | 308 | 320 | 745 | 233 | 297 | 725 |
| Volume | 0 | 8 | 147 | 0 | 4 | 0 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 320 | | | | 297 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 3 | 209 | 8 | | 147 | | 4 | |
| C(m) (vph) | 1247 | 1216 | 320 | | 745 | | 297 | |
| v/c | 0.00 | 0.17 | 0.03 | | 0.20 | | 0.01 | |
| 95% queue length | 0.01 | 0.62 | 0.08 | | 0.73 | | 0.04 | |
| Control Delay | 7.9 | 8.6 | 16.5 | | 11.0 | | 17.3 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 11.3 | | | 17.3 | |
| Approach LOS | | | | B | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 1.00 | 0.83 |
| v(il), Volume for stream 2 or 5 | 299 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 1.00 | |
| d(M,LT), Delay for stream 1 or 4 | 7.9 | 8.6 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.0 | |

```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
                               AM PEAK HOUR
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
*******************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.935
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       180              Level Of Service:                  E
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Permitted        Permitted
Rights:            Include          Include           Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    0  1  0  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      13 1332   208   132  907    85   132   74    44   190   53   165
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   13 1332   208   132  907    85   132   74    44   190   53   165
Added Vol:      0    5     3     0   16    49    16    5     0     8   16     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   13 1337   211   132  923   134   148   79    44   198   69   165
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    14 1453   229   143 1003   146   161   86    48   215   75   179
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   14 1453   229   143 1003   146   161   86    48   215   75   179
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   14 1453   229   143 1003   146   161   86    48   215   75   179
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.65 0.35  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425   929  496  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.51  0.16  0.10 0.35  0.10  0.17 0.17  0.03  0.15 0.05  0.13
Crit Volume:       727         143                     247         215
Crit Moves:        ****        ****                    ****        ****
*******************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
                               AM PEAK HOUR
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
*******************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.812
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       107              Level Of Service:                  D
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted         Permitted        Permitted
Rights:            Include          Include           Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      93 1394   149    23 1107   128   179   31   104    83   10    25
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   93 1394   149    23 1107   128   179   31   104    83   10    25
Added Vol:      0    8     0     0   24     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   93 1402   149    23 1131   128   179   31   104    83   10    25
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   101 1524   162    25 1229   139   195   34   113    90   11    27
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  101 1524   162    25 1229   139   195   34   113    90   11    27
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  101 1524   162    25 1229   139   195   34   113    90   11    27
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.57 0.10  0.33  1.00 0.29  0.71
Final Sat.:  1500 3000  1500  1500 3000  1500   855  148   497  1500  429  1071
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.51  0.11  0.02 0.41  0.09  0.23 0.23  0.23  0.06 0.03  0.03
Crit Volume:       762          25                     341          90
Crit Moves:        ****        ****                    ****        ****
*******************************************************************************
```

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
                               AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):         1.367
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180             Level Of Service:                  F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted      Prot+Permit        Permitted       Prot+Permit
Rights:            Ovl            Include          Include            Ovl
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1   1  0  1  1  0   1  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      6 1612   635   189 1193    20    60  402    32   360  211   176
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   6 1612   635   189 1193    20    60  402    32   360  211   176
Added Vol:     0    0     0     0    0    24     8    3     0     0    8     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   6 1612   635   189 1193    44    68  405    32   360  219   176
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    7 1752   690   205 1297    48    74  440    35   391  238   191
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   7 1752   690   205 1297    48    74  440    35   391  238   191
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   7 1752   690   205 1297    48    74  440    35   391  238   191
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 1.93  0.07  1.00 0.93  0.07  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2749   101  1425 1321   104  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.61  0.48  0.14 0.47  0.47  0.05 0.33  0.33  0.27 0.17  0.13
Crit Volume:       876         205                    475         391
Crit Moves:       ****        ****                   ****        ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
                               AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):         0.609
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       51             Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    172  902   103    75  760    29    16  116   115   128  174    76
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 172  902   103    75  760    29    16  116   115   128  174    76
Added Vol:     0    0     0     0    0     0     0    3     0     0    8     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 172  902   103    75  760    29    16  119   115   128  182    76
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:  187  980   112    82  826    32    17  129   125   139  198    83
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 187  980   112    82  826    32    17  129   125   139  198    83
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 187  980   112    82  826    32    17  129   125   139  198    83
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1425  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.34  0.08  0.06 0.29  0.02  0.01 0.09  0.09  0.10 0.14  0.06
Crit Volume: 187                   413               129         139
Crit Moves:  ****                 ****              ****        ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
                               AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.703
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        67              Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    2  0  2  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      27  156    24   112  131   508   544  215    34    48  355   274
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   27  156    24   112  131   508   544  215    34    48  355   274
Added Vol:      0    0     0     0    0     0     0   11     0     0   32     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   27  156    24   112  131   508   544  226    34    48  387   274
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    29  170    26   122  142   552   591  246    37    52  421   298
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   29  170    26   122  142   552   591  246    37    52  421   298
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
FinalVolume:   29  170    26   122  142   552   650  246    37    52  421   298
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  2.00 2.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  2850 2850  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.06  0.02  0.09 0.05  0.39  0.23 0.09  0.03  0.04 0.30  0.21
Crit Volume:   29                         552     0                     421
Crit Moves:  ****                        ****  ****                    ****
********************************************************************************
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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
                               PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.822
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       112              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       1  0  2  0  1    1  0  2  0  1    0  1  0  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     75 1098    86   185 1294    50    76   65    30   153  104   162
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  75 1098    86   185 1294    50    76   65    30   153  104   162
Added Vol:     0   10     5     0    9    28    29   10     0     5    9     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  75 1108    91   185 1303    78   105   75    30   158  113   162
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   82 1204    99   201 1416    85   114   82    33   172  123   176
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  82 1204    99   201 1416    85   114   82    33   172  123   176
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  82 1204    99   201 1416    85   114   82    33   172  123   176
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.58 0.42  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425   831  594  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.42  0.07  0.14 0.50  0.06  0.14 0.14  0.02  0.12 0.09  0.12
Crit Volume:       602         201                    196         172
Crit Moves:        ****        ****                   ****        ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
                               PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.764
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        85              Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       1  0  2  0  1    1  0  2  0  1    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     47 1197   302    50 1246   117    89   49    45   194   82    61
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  47 1197   302    50 1246   117    89   49    45   194   82    61
Added Vol:     0   15     0     0   14     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  47 1212   302    50 1260   117    89   49    45   194   82    61
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   51 1317   328    54 1370   127    97   53    49   211   89    66
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  51 1317   328    54 1370   127    97   53    49   211   89    66
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  51 1317   328    54 1370   127    97   53    49   211   89    66
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.49 0.27  0.24  1.00 0.57  0.43
Final Sat.:  1500 3000  1500  1500 3000  1500   730  402   369  1500  860   640
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.44  0.22  0.04 0.46  0.08  0.13 0.13  0.13  0.14 0.10  0.10
Crit Volume:   51                     685               199       211
Crit Moves:  ****                    ****              ****      ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
                               PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         1.321
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180              Level Of Service:                  F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted       Prot+Permit       Permitted       Prot+Permit
Rights:             Ovl             Include          Include            Ovl
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  1  1  0   1  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      36 1259   215   178 1458    61    42  184    21   714  276   156
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   36 1259   215   178 1458    61    42  184    21   714  276   156
Added Vol:      0    0     0     0    0    14    15    5     0     0    5     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   36 1259   215   178 1458    75    57  189    21   714  281   156
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    39 1368   234   193 1585    82    62  205    23   776  305   170
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   39 1368   234   193 1585    82    62  205    23   776  305   170
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   39 1368   234   193 1585    82    62  205    23   776  305   170
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 1.90  0.10  1.00 0.90  0.10  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2711   139  1425 1282   143  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.48  0.16  0.14 0.58  0.58  0.04 0.16  0.16  0.54 0.21  0.12
Crit Volume:       684         193                    228         776
Crit Moves:        ****        ****                   ****        ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
                               PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.804
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      102              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     144  640    62    72 1076    51    38  164   213   159  117    50
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  144  640    62    72 1076    51    38  164   213   159  117    50
Added Vol:      0    0     0     0    0     0     0    5     0     0    5     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  144  640    62    72 1076    51    38  169   213   159  122    50
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   157  696    67    78 1170    55    41  184   232   173  133    54
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  157  696    67    78 1170    55    41  184   232   173  133    54
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  157  696    67    78 1170    55    41  184   232   173  133    54
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1425  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.24  0.05  0.05 0.41  0.04  0.03 0.13  0.16  0.12 0.09  0.04
Crit Volume:  157                    585                   232   173
Crit Moves:  ****                   ****                  ****  ****
********************************************************************************
```

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
PM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #11 WESTERN AVENUE/WEST 25TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.635 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 55 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Permitted | | | Permitted | | | Protected | | | Protected | |
| Rights: | | Include | | | Ovl | | | Include | | | Include | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 2 0 2 0 1 | | | 1 0 1 0 1 | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 54 | 106 | 55 | 206 | 215 | 369 | 477 | 306 | 35 | 71 | 290 | 176 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 54 | 106 | 55 | 206 | 215 | 369 | 477 | 306 | 35 | 71 | 290 | 176 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 19 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 54 | 106 | 55 | 206 | 215 | 369 | 477 | 325 | 35 | 71 | 309 | 176 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 59 | 115 | 60 | 224 | 234 | 401 | 518 | 353 | 38 | 77 | 336 | 191 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 59 | 115 | 60 | 224 | 234 | 401 | 518 | 353 | 38 | 77 | 336 | 191 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 59 | 115 | 60 | 224 | 234 | 401 | 570 | 353 | 38 | 77 | 336 | 191 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 2850 | 2850 | 1425 | 1425 | 1425 | 1425 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.04 | 0.16 | 0.08 | 0.28 | 0.20 | 0.12 | 0.03 | 0.05 | 0.24 | 0.13 |
| Crit Volume: | | | 60 | 224 | | | 285 | | | | 336 | |
| Crit Moves: | | | **** | **** | | | **** | | | | **** | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.675
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 17.4
Optimal Cycle: 51 Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 | 0 1 | 0 0 | 1 | 0 1 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 59 | 1382 | 21 | 16 | 878 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 59 | 1382 | 21 | 16 | 878 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| Added Vol: | 0 | 22 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 59 | 1404 | 21 | 16 | 943 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 64 | 1526 | 23 | 17 | 1025 | 16 | 71 | 23 | 271 | 88 | 51 | 50 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 64 | 1526 | 23 | 17 | 1025 | 16 | 71 | 23 | 271 | 88 | 51 | 50 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 64 | 1526 | 23 | 17 | 1025 | 16 | 71 | 23 | 271 | 88 | 51 | 50 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.70 | 0.70 | 0.85 | 0.76 | 0.76 | 0.85 |
| Lanes: | 1.00 | 1.97 | 0.03 | 1.00 | 1.97 | 0.03 | 0.76 | 0.24 | 1.00 | 0.63 | 0.37 | 1.00 |
| Final Sat.: | 1805 | 3550 | 53 | 1805 | 3546 | 56 | 1007 | 325 | 1615 | 913 | 530 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.43 | 0.43 | 0.01 | 0.29 | 0.29 | 0.07 | 0.07 | 0.17 | 0.10 | 0.10 | 0.03 |
| Crit Moves: | | **** | | **** | | | | | **** | | | |
| Green/Cycle: | 0.07 | 0.64 | 0.64 | 0.01 | 0.58 | 0.58 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| Volume/Cap: | 0.50 | 0.67 | 0.67 | 0.67 | 0.50 | 0.50 | 0.28 | 0.28 | 0.67 | 0.39 | 0.39 | 0.12 |
| Delay/Veh: | 47.7 | 12.3 | 12.3 | 102.1 | 12.6 | 12.6 | 30.8 | 30.8 | 38.4 | 32.0 | 32.0 | 29.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 47.7 | 12.3 | 12.3 | 102.1 | 12.6 | 12.6 | 30.8 | 30.8 | 38.4 | 32.0 | 32.0 | 29.3 |
| LOS by Move: | D | B | B | F | B | B | C | C | D | C | C | C |
| HCM2kAvgQ: | 3 | 16 | 16 | 2 | 10 | 10 | 2 | 2 | 9 | 4 | 4 | 1 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 WESTERN AVENUE/CAPITOL DRIVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.815
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 24.0
Optimal Cycle: 75 Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 0 1 | 0 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 13 | 1332 | 208 | 132 | 907 | 85 | 132 | 74 | 44 | 190 | 53 | 165 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 13 | 1332 | 208 | 132 | 907 | 85 | 132 | 74 | 44 | 190 | 53 | 165 |
| Added Vol: | 0 | 5 | 3 | 0 | 16 | 49 | 16 | 5 | 0 | 8 | 16 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 13 | 1337 | 211 | 132 | 923 | 134 | 148 | 79 | 44 | 198 | 69 | 165 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 14 | 1453 | 229 | 143 | 1003 | 146 | 161 | 86 | 48 | 215 | 75 | 179 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 14 | 1453 | 229 | 143 | 1003 | 146 | 161 | 86 | 48 | 215 | 75 | 179 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 14 | 1453 | 229 | 143 | 1003 | 146 | 161 | 86 | 48 | 215 | 75 | 179 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.75 | 0.75 | 0.85 | 0.45 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.65 | 0.35 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 929 | 496 | 1615 | 855 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.40 | 0.14 | 0.08 | 0.28 | 0.09 | 0.17 | 0.17 | 0.03 | 0.25 | 0.04 | 0.11 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.02 | 0.49 | 0.49 | 0.10 | 0.58 | 0.58 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 |
| Volume/Cap: | 0.48 | 0.82 | 0.29 | 0.82 | 0.48 | 0.16 | 0.56 | 0.56 | 0.10 | 0.82 | 0.13 | 0.36 |
| Delay/Veh: | 60.8 | 24.5 | 15.1 | 68.8 | 12.7 | 10.0 | 30.5 | 30.5 | 24.7 | 49.4 | 25.0 | 27.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 60.8 | 24.5 | 15.1 | 68.8 | 12.7 | 10.0 | 30.5 | 30.5 | 24.7 | 49.4 | 25.0 | 27.3 |
| LOS by Move: | E | C | B | E | B | B | C | C | C | D | C | C |
| HCM2kAvgQ: | 1 | 22 | 4 | 7 | 10 | 2 | 7 | 7 | 1 | 8 | 2 | 4 |

Note: Queue reported is the number of cars per lane.

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
             EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         0.733
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      17.5
Optimal Cycle:        59             Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      93 1394   149    23 1107   128   179   31   104    83   10    25
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   93 1394   149    23 1107   128   179   31   104    83   10    25
Added Vol:      0    8     0     0   24     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   93 1402   149    23 1131   128   179   31   104    83   10    25
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   101 1524   162    25 1229   139   195   34   113    90   11    27
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  101 1524   162    25 1229   139   195   34   113    90   11    27
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  101 1524   162    25 1229   139   195   34   113    90   11    27
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.15 0.95  0.85  0.08 0.95  0.85  0.76 0.76  0.76  0.73 0.89  0.89
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.57 0.10  0.33  1.00 0.29  0.71
Final Sat.:   293 3610  1615   160 3610  1615   820  142   477  1393  485  1212
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.35 0.42  0.10  0.16 0.34  0.09  0.24 0.24  0.24  0.06 0.02  0.02
Crit Moves:       ****                              ****
Green/Cycle: 0.58 0.58  0.58  0.58 0.58  0.58  0.32 0.32  0.32  0.32 0.32  0.32
Volume/Cap:  0.60 0.73  0.17  0.27 0.59  0.15  0.73 0.73  0.73  0.20 0.07  0.07
Delay/Veh:   19.6 16.9  10.1  12.2 14.1   9.9  35.9 35.9  35.9  24.7 23.4  23.4
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  19.6 16.9  10.1  12.2 14.1   9.9  35.9 35.9  35.9  24.7 23.4  23.4
LOS by Move:    B    B     B     B    B     A     D    D     D     C    C     C
HCM2kAvgQ:      3   19     2     1   13     2    11   11    11     2    1     1
********************************************************************************
Note: Queue reported is the number of cars per lane.
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
             EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         1.129
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      67.9
Optimal Cycle:       180             Level Of Service:                  E
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted       Prot+Permit       Permitted       Prot+Permit
Rights:            Ovl           Include          Include            Ovl
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  1  1  0    1  0  0  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       6 1612   635   189 1193    20    60  402    32   360  211   176
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    6 1612   635   189 1193    20    60  402    32   360  211   176
Added Vol:      0    0     0     0    0    24     8    3     0     0    8     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    6 1612   635   189 1193    44    68  405    32   360  219   176
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     7 1752   690   205 1297    48    74  440    35   391  238   191
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    7 1752   690   205 1297    48    74  440    35   391  238   191
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    7 1752   690   205 1297    48    74  440    35   391  238   191
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.95  0.85  0.40 0.95  0.95  0.60 0.99  0.99  0.58 1.00  0.85
Lanes:       1.00 2.00  1.00  1.00 1.93  0.07  1.00 0.93  0.07  1.00 1.00  1.00
Final Sat.:  1805 3610  1615   765 3464   128  1148 1741   138  1101 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.49  0.43  0.27 0.37  0.37  0.06 0.25  0.25  0.36 0.13  0.12
Crit Moves:       ****        ****                   ****        ****
Green/Cycle: 0.00 0.41  0.59  0.50 0.50  0.50  0.21 0.21  0.21  0.40 0.40  0.49
Volume/Cap:  0.75 1.19  0.72  0.83 0.75  0.75  0.30 1.19  1.19  0.96 0.32  0.24
Delay/Veh:  209.2  121  17.3  33.8 21.8  21.8  33.8  146 146.2  58.8 21.1  14.8
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh: 209.2  121  17.3  33.8 21.8  21.8  33.8  146 146.2  58.8 21.1  14.8
LOS by Move:    F    F     B     C    C     C     C    F     F     E    C     B
HCM2kAvgQ:      1   49    16     8   18    18     2   27    27    17    5     3
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 0.505
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 21.8
Optimal Cycle: 37 Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Protected | | | Protected | | | Permitted | | | Permitted | |
| Rights: | | Include | | | Include | | | Include | | | Include | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 1 0 1 | | | 1 0 1 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 172 | 902 | 103 | 75 | 760 | 29 | 16 | 116 | 115 | 128 | 174 | 76 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 172 | 902 | 103 | 75 | 760 | 29 | 16 | 116 | 115 | 128 | 174 | 76 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 8 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 172 | 902 | 103 | 75 | 760 | 29 | 16 | 119 | 115 | 128 | 182 | 76 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 187 | 980 | 112 | 82 | 826 | 32 | 17 | 129 | 125 | 139 | 198 | 83 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 187 | 980 | 112 | 82 | 826 | 32 | 17 | 129 | 125 | 139 | 198 | 83 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 187 | 980 | 112 | 82 | 826 | 32 | 17 | 129 | 125 | 139 | 198 | 83 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.47 | 1.00 | 0.85 | 0.60 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 893 | 1900 | 1615 | 1140 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.27 | 0.07 | 0.05 | 0.23 | 0.02 | 0.02 | 0.07 | 0.08 | 0.12 | 0.10 | 0.05 |
| Crit Moves: | **** | | | | **** | | | | | **** | | |
| Green/Cycle: | 0.21 | 0.56 | 0.56 | 0.09 | 0.45 | 0.45 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| Volume/Cap: | 0.50 | 0.48 | 0.12 | 0.48 | 0.50 | 0.04 | 0.08 | 0.28 | 0.32 | 0.50 | 0.43 | 0.21 |
| Delay/Veh: | 36.4 | 13.2 | 10.3 | 45.1 | 19.6 | 15.3 | 29.5 | 31.2 | 31.6 | 34.3 | 32.7 | 30.6 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 36.4 | 13.2 | 10.3 | 45.1 | 19.6 | 15.3 | 29.5 | 31.2 | 31.6 | 34.3 | 32.7 | 30.6 |
| LOS by Move: | D | B | B | D | B | B | C | C | C | C | C | C |
| HCM2kAvgQ: | 6 | 9 | 2 | 3 | 10 | 1 | 0 | 3 | 3 | 4 | 5 | 2 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 WESTERN AVENUE/WEST 25TH STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 0.626
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 25.8
Optimal Cycle: 46 Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Permitted | | | Permitted | | | Protected | | | Protected | |
| Rights: | | Include | | | Ovl | | | Include | | | Include | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 2 0 2 0 1 | | | 1 0 1 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 27 | 156 | 24 | 112 | 131 | 508 | 544 | 215 | 34 | 48 | 355 | 274 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 27 | 156 | 24 | 112 | 131 | 508 | 544 | 215 | 34 | 48 | 355 | 274 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 32 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 27 | 156 | 24 | 112 | 131 | 508 | 544 | 226 | 34 | 48 | 387 | 274 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 29 | 170 | 26 | 122 | 142 | 552 | 591 | 246 | 37 | 52 | 421 | 298 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 29 | 170 | 26 | 122 | 142 | 552 | 591 | 246 | 37 | 52 | 421 | 298 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 29 | 170 | 26 | 122 | 142 | 552 | 591 | 246 | 37 | 52 | 421 | 298 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.66 | 0.95 | 0.85 | 0.64 | 0.95 | 0.85 | 0.92 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1246 | 3610 | 1615 | 1212 | 3610 | 1615 | 3502 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.05 | 0.02 | 0.10 | 0.04 | 0.34 | 0.17 | 0.07 | 0.02 | 0.03 | 0.22 | 0.18 |
| Crit Moves: | | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.55 | 0.27 | 0.44 | 0.44 | 0.19 | 0.35 | 0.35 |
| Volume/Cap: | 0.09 | 0.17 | 0.06 | 0.36 | 0.14 | 0.63 | 0.63 | 0.16 | 0.05 | 0.16 | 0.63 | 0.52 |
| Delay/Veh: | 26.9 | 27.5 | 26.7 | 29.8 | 27.3 | 17.1 | 33.4 | 17.0 | 16.2 | 34.3 | 28.7 | 26.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.9 | 27.5 | 26.7 | 29.8 | 27.3 | 17.1 | 33.4 | 17.0 | 16.2 | 34.3 | 28.7 | 26.5 |
| LOS by Move: | C | C | C | C | C | B | C | B | B | C | C | C |
| HCM2kAvgQ: | 1 | 2 | 1 | 3 | 2 | 12 | 9 | 2 | 1 | 1 | 11 | 8 |

Note: Queue reported is the number of cars per lane.

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
             EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
                                PM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.574
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):        9.8
Optimal Cycle:        41              Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted         Permitted
Rights:          Include          Include           Include           Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  1  1  0   1  0  1  1  0   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      62 1239    63    49 1375    16    31   13    72    53    4    19
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   62 1239    63    49 1375    16    31   13    72    53    4    19
Added Vol:      0   39     0     0   38     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   62 1278    63    49 1413    16    31   13    72    53    4    19
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    67 1389    68    53 1536    17    34   14    78    58    4    21
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   67 1389    68    53 1536    17    34   14    78    58    4    21
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   67 1389    68    53 1536    17    34   14    78    58    4    21
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.94  0.94  0.95 0.95  0.95  0.74 0.74  0.85  0.69 0.69  0.85
Lanes:       1.00 1.91  0.09  1.00 1.98  0.02  0.70 0.30  1.00  0.93 0.07  1.00
Final Sat.:  1805 3416   168  1805 3562    40   992  416  1615  1228   93  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.41  0.41  0.03 0.43  0.43  0.03 0.03  0.05  0.05 0.05  0.01
Crit Moves:  ****                   ****                    ****
Green/Cycle: 0.07 0.76  0.76  0.06 0.75  0.75  0.08 0.08  0.08  0.08 0.08  0.08
Volume/Cap:  0.57 0.53  0.53  0.53 0.57  0.57  0.40 0.40  0.57  0.56 0.56  0.15
Delay/Veh:   52.2  5.0   5.0  51.6  5.8   5.8  45.6 45.6  49.9  50.1 50.1  43.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  52.2  5.0   5.0  51.6  5.8   5.8  45.6 45.6  49.9  50.1 50.1  43.0
LOS by Move:    D    A     A     D    A     A     D    D     D     D    D     D
HCM2kAvgQ:      3   10    10     2   11    11     2    2     3     3    3     1
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
             EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
                                PM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.699
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):       23.7
Optimal Cycle:        54              Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted         Permitted
Rights:          Include          Include           Include           Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   0  1  0  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      75 1098    86   185 1294    50    76   65    30   153  104   162
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   75 1098    86   185 1294    50    76   65    30   153  104   162
Added Vol:      0   10     5     0    9    28    29   10     0     5    9     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   75 1108    91   185 1303    78   105   75    30   158  113   162
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    82 1204    99   201 1416    85   114   82    33   172  123   176
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   82 1204    99   201 1416    85   114   82    33   172  123   176
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   82 1204    99   201 1416    85   114   82    33   172  123   176
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.95  0.85  0.95 0.95  0.85  0.69 0.69  0.85  0.49 1.00  0.85
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.58 0.42  1.00  1.00 1.00  1.00
Final Sat.:  1805 3610  1615  1805 3610  1615   766  547  1615   935 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.33  0.06  0.11 0.39  0.05  0.15 0.15  0.02  0.18 0.06  0.11
Crit Moves:       ****        ****                                ****
Green/Cycle: 0.07 0.48  0.48  0.16 0.57  0.57  0.26 0.26  0.26  0.26 0.26  0.26
Volume/Cap:  0.69 0.70  0.13  0.70 0.69  0.09  0.57 0.57  0.08  0.70 0.25  0.41
Delay/Veh:   61.2 21.8  14.6  47.1 16.1   9.7  34.1 34.1  27.8  41.9 29.3  31.1
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  61.2 21.8  14.6  47.1 16.1   9.7  34.1 34.1  27.8  41.9 29.3  31.1
LOS by Move:    E    C     B     D    B     A     C    C     C     D    C     C
HCM2kAvgQ:      4   16     2     7   17     1     6    6     1     6    3     5
********************************************************************************
Note: Queue reported is the number of cars per lane.
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
             EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
                                PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        0.589
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):     13.6
Optimal Cycle:       43             Level Of Service:                B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  2  0  1   0  0  1! 0  0   1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      47 1197   302    50 1246   117    89   49    45   194   82    61
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   47 1197   302    50 1246   117    89   49    45   194   82    61
Added Vol:      0   15     0     0   14     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   47 1212   302    50 1260   117    89   49    45   194   82    61
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    51 1317   328    54 1370   127    97   53    49   211   89    66
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   51 1317   328    54 1370   127    97   53    49   211   89    66
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   51 1317   328    54 1370   127    97   53    49   211   89    66
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.14 0.95  0.85  0.15 0.95  0.85  0.69 0.69  0.69  0.75 0.94  0.94
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.49 0.27  0.24  1.00 0.57  0.43
Final Sat.:   266 3610  1615   291 3610  1615   642  353   324  1419 1020   759
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.19 0.36  0.20  0.19 0.38  0.08  0.15 0.15  0.15  0.15 0.09  0.09
Crit Moves:                        ****              ****
Green/Cycle: 0.64 0.64  0.64  0.64 0.64  0.64  0.26 0.26  0.26  0.26 0.26  0.26
Volume/Cap:  0.30 0.57  0.32  0.29 0.59  0.12  0.59 0.59  0.59  0.58 0.34  0.34
Delay/Veh:    8.8 10.3   8.1   8.7 10.6   6.9  35.3 35.3  35.3  34.9 30.8  30.8
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   8.8 10.3   8.1   8.7 10.6   6.9  35.3 35.3  35.3  34.9 30.8  30.8
LOS by Move:    A    B     A     A    B     A     D    D     D     C    C     C
HCM2kAvgQ:      1   12     5     1   13     2     6    6     6     6    4     4
********************************************************************************
Note: Queue reported is the number of cars per lane.
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
             EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
                                PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        1.098
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):     88.8
Optimal Cycle:      180             Level Of Service:                F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted       Prot+Permit       Permitted       Prot+Permit
Rights:            Ovl            Include          Include            Ovl
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  1  1  0   1  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      36 1259   215   178 1458    61    42  184    21   714  276   156
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   36 1259   215   178 1458    61    42  184    21   714  276   156
Added Vol:      0    0     0     0    0    14    15    5     0     0    5     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   36 1259   215   178 1458    75    57  189    21   714  281   156
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    39 1368   234   193 1585    82    62  205    23   776  305   170
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   39 1368   234   193 1585    82    62  205    23   776  305   170
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   39 1368   234   193 1585    82    62  205    23   776  305   170
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.95  0.85  0.51 0.94  0.94  0.57 0.99  0.99  0.79 1.00  0.85
Lanes:       1.00 2.00  1.00  1.00 1.90  0.10  1.00 0.90  0.10  1.00 1.00  1.00
Final Sat.:  1805 3610  1615   977 3409   175  1081 1684   187  1503 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.38  0.14  0.20 0.46  0.46  0.06 0.12  0.12  0.52 0.16  0.10
Crit Moves:       ****        ****                                ****
Green/Cycle: 0.02 0.33  0.70  0.40 0.40  0.40  0.11 0.11  0.11  0.48 0.48  0.57
Volume/Cap:  1.15 1.15  0.21  0.79 1.15  1.15  0.54 1.15  1.15  1.04 0.34  0.18
Delay/Veh:  253.0  113   5.3  36.2  108 107.5  47.6  156 156.3  65.9 16.4  10.4
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh: 253.0  113   5.3  36.2  108 107.5  47.6  156 156.3  65.9 16.4  10.4
LOS by Move:    F    F     A     D    F     F     D    F     F     E    B     B
HCM2kAvgQ:      4   37     3     7   44    44     3   14    14    33    6     2
********************************************************************************
Note: Queue reported is the number of cars per lane.
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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.652 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 23.5 |
| Optimal Cycle: | 48 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 1 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 169 | 213 | 159 | 122 | 50 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 184 | 232 | 173 | 133 | 54 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 184 | 232 | 173 | 133 | 54 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 157 | 696 | 67 | 78 | 1170 | 55 | 41 | 184 | 232 | 173 | 133 | 54 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.61 | 1.00 | 0.85 | 0.52 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1150 | 1900 | 1615 | 982 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.19 | 0.04 | 0.04 | 0.32 | 0.03 | 0.04 | 0.10 | 0.14 | 0.18 | 0.07 | 0.03 |
| Crit Moves: | **** | | | | **** | | | | | **** | | |
| Green/Cycle: | 0.13 | 0.51 | 0.51 | 0.12 | 0.50 | 0.50 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| Volume/Cap: | 0.65 | 0.37 | 0.08 | 0.37 | 0.65 | 0.07 | 0.13 | 0.36 | 0.53 | 0.65 | 0.26 | 0.12 |
| Delay/Veh: | 47.4 | 14.7 | 12.3 | 42.0 | 19.6 | 13.1 | 27.8 | 29.9 | 32.4 | 38.0 | 28.9 | 27.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 47.4 | 14.7 | 12.3 | 42.0 | 19.6 | 13.1 | 27.8 | 29.9 | 32.4 | 38.0 | 28.9 | 27.7 |
| LOS by Move: | D | B | B | D | B | B | C | C | C | D | C | C |
| HCM2kAvgQ: | 6 | 7 | 1 | 3 | 15 | 1 | 1 | 5 | 7 | 6 | 3 | 1 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 WESTERN AVENUE/WEST 25TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.555 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 25.0 |
| Optimal Cycle: | 40 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Ovl | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 2 0 2 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 54 | 106 | 55 | 206 | 215 | 369 | 477 | 306 | 35 | 71 | 290 | 176 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 54 | 106 | 55 | 206 | 215 | 369 | 477 | 306 | 35 | 71 | 290 | 176 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 19 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 54 | 106 | 55 | 206 | 215 | 369 | 477 | 325 | 35 | 71 | 309 | 176 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 59 | 115 | 60 | 224 | 234 | 401 | 518 | 353 | 38 | 77 | 336 | 191 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 59 | 115 | 60 | 224 | 234 | 401 | 518 | 353 | 38 | 77 | 336 | 191 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 59 | 115 | 60 | 224 | 234 | 401 | 518 | 353 | 38 | 77 | 336 | 191 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.57 | 0.95 | 0.85 | 0.68 | 0.95 | 0.85 | 0.92 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1077 | 3610 | 1615 | 1283 | 3610 | 1615 | 3502 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.03 | 0.04 | 0.17 | 0.06 | 0.25 | 0.15 | 0.10 | 0.02 | 0.04 | 0.18 | 0.12 |
| Crit Moves: | | | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.58 | 0.27 | 0.41 | 0.41 | 0.18 | 0.32 | 0.32 |
| Volume/Cap: | 0.17 | 0.10 | 0.12 | 0.55 | 0.21 | 0.43 | 0.55 | 0.24 | 0.06 | 0.24 | 0.55 | 0.37 |
| Delay/Veh: | 25.1 | 24.3 | 24.5 | 30.2 | 25.2 | 12.0 | 32.3 | 19.5 | 18.0 | 35.7 | 29.3 | 26.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.1 | 24.3 | 24.5 | 30.2 | 25.2 | 12.0 | 32.3 | 19.5 | 18.0 | 35.7 | 29.3 | 26.8 |
| LOS by Move: | C | C | C | C | C | B | C | B | B | D | C | C |
| HCM2kAvgQ: | 1 | 1 | 1 | 6 | 3 | 7 | 8 | 4 | 1 | 2 | 9 | 5 |

Note: Queue reported is the number of cars per lane.

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
               EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CMP
                                  AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.819
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       71              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  1  1  0    0  1  0  0  1    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      59 1382    21    16  878    15    65   21   249    81   47    46
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   59 1382    21    16  878    15    65   21   249    81   47    46
Added Vol:      0   22     0     0   65     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   59 1404    21    16  943    15    65   21   249    81   47    46
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    64 1526    23    17 1025    16    71   23   271    88   51    50
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   64 1526    23    17 1025    16    71   23   271    88   51    50
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   64 1526    23    17 1025    16    71   23   271    88   51    50
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.97  0.03  1.00 1.97  0.03  0.76 0.24  1.00  0.63 0.37  1.00
Final Sat.:  1600 3153    47  1600 3150    50  1209  391  1600  1012  588  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.48  0.48  0.01 0.33  0.33  0.04 0.06  0.17  0.06 0.09  0.03
Crit Moves:       ****        ****                         ****  ****
********************************************************************************
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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
               EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CMP
                                  AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.643
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       44              Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     172  902   103    75  760    29    16  116   115   128  174    76
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  172  902   103    75  760    29    16  116   115   128  174    76
Added Vol:      0    0     0     0    0     0     0    3     0     0    8     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  172  902   103    75  760    29    16  119   115   128  182    76
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   187  980   112    82  826    32    17  129   125   139  198    83
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  187  980   112    82  826    32    17  129   125   139  198    83
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  187  980   112    82  826    32    17  129   125   139  198    83
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.12 0.31  0.07  0.05 0.26  0.02  0.01 0.08  0.08  0.09 0.12  0.05
Crit Moves:  ****                  ****              ****        ****
********************************************************************************
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------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
              EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CMP
                               PM PEAK HOUR
------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
********************************************************************************
Cycle (sec):        100            Critical Vol./Cap.(X):        0.712
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       52            Level Of Service:                 C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  1  1  0   1  0  1  1  0   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      62 1239    63    49 1375    16    31   13    72    53    4    19
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   62 1239    63    49 1375    16    31   13    72    53    4    19
Added Vol:      0   39     0     0   38     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   62 1278    63    49 1413    16    31   13    72    53    4    19
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    67 1389    68    53 1536    17    34   14    78    58    4    21
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   67 1389    68    53 1536    17    34   14    78    58    4    21
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   67 1389    68    53 1536    17    34   14    78    58    4    21
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.91  0.09  1.00 1.98  0.02  0.70 0.30  1.00  0.93 0.07  1.00
Final Sat.:  1600 3050   150  1600 3164    36  1127  473  1600  1488  112  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.46  0.46  0.03 0.49  0.49  0.02 0.03  0.05  0.04 0.04  0.01
Crit Moves:  ****                  ****                   ****  ****
********************************************************************************
```





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------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
              EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CMP
                               PM PEAK HOUR
------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):        100            Critical Vol./Cap.(X):        0.816
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       70            Level Of Service:                 D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  2  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     144  640    62    72 1076    51    38  164   213   159  117    50
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  144  640    62    72 1076    51    38  164   213   159  117    50
Added Vol:      0    0     0     0    0     0     0    5     0     0    5     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  144  640    62    72 1076    51    38  169   213   159  122    50
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   157  696    67    78 1170    55    41  184   232   173  133    54
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  157  696    67    78 1170    55    41  184   232   173  133    54
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  157  696    67    78 1170    55    41  184   232   173  133    54
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.22  0.04  0.05 0.37  0.03  0.03 0.11  0.14  0.11 0.08  0.03
Crit Moves:  ****                  ****                   ****  ****
********************************************************************************
```

# Mitigated Forecast Existing With Project Conditions

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--------------------------------------------------------------------------------
  MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       MITIGATED EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF RPV
                                 AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.954
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       137              Level Of Service:                  E
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Protected         Protected         Protected
Rights:           Include           Include           Include            Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  397   180   379  351     0     0    0     0   156    0   416
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  397   180   379  351     0     0    0     0   156    0   416
Added Vol:      0    5    35     0   16     0     0    0     0   105    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  402   215   379  367     0     0    0     0   261    0   416
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  437   234   412  399     0     0    0     0   284    0   452
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  437   234   412  399     0     0    0     0   284    0   452
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0  437   234   412  399     0     0    0     0   284    0   452
OvlAdjVol:                                                                    40
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.65  0.35  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Final Sat.:     0 1042   558  1600 1600     0     0    0     0  1600    0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.42  0.42  0.26 0.25  0.00  0.00 0.00  0.00  0.18 0.00  0.28
OvlAdjV/S:                                                                  0.03
Crit Moves:       ****        ****                              ****
********************************************************************************
```

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--------------------------------------------------------------------------------
  MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       MITIGATED EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF RPV
                                 AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.862
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        84              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Protected         Permitted         Permitted
Rights:           Include           Include           Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  0  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      13 1332   208   132  907    85   132   74    44   190   53   165
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   13 1332   208   132  907    85   132   74    44   190   53   165
Added Vol:      0    5     3     0   16    49    16    5     0     8   16     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   13 1337   211   132  923   134   148   79    44   198   69   165
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    14 1453   229   143 1003   146   161   86    48   215   75   179
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   14 1453   229   143 1003   146   161   86    48   215   75   179
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   14 1453   229   143 1003   146   161   86    48   215   75   179
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.64  0.36  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1600 1028   572  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.45  0.14  0.09 0.31  0.09  0.10 0.08  0.08  0.13 0.05  0.11
Crit Moves:       ****        ****                   ****        ****
********************************************************************************
```

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---------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
      MITIGATED EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF RPV
                                   PM PEAK HOUR
---------------------------------------------------------------------------------
                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
*********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.875
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       89              Level Of Service:                  D
*********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:          Include          Include          Include            Ovl
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  138   157   419  200    0     0    0    0   293    0   351
Growth Adj:  1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
Initial Bse:    0  138   157   419  200    0     0    0    0   293    0   351
Added Vol:      0   10    63     0    9    0     0    0    0    61    0     0
PasserByVol:    0    0     0     0    0    0     0    0    0     0    0     0
Initial Fut:    0  148   220   419  209    0     0    0    0   354    0   351
User Adj:    1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92 0.92  0.92
PHF Volume:     0  161   239   455  227    0     0    0    0   385    0   382
Reduct Vol:     0    0     0     0    0    0     0    0    0     0    0     0
Reduced Vol:    0  161   239   455  227    0     0    0    0   385    0   382
PCE Adj:     1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
FinalVolume:    0  161   239   455  227    0     0    0    0   385    0   382
OvlAdjVol:                                                                   0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600 1600  1600 1600 1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
Lanes:       0.00 0.40  0.60  1.00 1.00 0.00  0.00 0.00 0.00  1.00 0.00  1.00
Final Sat.:     0  643   957  1600 1600    0     0    0    0  1600    0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.25  0.25  0.28 0.14 0.00  0.00 0.00 0.00  0.24 0.00  0.24
OvlAdjV/S:                                                                0.00
Crit Moves:       ****        ****                              ****
*********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
      MITIGATED EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF RPV
                                   PM PEAK HOUR
---------------------------------------------------------------------------------
                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
*********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.781
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       63              Level Of Service:                  C
*********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  0  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      75 1098    86   185 1294   50    76   65   30   153  104   162
Growth Adj:  1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
Initial Bse:   75 1098    86   185 1294   50    76   65   30   153  104   162
Added Vol:      0   10     5     0    9   28    29   10    0     5    9     0
PasserByVol:    0    0     0     0    0    0     0    0    0     0    0     0
Initial Fut:   75 1108    91   185 1303   78   105   75   30   158  113   162
User Adj:    1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92 0.92  0.92
PHF Volume:    82 1204    99   201 1416   85   114   82   33   172  123   176
Reduct Vol:     0    0     0     0    0    0     0    0    0     0    0     0
Reduced Vol:   82 1204    99   201 1416   85   114   82   33   172  123   176
PCE Adj:     1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
FinalVolume:   82 1204    99   201 1416   85   114   82   33   172  123   176
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600 1600  1600 1600 1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00 1.00  1.00 0.71 0.29  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200 1600  1600 1143  457  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.38  0.06  0.13 0.44 0.05  0.07 0.07 0.07  0.11 0.08  0.11
Crit Moves:       ****        ****                   ****       ****
*********************************************************************************
```

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
      MITIGATED EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF RPV
                         WEEKDAY (11:00-1:00) PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
*******************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        0.776
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       62              Level Of Service:                 C
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include            Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  144   161   283  232     0     0    0     0   254    0   220
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  144   161   283  232     0     0    0     0   254    0   220
Added Vol:      0   10    64     0   12     0     0    0     0    79    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  154   225   283  244     0     0    0     0   333    0   220
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  167   245   308  265     0     0    0     0   362    0   239
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  167   245   308  265     0     0    0     0   362    0   239
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0  167   245   308  265     0     0    0     0   362    0   239
OvlAdjVol:                                                                    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.41  0.59  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Final Sat.:     0  650   950  1600 1600     0     0    0     0  1600    0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.26  0.26  0.19 0.17  0.00  0.00 0.00  0.00  0.23 0.00  0.15
OvlAdjV/S:                                                                 0.00
Crit Moves:       ****        ****                              ****
*******************************************************************************
```

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
      MITIGATED EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF RPV
                         WEEKDAY (2:00-4:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap.(X):        0.870
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       87                Level Of Service:                 D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include            Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  242   197   342  262     0     0    0     0   208    0   278
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  242   197   342  262     0     0    0     0   208    0   278
Added Vol:      0   13    81     0    8     0     0    0     0    51    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  255   278   342  270     0     0    0     0   259    0   278
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  277   302   372  293     0     0    0     0   282    0   302
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  277   302   372  293     0     0    0     0   282    0   302
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0  277   302   372  293     0     0    0     0   282    0   302
OvlAdjVol:                                                                    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.48  0.52  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Final Sat.:     0  765   835  1600 1600     0     0    0     0  1600    0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.36  0.36  0.23 0.18  0.00  0.00 0.00  0.00  0.18 0.00  0.19
OvlAdjV/S:                                                                 0.00
Crit Moves:       ****        ****                              ****
********************************************************************************
```

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
      MITIGATED EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF RPV
                    SATURDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Cycle (sec):        100                 Critical Vol./Cap.(X):        0.633
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       43                 Level Of Service:                 B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:          Include          Include          Include            Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  161   123   296  158     0     0    0     0   127    0   259
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  161   123   296  158     0     0    0     0   127    0   259
Added Vol:      0    5    31     0    7     0     0    0     0    42    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  166   154   296  165     0     0    0     0   169    0   259
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  180   167   322  179     0     0    0     0   184    0   282
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  180   167   322  179     0     0    0     0   184    0   282
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0  180   167   322  179     0     0    0     0   184    0   282
OvlAdjVol:                                                                    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.52  0.48  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Final Sat.:     0  830   770  1600 1600     0     0    0     0  1600    0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.22  0.22  0.20 0.11  0.00  0.00 0.00  0.00  0.11 0.00  0.18
OvlAdjV/S:                                                                 0.00
Crit Moves:       ****        ****                              ****
********************************************************************************
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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
  MITIGATED EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
                               AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.855
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       138              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  0  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      13 1332   208   132  907    85   132   74    44   190   53   165
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   13 1332   208   132  907    85   132   74    44   190   53   165
Added Vol:      0    5     3     0   16    49    16    5     0     8   16     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   13 1337   211   132  923   134   148   79    44   198   69   165
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    14 1453   229   143 1003   146   161   86    48   215   75   179
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   14 1453   229   143 1003   146   161   86    48   215   75   179
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   14 1453   229   143 1003   146   161   86    48   215   75   179
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.64  0.36  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425  915   510  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.51  0.16  0.10 0.35  0.10  0.11 0.09  0.09  0.15 0.05  0.13
Crit Volume:       727         143                             134   215
Crit Moves:       ****        ****                            ****  ****
********************************************************************************
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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
  MITIGATED EXISTING PLUS MARYMOUNT PROJECT CONDITIONS - CITY OF LOS ANGELES
                                  PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):        0.764
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        85             Level Of Service:                 C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  2  0  1   1  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      75 1098    86   185 1294    50    76   65    30   153  104   162
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   75 1098    86   185 1294    50    76   65    30   153  104   162
Added Vol:      0   10     5     0    9    28    29   10     0     5    9     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   75 1108    91   185 1303    78   105   75    30   158  113   162
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    82 1204    99   201 1416    85   114   82    33   172  123   176
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   82 1204    99   201 1416    85   114   82    33   172  123   176
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   82 1204    99   201 1416    85   114   82    33   172  123   176
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.71  0.29  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1018   407  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.42  0.07  0.14 0.50  0.06  0.08 0.08  0.08  0.12 0.09  0.12
Crit Volume:       602         201                          114   172
Crit Moves:       ****        ****                         ****  ****
********************************************************************************
```

# Forecast Year 2012 Without Project Conditions

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
         FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Average Delay (sec/veh):     98.3       Worst Case Level Of Service: F[311.7]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:       0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  397   180   379  351     0     0    0     0   156    0   416
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  397   180   379  351     0     0    0     0   156    0   416
Added Vol:      0    0     2     0    1     0     0    0     0     8    0     0
Cumulative:     0    1     4     4    3     0     0    0     0     4    0     4
Initial Fut:    0  398   186   383  355     0     0    0     0   168    0   420
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  433   202   416  386     0     0    0     0   183    0   457
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  433   202   416  386     0     0    0     0   183    0   457
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   635 xxxx xxxxx  xxxx xxxx xxxxx  1752 xxxx   534
Potent Cap.: xxxx xxxx xxxxx   958 xxxx xxxxx  xxxx xxxx xxxxx    95 xxxx   550
Move Cap.:   xxxx xxxx xxxxx   958 xxxx xxxxx  xxxx xxxx xxxxx    63 xxxx   550
Volume/Cap:  xxxx xxxx  xxxx  0.43 xxxx  xxxx  xxxx xxxx  xxxx  2.91 xxxx  0.83
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   2.2 xxxx xxxxx  xxxx xxxx xxxxx  18.7 xxxx   8.5
Control Del:xxxxx xxxx xxxxx  11.6 xxxx xxxxx xxxxx xxxx xxxxx  1002 xxxx  35.8
LOS by Move:    *    *     *     B    *     *     *    *     *     F    *     E
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx            311.7
ApproachLOS:         *                *                *                F
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```





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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
         FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.495
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         33               Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0   0  1  0  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       6    0    15   214    6    37    48  185    31   139  117   208
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    6    0    15   214    6    37    48  185    31   139  117   208
Added Vol:      1    0     2     0    0     0     0    0     3    10    0     0
Cumulative:     0    0     0     4    0     0     0    6     0     0    8     4
Initial Fut:    7    0    17   218    6    37    48  191    34   149  125   212
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     8    0    18   237    7    40    52  208    37   162  136   230
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    8    0    18   237    7    40    52  208    37   162  136   230
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    8    0    18   237    7    40    52  208    37   162  136   230
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.29 0.00  0.71  0.97 0.03  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:   467    0  1133  1557   43  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.02  0.15 0.15  0.03  0.03 0.13  0.02  0.10 0.08  0.14
Crit Moves:             ****  ****                  ****        ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                  AM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      3.6       Worst Case Level Of Service: D[ 28.2]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0     0    27    0    74   188  384     0     0  466    52
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    0     0    27    0    74   188  384     0     0  466    52
Added Vol:       0    0     0     1    0     0     1    0     0     0    0     3
Cumulative:      0    0     0     3    0    12    10  136     0     0  127     1
Initial Fut:     0    0     0    31    0    86   199  520     0     0  593    56
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0    0     0    34    0    93   216  565     0     0  645    61
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0    0     0    34    0    93   216  565     0     0  645    61
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1642 xxxx   645   705 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   111 xxxx   476   902 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    91 xxxx   476   902 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.37 xxxx  0.20  0.24 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.5 xxxx   0.7   0.9 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  66.6 xxxx  14.4  10.2 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     F    *     B     B    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             28.2            xxxxxx           xxxxxx
ApproachLOS:        *                 D                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```





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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                  AM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #5 MIRALESTE DRIVE/1ST STREET
********************************************************************************
Average Delay (sec/veh):      5.7       Worst Case Level Of Service: B[ 14.8]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  284   103   342  163     0     0    0     0    26    0   164
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  284   103   342  163     0     0    0     0    26    0   164
Added Vol:       0    1     0     1    0     0     0    0     0     0    0     3
Cumulative:      0    2     0     2    2     0     0    0     0     0    0     2
Initial Fut:     0  287   103   345  165     0     0    0     0    26    0   169
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  312   112   375  179     0     0    0     0    28    0   184
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  312   112   375  179     0     0    0     0    28    0   184
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   424 xxxx xxxxx  xxxx xxxx xxxxx  1241 xxxx   312
Potent Cap.: xxxx xxxx xxxxx  1146 xxxx xxxxx  xxxx xxxx xxxxx   195 xxxx   733
Move Cap.:   xxxx xxxx xxxxx  1146 xxxx xxxxx  xxxx xxxx xxxxx   145 xxxx   733
Volume/Cap:  xxxx xxxx  xxxx  0.33 xxxx  xxxx  xxxx xxxx  xxxx  0.19 xxxx  0.25
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.4 xxxx xxxxx  xxxx xxxx xxxxx   0.7 xxxx   1.0
Control Del:xxxxx xxxx xxxxx   9.7 xxxx xxxxx xxxxx xxxx xxxxx  35.6 xxxx  11.5
LOS by Move:     *    *     *     A    *     *     *    *     *     E    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx            xxxxxx             14.8
ApproachLOS:        *                *                 *                 B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.2

## TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: AM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 17 | 385 | 130 | 177 | 414 | 3 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 18 | 418 | 141 | 192 | 449 | 3 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | | LT | R | L | TR | |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 40 | 14 | 241 | 4 | 4 | 15 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 43 | 15 | 261 | 4 | 4 | 16 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | No / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | | LT | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 18 | 192 | 58 | | 261 | | 24 | |
| C(m) (vph) | 1119 | 1022 | 246 | | 639 | | 219 | |
| v/c | 0.02 | 0.19 | 0.24 | | 0.41 | | 0.11 | |
| 95% queue length | 0.05 | 0.69 | 0.89 | | 1.99 | | 0.36 | |
| Control Delay | 8.3 | 9.3 | 24.1 | | 14.5 | | 23.5 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 16.2 | | | 23.5 | |
| Approach LOS | | | | C | | | C | |

HCS+: Unsignalized Intersections Release 5.2

Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: AM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 17 | 385 | 130 | 177 | 414 | 3 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 5 | 105 | 35 | 48 | 112 | 1 |
| Hourly Flow Rate, HFR | 18 | 418 | 141 | 192 | 449 | 3 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | | LT | R | L | TR | |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 40 | 14 | 241 | 4 | 4 | 15 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 11 | 4 | 65 | 1 | 1 | 4 |
| Hourly Flow Rate, HFR | 43 | 15 | 261 | 4 | 4 | 16 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | No / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | | LT | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 418 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 452 | 559 | 1298 | 1290 | 418 | 1496 | 1429 | 450 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 454 | 844 | 454 | 836 | 834 | 662 | 834 | 595 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 418 | 450 |
| Potential Capacity | 639 | 613 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 639 | 613 |
| Probability of Queue free St. | 0.59 | 0.97 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 559 | 452 |
| Potential Capacity | 1022 | 1119 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1022 | 1119 |
| Probability of Queue free St. | 0.81 | 0.98 |
| Maj L-Shared Prob Q free St. | | 0.98 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1290 | 1429 |
| Potential Capacity | 165 | 136 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.79 |
| Movement Capacity | 131 | 108 |
| Probability of Queue free St. | 0.96 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1298 | 1496 |
| Potential Capacity | 140 | 102 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.78 | 0.76 |
| Maj. L, Min T Adj. Imp Factor. | 0.83 | 0.82 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.48 |
| Movement Capacity | 114 | 49 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 454 | 834 |
| Potential Capacity | 573 | 386 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.98 | 0.81 |
| Movement Capacity | 561 | 313 |
| Probability of Queue free St. | 0.97 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 836 | 595 |
| Potential Capacity | 385 | 496 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.98 |
| Movement Capacity | 313 | 485 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1290 | 1429 |
| Potential Capacity | 165 | 136 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.79 |
| Movement Capacity | 131 | 108 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.62 | 1.11 |
| C t | 265 | 225 |
| Probability of Queue free St. | 0.96 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 454 | 834 |
| Potential Capacity | 589 | 365 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.98 | 0.81 |
| Movement Capacity | 576 | 296 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 844 | 662 |
| Potential Capacity | 361 | 454 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.56 |
| Movement Capacity | 282 | 256 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1298 | 1496 |
| Potential Capacity | 140 | 102 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.78 | 0.76 |
| Maj. L, Min T Adj. Imp Factor. | 0.83 | 0.82 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.48 |
| Movement Capacity | 114 | 49 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.08 | 16.47 |
| C t | 240 | 61 |

Worksheet 8-Shared Lane Calculations

| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume (vph) | 43 | 15 | 261 | 4 | 4 | 16 |
| Movement Capacity (vph) | 240 | 265 | 639 | 61 | 225 | 613 |
| Shared Lane Capacity (vph) | 246 | | | | 219 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| C sep | 240 | 265 | 639 | 61 | 225 | 613 |
| Volume | 43 | 15 | 261 | 4 | 4 | 16 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 246 | | | | 219 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 18 | 192 | 58 | | 261 | | 24 | |
| C(m) (vph) | 1119 | 1022 | 246 | | 639 | | 219 | |
| v/c | 0.02 | 0.19 | 0.24 | | 0.41 | | 0.11 | |
| 95% queue length | 0.05 | 0.69 | 0.89 | | 1.99 | | 0.36 | |
| Control Delay | 8.3 | 9.3 | 24.1 | | 14.5 | | 23.5 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 16.2 | | | 23.5 | |
| Approach LOS | | | | C | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.98 | 0.81 |
| v(il), Volume for stream 2 or 5 | 418 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.98 | |
| d(M,LT), Delay for stream 1 or 4 | 8.3 | 9.3 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.2 | |

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                 AM PEAK HOUR
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
*******************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         0.901
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100             Level Of Service:                   E
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected         Permitted         Permitted
Rights:          Include          Include           Include           Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Lanes:       1  0  1  1  0   1  0  1  1  0   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      59 1382    21    16  878    15    65   21   249    81   47    46
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   62 1443    22    17  917    16    68   22   260    85   49    48
Added Vol:      0    1     0     0    5     0     0    0     0     0    0     0
Cumulative:     0  165     0     2  175     2     3    0     0     0    0     3
Initial Fut:   62 1609    22    19 1097    18    71   22   260    85   49    51
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    67 1749    24    20 1192    19    77   24   283    92   53    55
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   67 1749    24    20 1192    19    77   24   283    92   53    55
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   67 1749    24    20 1192    19    77   24   283    92   53    55
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.97  0.03  1.00 1.97  0.03  0.76 0.24  1.00  0.63 0.37  1.00
Final Sat.:  1600 3157    43  1600 3149    51  1222  378  1600  1013  587  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.55  0.55  0.01 0.38  0.38  0.05 0.06  0.18  0.06 0.09  0.03
Crit Moves:       ****        ****                        ****  ****
*******************************************************************************
```





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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                 AM PEAK HOUR
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
*******************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         1.057
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       180             Level Of Service:                   F
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected         Permitted         Permitted
Rights:          Include          Include           Include           Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Lanes:       1  0  2  0  1   1  0  2  0  1   0  1  0  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      13 1332   208   132  907    85   132   74    44   190   53   165
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   14 1391   217   138  947    89   138   77    46   198   55   172
Added Vol:      0    0     0     0    1     4     1    0     0     1    1     0
Cumulative:     1   96    39    52  113     2     3    9     0    48    7    63
Initial Fut:   15 1487   256   190 1061    95   142   86    46   247   63   235
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    16 1616   278   206 1153   103   154   94    50   269   69   256
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   16 1616   278   206 1153   103   154   94    50   269   69   256
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   16 1616   278   206 1153   103   154   94    50   269   69   256
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.62 0.38  1.00  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600   995  605  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.50  0.17  0.13 0.36  0.06  0.10 0.15  0.03  0.17 0.04  0.16
Crit Moves:       ****        ****                   ****       ****
*******************************************************************************
```

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                 AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.864
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        85              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  2  0  1   1  0  0  1  0   1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      93 1394   149    23 1107   128   179   31   104    83   10    25
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   97 1455   156    24 1156   134   187   32   109    87   10    26
Added Vol:      0    0     0     0    2     0     0    0     0     0    0     0
Cumulative:    23   86    15    15   98    25    26    8    23    15    7    15
Initial Fut:  120 1541   171    39 1256   159   213   40   132   102   17    41
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   131 1675   185    42 1365   172   231   44   143   110   19    45
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  131 1675   185    42 1365   172   231   44   143   110   19    45
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  131 1675   185    42 1365   172   231   44   143   110   19    45
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.23  0.77  1.00 0.30  0.70
Final Sat.:  1600 3200  1600  1600 3200  1600  1600  376  1224  1600  477  1123
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.52  0.12  0.03 0.43  0.11  0.14 0.12  0.12  0.07 0.04  0.04
Crit Moves:       ****        ****             ****             ****
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                 AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         1.516
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       180              Level Of Service:                  F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted       Prot+Permit       Permitted       Prot+Permit
Rights:            Ovl            Include          Include            Ovl
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  1  1  0   1  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       6 1612   635   189 1193    20    60  402    32   360  211   176
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:    6 1683   663   197 1245    21    63  420    33   376  220   184
Added Vol:      0    0     0     0    0     2     0    0     0     0    1     0
Cumulative:     0   64     0    18   90    14     9    0     0     0    0    15
Initial Fut:    6 1747   663   215 1335    37    72  420    33   376  221   199
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     7 1899   721   234 1452    40    78  456    36   409  241   216
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    7 1899   721   234 1452    40    78  456    36   409  241   216
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    7 1899   721   234 1452    40    78  456    36   409  241   216
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 1.95  0.05  1.00 0.93  0.07  1.00 1.00  1.00
Final Sat.:  1375 2750  1375  1375 2676    74  1375 1274   101  1375 1375  1375
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.69  0.52  0.17 0.54  0.54  0.06 0.36  0.36  0.30 0.17  0.16
Crit Volume:       949         234                   492         409
Crit Moves:       ****        ****                  ****        ****
********************************************************************************
```

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------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
         FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                AM PEAK HOUR
------------------------------------------------------------------------------
                     Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.659
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        59                Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     172  902   103    75  760    29    16  116   115   128  174    76
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:  180  942   108    78  793    30    17  121   120   134  182    79
Added Vol:      0    0     0     0    0     0     0    0     0     0    1     0
Cumulative:     0   50     0    10   65     2     2    0     0     0    0    11
Initial Fut:  180  992   108    88  858    32    19  121   120   134  183    90
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   195 1078   117    96  933    35    20  132   131   145  199    98
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  195 1078   117    96  933    35    20  132   131   145  199    98
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  195 1078   117    96  933    35    20  132   131   145  199    98
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1425  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14 0.38  0.08  0.07 0.33  0.02  0.01 0.09  0.09  0.10 0.14  0.07
Crit Volume:  195                     467                132        145
Crit Moves:  ****                    ****               ****       ****
********************************************************************************
```





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------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
         FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                AM PEAK HOUR
------------------------------------------------------------------------------
                     Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.813
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       107                Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   2  0  2  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      27  156    24   112  131   508   544  215    34    48  355   274
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   28  163    25   117  137   530   568  224    35    50  371   286
Added Vol:      0    0     0     0    0     0     0    1     0     0    3     0
Cumulative:     0    3     0    16    2    41    31  108     0     0   93    11
Initial Fut:   28  166    25   133  139   571   599  333    35    50  467   297
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    31  180    27   144  151   621   651  362    39    54  507   323
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   31  180    27   144  151   621   651  362    39    54  507   323
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
FinalVolume:   31  180    27   144  151   621   716  362    39    54  507   323
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  2.00 2.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  2850 2850  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.06  0.02  0.10 0.05  0.44  0.25 0.13  0.03  0.04 0.36  0.23
Crit Volume:   31                      621     0                      507
Crit Moves:  ****                     ****  ****                     ****
********************************************************************************
```

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                 PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Average Delay (sec/veh):    198.0       Worst Case Level Of Service: F[469.2]
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  138   157   419  200     0     0    0     0   293    0   351
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  138   157   419  200     0     0    0     0   293    0   351
Added Vol:       0    1     3     0    1     0     0    0     0     7    0     0
Cumulative:      0    0    10    10    1     0     0    0     0    10    0    10
Initial Fut:     0  139   170   429  202     0     0    0     0   310    0   361
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  151   185   466  220     0     0    0     0   337    0   392
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  151   185   466  220     0     0    0     0   337    0   392
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   336 xxxx xxxxx  xxxx xxxx xxxxx  1396 xxxx   243
Potent Cap.: xxxx xxxx xxxxx  1235 xxxx xxxxx  xxxx xxxx xxxxx   157 xxxx   800
Move Cap.:   xxxx xxxx xxxxx  1235 xxxx xxxxx  xxxx xxxx xxxxx   111 xxxx   800
Volume/Cap:  xxxx xxxx  xxxx  0.38 xxxx  xxxx  xxxx xxxx  xxxx  3.04 xxxx  0.49
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.8 xxxx xxxxx  xxxx xxxx xxxxx  32.2 xxxx   2.7
Control Del:xxxxx xxxx xxxxx   9.7 xxxx xxxxx xxxxx xxxx xxxxx 999.5 xxxx  13.7
LOS by Move:    *    *     *     A    *     *     *    *     *     F    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            469.2
ApproachLOS:        *                *                *                F
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```





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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                 PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.393
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         28              Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0   0  1  0  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       33    2    97    71    1    24    22  103    10    30  187   103
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    33    2    97    71    1    24    22  103    10    30  187   103
Added Vol:       1    0     4     0    0     0     0    0     3     8    0     0
Cumulative:      0    0     0    10    0     0     0    4     0     0    5    10
Initial Fut:    34    2   101    81    1    24    22  107    13    38  192   113
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     37    2   110    88    1    26    24  116    14    41  209   123
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    37    2   110    88    1    26    24  116    14    41  209   123
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    37    2   110    88    1    26    24  116    14    41  209   123
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.25 0.01  0.74  0.99 0.01  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:    397   23  1180  1580   20  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.02 0.09  0.09  0.06 0.06  0.02  0.01 0.07  0.01  0.03 0.13  0.08
Crit Moves:        ****        ****              ****                   ****
********************************************************************************
```

```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                 PM PEAK HOUR
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      3.7       Worst Case Level Of Service: D[ 31.9]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0     0    40    0   106   111  549     0     0  391    49
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    0     0    40    0   106   111  549     0     0  391    49
Added Vol:       0    0     0     1    0     0     1    0     0     0    0     2
Cumulative:      0    0     0     1    0     8     7  173     0     0  204     0
Initial Fut:     0    0     0    42    0   114   119  722     0     0  595    51
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0    0     0    46    0   124   129  785     0     0  647    55
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0    0     0    46    0   124   129  785     0     0  647    55
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1690 xxxx   647   702 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   104 xxxx   475   905 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    92 xxxx   475   905 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.49 xxxx  0.26  0.14 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   2.1 xxxx   1.0   0.5 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  77.1 xxxx  15.2   9.6 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     F    *     C     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             31.9            xxxxxx           xxxxxx
ApproachLOS:        *                D                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```





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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                 PM PEAK HOUR
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #5 MIRALESTE DRIVE/1ST STREET
********************************************************************************
Average Delay (sec/veh):      4.6       Worst Case Level Of Service: B[ 14.9]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled       Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  251    44   199  372     0     0    0     0    44    0   174
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  251    44   199  372     0     0    0     0    44    0   174
Added Vol:       0    1     0     1    0     0     0    0     0     0    0     2
Cumulative:      0    5     0     5    5     0     0    0     0     0    0     5
Initial Fut:     0  257    44   205  377     0     0    0     0    44    0   181
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  279    48   223  410     0     0    0     0    48    0   197
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  279    48   223  410     0     0    0     0    48    0   197
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   327 xxxx xxxxx  xxxx xxxx xxxxx  1135 xxxx   279
Potent Cap.: xxxx xxxx xxxxx  1244 xxxx xxxxx  xxxx xxxx xxxxx   226 xxxx   764
Move Cap.:   xxxx xxxx xxxxx  1244 xxxx xxxxx  xxxx xxxx xxxxx   195 xxxx   764
Volume/Cap:  xxxx xxxx  xxxx  0.18 xxxx  xxxx  xxxx xxxx  xxxx  0.25 xxxx  0.26
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.7 xxxx xxxxx  xxxx xxxx xxxxx   0.9 xxxx   1.0
Control Del:xxxxx xxxx xxxxx   8.5 xxxx xxxxx xxxxx xxxx xxxxx  29.4 xxxx  11.3
LOS by Move:     *    *     *     A    *     *     *    *     *     D    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx             14.9
ApproachLOS:        *                *                *                B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.2

## TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: PM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS    Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 7 | 402 | 69 | 166 | 477 | 2 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 7 | 436 | 74 | 180 | 518 | 2 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 47 | 6 | 221 | 2 | 5 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 51 | 6 | 240 | 2 | 5 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | No / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 7 | 180 | 57 | | 240 | | 13 | |
| C(m) (vph) | 1056 | 1065 | 247 | | 625 | | 258 | |
| v/c | 0.01 | 0.17 | 0.23 | | 0.38 | | 0.05 | |
| 95% queue length | 0.02 | 0.61 | 0.87 | | 1.80 | | 0.16 | |
| Control Delay | 8.4 | 9.1 | 23.9 | | 14.3 | | 19.7 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 16.1 | | | 19.7 | |
| Approach LOS | | | | C | | | C | |

HCS+: Unsignalized Intersections Release 5.2

Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: PM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS    Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 7 | 402 | 69 | 166 | 477 | 2 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 2 | 109 | 19 | 45 | 130 | 1 |
| Hourly Flow Rate, HFR | 7 | 436 | 74 | 180 | 518 | 2 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 47 | 6 | 221 | 2 | 5 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 13 | 2 | 60 | 1 | 1 | 2 |
| Hourly Flow Rate, HFR | 51 | 6 | 240 | 2 | 5 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | No / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 436 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 520 | 510 | 1334 | 1330 | 436 | 1489 | 1403 | 519 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 450 | 884 | 450 | 880 | 879 | 610 | 879 | 524 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 436 | 519 |
| Potential Capacity | 625 | 561 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 625 | 561 |
| Probability of Queue free St. | 0.62 | 0.99 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 510 | 520 |
| Potential Capacity | 1065 | 1056 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1065 | 1056 |
| Probability of Queue free St. | 0.83 | 0.99 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1330 | 1403 |
| Potential Capacity | 156 | 141 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.82 |
| Movement Capacity | 128 | 116 |
| Probability of Queue free St. | 0.98 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1334 | 1489 |
| Potential Capacity | 132 | 103 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.81 | 0.81 |
| Maj. L, Min T Adj. Imp Factor. | 0.85 | 0.85 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.53 |
| Movement Capacity | 111 | 54 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 450 | 879 |
| Potential Capacity | 575 | 368 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.83 |
| Movement Capacity | 570 | 306 |
| Probability of Queue free St. | 0.99 | 0.98 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 880 | 524 |
| Potential Capacity | 368 | 533 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.99 |
| Movement Capacity | 306 | 528 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1330 | 1403 |
| Potential Capacity | 156 | 141 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.82 |
| Movement Capacity | 128 | 116 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.58 | 0.82 |
| C t | 268 | 242 |
| Probability of Queue free St. | 0.98 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 450 | 879 |
| Potential Capacity | 592 | 345 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.83 |
| Movement Capacity | 587 | 287 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 884 | 610 |
| Potential Capacity | 343 | 485 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.60 |
| Movement Capacity | 277 | 293 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1334 | 1489 |
| Potential Capacity | 132 | 103 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.81 | 0.81 |
| Maj. L, Min T Adj. Imp Factor. | 0.85 | 0.85 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.53 |
| Movement Capacity | 111 | 54 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.99 | 3.95 |
| C t | 245 | 105 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | 51 | 6 | 240 | 2 | 5 | 6 |
| Movement Capacity (vph) | 245 | 268 | 625 | 105 | 242 | 561 |
| Shared Lane Capacity (vph) | 247 | | | | 258 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | 245 | 268 | 625 | 105 | 242 | 561 |
| Volume | 51 | 6 | 240 | 2 | 5 | 6 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 247 | | | | 258 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 7 | 180 | 57 | | 240 | | 13 | |
| C(m) (vph) | 1056 | 1065 | 247 | | 625 | | 258 | |
| v/c | 0.01 | 0.17 | 0.23 | | 0.38 | | 0.05 | |
| 95% queue length | 0.02 | 0.61 | 0.87 | | 1.80 | | 0.16 | |
| Control Delay | 8.4 | 9.1 | 23.9 | | 14.3 | | 19.7 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 16.1 | | | 19.7 | |
| Approach LOS | | | | C | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.99 | 0.83 |
| v(il), Volume for stream 2 or 5 | 436 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.4 | 9.1 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.1 | |

```
-----------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
         FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                               PM PEAK HOUR
-----------------------------------------------------------------------------
                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*****************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
*****************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.787
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       64              Level Of Service:                  C
*****************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  1  1  0   1  0  1  1  0   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      62 1239    63    49 1375    16    31   13    72    53    4    19
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   65 1294    66    51 1436    17    32   14    75    55    4    20
Added Vol:      0    2     0     0    4     0     0    0     0     0    0     0
Cumulative:     0  224     0     1  175     1     1    0     0     0    0     1
Initial Fut:   65 1520    66    52 1615    18    33   14    75    55    4    21
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    70 1652    71    57 1755    19    36   15    82    60    5    23
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   70 1652    71    57 1755    19    36   15    82    60    5    23
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   70 1652    71    57 1755    19    36   15    82    60    5    23
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.92  0.08  1.00 1.98  0.02  0.71 0.29  1.00  0.93 0.07  1.00
Final Sat.:  1600 3067   133  1600 3165    35  1137  463  1600  1488  112  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.54  0.54  0.04 0.55  0.55  0.02 0.03  0.05  0.04 0.04  0.01
Crit Moves:  ****                   ****                    ****  ****
*****************************************************************************
```





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-----------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
         FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                               PM PEAK HOUR
-----------------------------------------------------------------------------
                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*****************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
*****************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         1.034
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180              Level Of Service:                  F
*****************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  2  0  1   0  1  0  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      75 1098    86   185 1294    50    76   65    30   153  104   162
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   78 1146    90   193 1351    52    79   68    31   160  109   169
Added Vol:      0    1     0     0    1     3     2    1     0     1    1     0
Cumulative:     4  155    75    97   82     1     1   22     0    99   20    63
Initial Fut:   82 1302   165   290 1434    56    82   91    31   260  130   232
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    89 1416   179   315 1559    61    90   99    34   282  141   252
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   89 1416   179   315 1559    61    90   99    34   282  141   252
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   89 1416   179   315 1559    61    90   99    34   282  141   252
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.48 0.52  1.00  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600   761  839  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.44  0.11  0.20 0.49  0.04  0.06 0.12  0.02  0.18 0.09  0.16
Crit Moves:       ****        ****                   ****        ****
*****************************************************************************
```

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-------------------------------------------------------------------------------
  MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                  PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
*******************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         0.895
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        98              Level Of Service:                  D
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted       Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  0  1  0    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      47 1197   302     50 1246   117     89    49    45    194    82    61
Growth Adj:  1.04 1.04  1.04   1.04 1.04  1.04   1.04 1.04  1.04   1.04 1.04  1.04
Initial Bse:   49 1250   315     52 1301   122     93    51    47    203    86    64
Added Vol:      0    1     0      0    2     0      0    0     0      0    0     0
Cumulative:    31  128    39     39   92    32     31   19    30     40   20    40
Initial Fut:   80 1379   354     91 1395   154    124   70    77    243  106   104
User Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92   0.92 0.92  0.92   0.92 0.92  0.92   0.92 0.92  0.92
PHF Volume:    87 1499   385     99 1516   168    135   76    84    264  115   113
Reduct Vol:     0    0     0      0    0     0      0    0     0      0    0     0
Reduced Vol:   87 1499   385     99 1516   168    135   76    84    264  115   113
PCE Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
FinalVolume:   87 1499   385     99 1516   168    135   76    84    264  115   113
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600   1600 1600  1600   1600 1600  1600   1600 1600  1600
Adjustment:  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Lanes:       1.00 2.00  1.00   1.00 2.00  1.00   1.00 0.48  0.52   1.00 0.50  0.50
Final Sat.:  1600 3200  1600   1600 3200  1600   1600  763   837   1600  807   793
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.47  0.24   0.06 0.47  0.10   0.08 0.10  0.10   0.16 0.14  0.14
Crit Moves:       ****         ****                          ****   ****
*******************************************************************************
```





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-------------------------------------------------------------------------------
  MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                                  PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
*******************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         1.438
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       180              Level Of Service:                  F
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted       Prot+Permit        Permitted       Prot+Permit
Rights:             Ovl            Include          Include            Ovl
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        1  0  2  0  1    1  0  1  1  0    1  0  0  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      36 1259   215    178 1458    61     42  184    21    714  276   156
Growth Adj:  1.04 1.04  1.04   1.04 1.04  1.04   1.04 1.04  1.04   1.04 1.04  1.04
Initial Bse:   38 1314   224    186 1522    64     44  192    22    745  288   163
Added Vol:      0    0     0      0    0     2      1    0     0      0    1     0
Cumulative:     0  116     0     25  111    18     18    0     0      0    0    26
Initial Fut:   38 1430   224    211 1633    84     63  192    22    745  289   189
User Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92   0.92 0.92  0.92   0.92 0.92  0.92   0.92 0.92  0.92
PHF Volume:    41 1555   244    229 1775    91     68  209    24    810  314   205
Reduct Vol:     0    0     0      0    0     0      0    0     0      0    0     0
Reduced Vol:   41 1555   244    229 1775    91     68  209    24    810  314   205
PCE Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
FinalVolume:   41 1555   244    229 1775    91     68  209    24    810  314   205
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425   1425 1425  1425   1425 1425  1425   1425 1425  1425
Adjustment:  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Lanes:       1.00 2.00  1.00   1.00 1.90  0.10   1.00 0.90  0.10   1.00 1.00  1.00
Final Sat.:  1425 2850  1425   1425 2711   139   1425 1279   146   1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.55  0.17   0.16 0.65  0.65   0.05 0.16  0.16   0.57 0.22  0.14
Crit Volume:       777          229                           233    810
Crit Moves:       ****         ****                          ****   ****
*******************************************************************************
```

```
------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                               PM PEAK HOUR
------------------------------------------------------------------------------
                    Level Of Service Computation Report
         Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        0.868
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      152              Level Of Service:                 D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  2  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     144  640   62    72 1076   51    38  164  213   159  117   50
Growth Adj:  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04
Initial Bse:  150  668   65    75 1123   53    40  171  222   166  122   52
Added Vol:      0    0    0     0    0    0     0    0    0     0    1    0
Cumulative:     0   78    0    23   76    5     5    0    0     0    0   23
Initial Fut:  150  746   65    98 1199   58    45  171  222   166  123   75
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     0.92 0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92
PHF Volume:   163  811   70   107 1304   63    49  186  242   180  134   82
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  163  811   70   107 1304   63    49  186  242   180  134   82
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:  163  811   70   107 1304   63    49  186  242   180  134   82
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425 1425  1425 1425 1425  1425 1425 1425  1425 1425 1425
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       1.00 2.00 1.00  1.00 2.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Sat.:  1425 2850 1425  1425 2850 1425  1425 1425 1425  1425 1425 1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.28 0.05  0.07 0.46 0.04  0.03 0.13 0.17  0.13 0.09 0.06
Crit Volume:  163                   652                   242   180
Crit Moves:  ****                  ****                  ****  ****
********************************************************************************
```





```
------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                               PM PEAK HOUR
------------------------------------------------------------------------------
                    Level Of Service Computation Report
         Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        0.805
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      102              Level Of Service:                 D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  2  0  1   2  0  2  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54  106   55   206  215  369   477  306   35    71  290  176
Growth Adj:  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04
Initial Bse:   56  111   57   215  224  385   498  319   37    74  303  184
Added Vol:      0    0    0     0    0    0     0    1    0     0    2    0
Cumulative:     0    1    0    15    1   49    47  135    0     0  163   16
Initial Fut:   56  112   57   230  225  434   545  455   37    74  468  200
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     0.92 0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92
PHF Volume:    61  121   62   250  245  472   592  495   40    81  508  217
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:   61  121   62   250  245  472   592  495   40    81  508  217
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.10 1.00 1.00  1.00 1.00 1.00
FinalVolume:   61  121   62   250  245  472   652  495   40    81  508  217
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425 1425  1425 1425 1425  1425 1425 1425  1425 1425 1425
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       1.00 2.00 1.00  1.00 2.00 1.00  2.00 2.00 1.00  1.00 1.00 1.00
Final Sat.:  1425 2850 1425  1425 2850 1425  2850 2850 1425  1425 1425 1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.04 0.04  0.18 0.09 0.33  0.23 0.17 0.03  0.06 0.36 0.15
Crit Volume:               62   250               326                    508
Crit Moves:              ****  ****              ****                   ****
********************************************************************************
```

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
WEEKDAY (11:00-1:00) PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE

Average Delay (sec/veh): 78.2 Worst Case Level Of Service: F[205.6]

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| Control: | Uncontrolled | Uncontrolled | Stop Sign | Stop Sign |
| Rights: | Include | Include | Include | Include |
| Lanes: | 0 0 0 1 0 | 1 0 1 0 0 | 0 0 0 0 0 | 1 0 0 0 1 |

| | NB L | NB T | NB R | SB L | SB T | SB R | EB L | EB T | EB R | WB L | WB T | WB R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 0 | 144 | 161 | 283 | 232 | 0 | 0 | 0 | 0 | 254 | 0 | 220 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 144 | 161 | 283 | 232 | 0 | 0 | 0 | 0 | 254 | 0 | 220 |
| Added Vol: | 0 | 1 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 7 | 0 | 0 |
| Cumulative: | 0 | 1 | 11 | 11 | 3 | 0 | 0 | 0 | 0 | 10 | 0 | 10 |
| Initial Fut: | 0 | 146 | 175 | 294 | 236 | 0 | 0 | 0 | 0 | 271 | 0 | 230 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 159 | 190 | 320 | 257 | 0 | 0 | 0 | 0 | 295 | 0 | 250 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 159 | 190 | 320 | 257 | 0 | 0 | 0 | 0 | 295 | 0 | 250 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | xxxx | 6.2 |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | xxxx | 3.3 |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 349 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1149 | xxxx | 254 |
| Potent Cap.: | xxxx | xxxx | xxxxx | 1221 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 221 | xxxx | 790 |
| Move Cap.: | xxxx | xxxx | xxxxx | 1221 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 177 | xxxx | 790 |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.26 | xxxx | xxxx | xxxx | xxxx | xxxx | 1.67 | xxxx | 0.32 |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 1.1 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 20.2 | xxxx | 1.4 |
| Control Del: | xxxxx | xxxx | xxxxx | 9.0 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 370.2 | xxxx | 11.7 |
| LOS by Move: | * | * | * | A | * | * | * | * | * | F | * | B |
| Movement: | LT | - LTR - | RT | LT | - LTR - | RT | LT | - LTR - | RT | LT | - LTR - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | | xxxxxx | | | xxxxxx | | | xxxxxx | | | 205.6 | |
| ApproachLOS: | | * | | | * | | | * | | | F | |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
WEEKDAY (11:00-1:00) PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST

Cycle (sec): 100 Critical Vol./Cap.(X): 0.357
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| Control: | Permitted | Permitted | Permitted | Permitted |
| Rights: | Include | Include | Include | Include |
| Min. Green: | 0 0 0 | 0 0 0 | 0 0 0 | 0 0 0 |
| Lanes: | 0 0 1! 0 0 | 0 1 0 0 1 | 1 0 1 0 1 | 1 0 1 0 1 |

| | NB L | NB T | NB R | SB L | SB T | SB R | EB L | EB T | EB R | WB L | WB T | WB R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 21 | 15 | 76 | 68 | 6 | 8 | 13 | 94 | 30 | 75 | 126 | 82 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 21 | 15 | 76 | 68 | 6 | 8 | 13 | 94 | 30 | 75 | 126 | 82 |
| Added Vol: | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 |
| Cumulative: | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 6 | 0 | 0 | 8 | 10 |
| Initial Fut: | 22 | 15 | 80 | 79 | 6 | 8 | 13 | 100 | 33 | 83 | 134 | 92 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 24 | 16 | 87 | 86 | 7 | 9 | 14 | 109 | 36 | 90 | 146 | 100 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 24 | 16 | 87 | 86 | 7 | 9 | 14 | 109 | 36 | 90 | 146 | 100 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 24 | 16 | 87 | 86 | 7 | 9 | 14 | 109 | 36 | 90 | 146 | 100 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.19 | 0.13 | 0.68 | 0.93 | 0.07 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 301 | 205 | 1094 | 1487 | 113 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.08 | 0.08 | 0.05 | 0.06 | 0.01 | 0.01 | 0.07 | 0.02 | 0.06 | 0.09 | 0.06 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                        WEEKDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      2.6       Worst Case Level Of Service: C[ 19.7]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    47    0    73    51  336     0     0  315    23
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    47    0    73    51  336     0     0  315    23
Added Vol:      0    0     0     1    0     0     1    0     0     0    0     2
Cumulative:     0    0     0     3    0    13    11  200     0     0  152     1
Initial Fut:    0    0     0    51    0    86    63  536     0     0  467    26
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0    55    0    93    68  583     0     0  508    28
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    55    0    93    68  583     0     0  508    28
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1227 xxxx   508   536 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   199 xxxx   569  1042 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   189 xxxx   569  1042 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.29 xxxx  0.16  0.07 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.2 xxxx   0.6   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  31.8 xxxx  12.6   8.7 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     D    *     B     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx              19.7            xxxxxx           xxxxxx
ApproachLOS:         *                 C                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.2

## TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Weekday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 6 | 274 | 53 | 184 | 330 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 6 | 297 | 57 | 199 | 358 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 36 | 18 | 223 | 4 | 3 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 39 | 19 | 242 | 4 | 3 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 6 | 199 | 58 | | 242 | | 13 | |
| C(m) (vph) | 1205 | 1216 | 302 | | 747 | | 298 | |
| v/c | 0.00 | 0.16 | 0.19 | | 0.32 | | 0.04 | |
| 95% queue length | 0.02 | 0.58 | 0.70 | | 1.41 | | 0.14 | |
| Control Delay | 8.0 | 8.5 | 19.7 | | 12.1 | | 17.6 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 13.6 | | | 17.6 | |
| Approach LOS | | | | B | | | C | |

HCS+: Unsignalized Intersections Release 5.2

Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Weekday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 6 | 274 | 53 | 184 | 330 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 2 | 74 | 14 | 50 | 90 | 2 |
| Hourly Flow Rate, HFR | 6 | 297 | 57 | 199 | 358 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 36 | 18 | 223 | 4 | 3 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 10 | 5 | 61 | 1 | 1 | 2 |
| Hourly Flow Rate, HFR | 39 | 19 | 242 | 4 | 3 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 297 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 365 | 354 | 1073 | 1072 | 297 | 1228 | 1126 | 362 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 309 | 764 | 309 | 763 | 760 | 468 | 760 | 366 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 297 | 362 |
| Potential Capacity | 747 | 687 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 747 | 687 |
| Probability of Queue free St. | 0.68 | 0.99 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 354 | 365 |
| Potential Capacity | 1216 | 1205 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1216 | 1205 |
| Probability of Queue free St. | 0.84 | 1.00 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1072 | 1126 |
| Potential Capacity | 222 | 207 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.83 |
| Movement Capacity | 185 | 172 |
| Probability of Queue free St. | 0.95 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1073 | 1228 |
| Potential Capacity | 200 | 156 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.82 | 0.79 |
| Maj. L, Min T Adj. Imp Factor. | 0.86 | 0.84 |
| Cap. Adj. factor due to Impeding mvmnt | 0.86 | 0.57 |
| Movement Capacity | 171 | 89 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 309 | 760 |
| Potential Capacity | 663 | 417 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.84 |
| Movement Capacity | 659 | 349 |
| Probability of Queue free St. | 0.97 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 763 | 366 |
| Potential Capacity | 416 | 626 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.99 |
| Movement Capacity | 348 | 622 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1072 | 1126 |
| Potential Capacity | 222 | 207 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.83 |
| Movement Capacity | 185 | 172 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.02 | 0.71 |
| C t | 313 | 293 |
| Probability of Queue free St. | 0.95 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 309 | 760 |
| Potential Capacity | 705 | 401 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.84 |
| Movement Capacity | 701 | 335 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 764 | 468 |
| Potential Capacity | 399 | 579 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.65 |
| Movement Capacity | 328 | 378 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1073 | 1228 |
| Potential Capacity | 200 | 156 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.82 | 0.79 |
| Maj. L, Min T Adj. Imp Factor. | 0.86 | 0.84 |
| Cap. Adj. factor due to Impeding mvmnt | 0.86 | 0.57 |
| Movement Capacity | 171 | 89 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.51 | 2.73 |
| C t | 297 | 162 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | 39 | 19 | 242 | 4 | 3 | 6 |
| Movement Capacity (vph) | 297 | 313 | 747 | 162 | 293 | 687 |
| Shared Lane Capacity (vph) | 302 | | | | 298 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | 297 | 313 | 747 | 162 | 293 | 687 |
| Volume | 39 | 19 | 242 | 4 | 3 | 6 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 302 | | | | 298 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 6 | 199 | 58 | | 242 | | 13 | |
| C(m) (vph) | 1205 | 1216 | 302 | | 747 | | 298 | |
| v/c | 0.00 | 0.16 | 0.19 | | 0.32 | | 0.04 | |
| 95% queue length | 0.02 | 0.58 | 0.70 | | 1.41 | | 0.14 | |
| Control Delay | 8.0 | 8.5 | 19.7 | | 12.1 | | 17.6 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 13.6 | | | 17.6 | |
| Approach LOS | | | | B | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 1.00 | 0.84 |
| v(il), Volume for stream 2 or 5 | 297 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.0 | 8.5 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.0 | |

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                         WEEKDAY (2:00-4:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Average Delay (sec/veh):    103.7       Worst Case Level Of Service: F[313.3]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:       0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  242   197   342  262     0     0    0     0   208    0   278
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  242   197   342  262     0     0    0     0   208    0   278
Added Vol:      0    1     5     0    1     0     0    0     0     6    0     0
Cumulative:     0    1    14    14    3     0     0    0     0    13    0    13
Initial Fut:    0  244   216   356  266     0     0    0     0   227    0   291
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  265   235   387  289     0     0    0     0   247    0   316
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  265   235   387  289     0     0    0     0   247    0   316
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   500 xxxx xxxxx  xxxx xxxx xxxxx  1446 xxxx   383
Potent Cap.: xxxx xxxx xxxxx  1075 xxxx xxxxx  xxxx xxxx xxxxx   147 xxxx   669
Move Cap.:   xxxx xxxx xxxxx  1075 xxxx xxxxx  xxxx xxxx xxxxx   106 xxxx   669
Volume/Cap:  xxxx xxxx  xxxx  0.36 xxxx  xxxx  xxxx xxxx  xxxx  2.34 xxxx  0.47
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.7 xxxx xxxxx  xxxx xxxx xxxxx  21.9 xxxx   2.5
Control Del:xxxxx xxxx xxxxx  10.2 xxxx xxxxx xxxxx xxxx xxxxx 695.6 xxxx  15.1
LOS by Move:    *    *     *     B    *     *     *    *     *     F    *     C
Movement:    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx            313.3
ApproachLOS:       *                *                *                F
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                         WEEKDAY (2:00-4:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.511
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         34               Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       0  0  1! 0  0    0  1  0  0  1    1  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      21    7   116   229    4    52    32  141    21    58  135   143
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   21    7   116   229    4    52    32  141    21    58  135   143
Added Vol:      2    0     5     0    0     0     0    0     2     7    0     0
Cumulative:     0    0     0    14    0     0     0    5     0     0    7    13
Initial Fut:   23    7   121   243    4    52    32  146    23    65  142   156
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    25    8   132   264    4    57    35  159    25    71  154   170
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   25    8   132   264    4    57    35  159    25    71  154   170
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   25    8   132   264    4    57    35  159    25    71  154   170
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.15 0.05  0.80  0.98 0.02  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:   244   74  1282  1574   26  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.10  0.10  0.17 0.17  0.04  0.02 0.10  0.02  0.04 0.10  0.11
Crit Moves:       ****        ****                    ****        ****
********************************************************************************
```

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
         FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                        WEEKDAY (2:00-4:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      6.4       Worst Case Level Of Service: E[ 46.4]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    45    0   128   198  510     0     0  350    47
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    45    0   128   198  510     0     0  350    47
Added Vol:      0    0     0     1    0     0     0    0     0     0    0     2
Cumulative:     0    0     0     3    0    11     8  173     0     0  207     1
Initial Fut:    0    0     0    49    0   139   206  683     0     0  557    50
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0    53    0   151   224  742     0     0  605    54
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    53    0   151   224  742     0     0  605    54
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1796 xxxx   605   660 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    89 xxxx   501   938 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    73 xxxx   501   938 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.73 xxxx  0.30  0.24 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   3.4 xxxx   1.3   0.9 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx 134.8 xxxx  15.3  10.0 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     F    *     C     B    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx             46.4             xxxxxx           xxxxxx
ApproachLOS:         *                E                  *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
                HCS+: Unsignalized Intersections Release 5.2

_______________________TWO-WAY STOP CONTROL SUMMARY___________________________

Analyst:              DK
Agency/Co.:           RBF
Date Performed:       7/23/2007
Analysis Time Period: Afternoon Peak Hour
Intersection:         Miraleste/Via Colinita
Jurisdiction:         RPV
Units: U. S. Customary
Analysis Year:        2012 Without Project
Project ID:  Marymount
East/West Street:     Via Colinita
North/South Street:   Miraleste
Intersection Orientation: NS                Study period (hrs):  0.25

_____________________Vehicle Volumes and Adjustments__________________________
Major Street:  Approach       Northbound              Southbound
               Movement     1      2      3     |  4      5      6
                            L      T      R     |  L      T      R
______________________________________________________________________________
Volume                      11     294    42       267    413    5
Peak-Hour Factor, PHF       0.92   0.92   0.92     0.92   0.92   0.92
Hourly Flow Rate, HFR       11     319    45       290    448    5
Percent Heavy Vehicles      0      --     --       0      --     --
Median Type/Storage         Raised curb          / 2
RT Channelized?                          No
Lanes                          0   1    1             1   1    0
Configuration                   LT     R               L      TR
Upstream Signal?                   No                     No
______________________________________________________________________________
Minor Street:  Approach       Westbound               Eastbound
               Movement     7      8      9     |  10     11     12
                            L      T      R     |  L      T      R
______________________________________________________________________________
Volume                      52     20     212      1      2      14
Peak Hour Factor, PHF       0.92   0.92   0.92     0.92   0.92   0.92
Hourly Flow Rate, HFR       56     21     230      1      2      15
Percent Heavy Vehicles      0      0      0        0      0      0
Percent Grade (%)                  0                      0
Flared Approach:  Exists?/Storage               /              No     /
Lanes                          0   1    1            0    1    0
Configuration                   LT     R                  LTR
______________________________________________________________________________

__________________Delay, Queue Length, and Level of Service___________________
Approach            NB     SB       Westbound              Eastbound
Movement            1      4   |  7      8      9     |  10     11     12
Lane Config         LT     L   |  LT            R     |         LTR
______________________________________________________________________________
v (vph)             11     290    77            230             18
C(m) (vph)          1118   1206   190           726             374
v/c                 0.01   0.24   0.41          0.32            0.05
95% queue length    0.03   0.94   1.81          1.36            0.15
Control Delay       8.3    8.9    36.3          12.2            15.1
LOS                  A      A      E             B               C
Approach Delay                           18.3                   15.1
Approach LOS                              C                      C
______________________________________________________________________________
```

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                HCS+: Unsignalized Intersections Release 5.2
Phone:                                         Fax:
E-Mail:

______________________TWO-WAY STOP CONTROL(TWSC) ANALYSIS_____________________

Analyst:              DK
Agency/Co.:           RBF
Date Performed:       7/23/2007
Analysis Time Period: Afternoon Peak Hour
Intersection:         Miraleste/Via Colinita
Jurisdiction:         RPV
Units: U. S. Customary
Analysis Year:        2012 Without Project
Project ID:  Marymount
East/West Street:     Via Colinita
North/South Street:   Miraleste
Intersection Orientation: NS                Study period (hrs):  0.25

________________________Vehicle Volumes and Adjustments_______________________
Major Street Movements      1      2      3      4      5      6
                            L      T      R      L      T      R
______________________________________________________________________________
Volume                     11     294    42     267    413    5
Peak-Hour Factor, PHF      0.92   0.92   0.92   0.92   0.92   0.92
Peak-15 Minute Volume      3      80     11     73     112    1
Hourly Flow Rate, HFR      11     319    45     290    448    5
Percent Heavy Vehicles     0      --     --     0      --     --
Median Type/Storage         Raised curb          / 2
RT Channelized?                          No
Lanes                          0   1    1             1   1    0
Configuration                   LT     R               L      TR
Upstream Signal?                   No                     No
______________________________________________________________________________
Minor Street Movements      7      8      9      10     11     12
                            L      T      R      L      T      R
______________________________________________________________________________
Volume                     52     20     212    1      2      14
Peak Hour Factor, PHF      0.92   0.92   0.92   0.92   0.92   0.92
Peak-15 Minute Volume      14     5      58     0      1      4
Hourly Flow Rate, HFR      56     21     230    1      2      15
Percent Heavy Vehicles     0      0      0      0      0      0
Percent Grade (%)                 0                    0
Flared Approach:  Exists?/Storage               /              No     /
RT Channelized?                          No
Lanes                          0   1    1            0    1    0
Configuration                   LT     R                  LTR
______________________________________________________________________________

______________________Pedestrian Volumes and Adjustments______________________
Movements                    13     14     15     16
______________________________________________________________________________
Flow (ped/hr)                0      0      0      0
Lane Width (ft)              12.0   12.0   12.0   12.0
Walking Speed (ft/sec)       4.0    4.0    4.0    4.0
Percent Blockage             0      0      0      0
______________________________________________________________________________
```

Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 319 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | 0.000 | | 0.000 | |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 453 | 364 | 1380 | 1374 | 319 | 1519 | 1416 | 450 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 341 | 1039 | 341 | 1033 | 1030 | 489 | 1030 | 386 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 319 | 450 |
| Potential Capacity | 726 | 613 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 726 | 613 |
| Probability of Queue free St. | 0.68 | 0.98 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 364 | 453 |
| Potential Capacity | 1206 | 1118 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1206 | 1118 |
| Probability of Queue free St. | 0.76 | 0.99 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1374 | 1416 |
| Potential Capacity | 147 | 139 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 0.75 |
| Movement Capacity | 110 | 104 |
| Probability of Queue free St. | 0.93 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1380 | 1519 |
| Potential Capacity | 123 | 98 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.74 | 0.70 |
| Maj. L, Min T Adj. Imp Factor. | 0.80 | 0.77 |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.52 |
| Movement Capacity | 96 | 51 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 341 | 1030 |
| Potential Capacity | 642 | 313 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.76 |
| Movement Capacity | 634 | 238 |
| Probability of Queue free St. | 0.97 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 1033 | 386 |
| Potential Capacity | 312 | 614 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.76 | 0.99 |
| Movement Capacity | 237 | 607 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1374 | 1416 |
| Potential Capacity | 147 | 139 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 0.75 |
| Movement Capacity | 110 | 104 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 4.52 | 0.63 |
| C t | 210 | 201 |
| Probability of Queue free St. | 0.93 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 341 | 1030 |
| Potential Capacity | 678 | 284 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.76 |
| Movement Capacity | 670 | 216 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 1039 | 489 |
| Potential Capacity | 281 | 564 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.73 | 0.65 |
| Movement Capacity | 206 | 368 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1380 | 1519 |
| Potential Capacity | 123 | 98 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.74 | 0.70 |
| Maj. L, Min T Adj. Imp Factor. | 0.80 | 0.77 |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.52 |
| Movement Capacity | 96 | 51 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 5.80 | 6.11 |
| C t | 183 | 73 |

Worksheet 8-Shared Lane Calculations

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume (vph) | 56 | 21 | 230 | 1 | 2 | 15 |
| Movement Capacity (vph) | 183 | 210 | 726 | 73 | 201 | 613 |
| Shared Lane Capacity (vph) | 190 | | | | 374 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| C sep | 183 | 210 | 726 | 73 | 201 | 613 |
| Volume | 56 | 21 | 230 | 1 | 2 | 15 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 190 | | | | 374 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 11 | 290 | 77 | | 230 | | 18 | |
| C(m) (vph) | 1118 | 1206 | 190 | | 726 | | 374 | |
| v/c | 0.01 | 0.24 | 0.41 | | 0.32 | | 0.05 | |
| 95% queue length | 0.03 | 0.94 | 1.81 | | 1.36 | | 0.15 | |
| Control Delay | 8.3 | 8.9 | 36.3 | | 12.2 | | 15.1 | |
| LOS | A | A | E | | B | | C | |
| Approach Delay | | | | 18.3 | | | 15.1 | |
| Approach LOS | | | | C | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.99 | 0.76 |
| v(il), Volume for stream 2 or 5 | 319 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.3 | 8.9 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.1 | |

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
         FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                      SATURDAY (11:00-1:00) PEAK HOUR
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
*******************************************************************************
Average Delay (sec/veh):     15.2       Worst Case Level Of Service: E[ 36.5]
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  161   123   296  158     0     0    0     0   127    0   259
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  161   123   296  158     0     0    0     0   127    0   259
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
Cumulative:      0    3    17    17    1     0     0    0     0    17    0    17
Initial Fut:     0  164   140   313  159     0     0    0     0   144    0   276
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  178   152   340  173     0     0    0     0   157    0   300
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  178   152   340  173     0     0    0     0   157    0   300
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   330 xxxx xxxxx  xxxx xxxx xxxxx  1108 xxxx   254
Potent Cap.: xxxx xxxx xxxxx  1240 xxxx xxxxx  xxxx xxxx xxxxx   234 xxxx   789
Move Cap.:   xxxx xxxx xxxxx  1240 xxxx xxxxx  xxxx xxxx xxxxx   185 xxxx   789
Volume/Cap:  xxxx xxxx  xxxx  0.27 xxxx  xxxx  xxxx xxxx  xxxx  0.85 xxxx  0.38
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.1 xxxx xxxxx  xxxx xxxx xxxxx   6.1 xxxx   1.8
Control Del:xxxxx xxxx xxxxx   9.0 xxxx xxxxx xxxxx xxxx xxxxx  82.9 xxxx  12.3
LOS by Move:    *    *     *     A    *     *     *    *     *     F    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      xxxxxx           xxxxxx           xxxxxx            36.5
ApproachLOS:         *                *                *                E
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```





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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
         FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                      SATURDAY (11:00-1:00) PEAK HOUR
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
*******************************************************************************
Cycle (sec):           100              Critical Vol./Cap.(X):         0.264
Loss Time (sec):        10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:          24              Level Of Service:                  A
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:      0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  0  1  0   0  1  0  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    3     4    65    0    17    19  143     3     1  106    53
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    3     4    65    0    17    19  143     3     1  106    53
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
Cumulative:      0    0     0    17    0     0     0    8     0     0    6    17
Initial Fut:     0    3     4    82    0    17    19  151     3     1  112    70
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0    3     4    89    0    18    21  164     3     1  122    76
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:     0    3     4    89    0    18    21  164     3     1  122    76
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:     0    3     4    89    0    18    21  164     3     1  122    76
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.00 0.43  0.57  1.00 0.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:      0  686   914  1600    0  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.00 0.00  0.00  0.06 0.00  0.01  0.01 0.10  0.00  0.00 0.08  0.05
Crit Moves:           ****        ****                   ****        ****
*******************************************************************************
```

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
          FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF RPV
                        SATURDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      2.7       Worst Case Level Of Service: D[ 31.8]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    30    0    70    75  406     0     0  412    55
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    30    0    70    75  406     0     0  412    55
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Cumulative:     0    0     0     1    0    12    14  289     0     0  324     3
Initial Fut:    0    0     0    31    0    82    89  695     0     0  736    58
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0    34    0    89    97  755     0     0  800    63
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    34    0    89    97  755     0     0  800    63
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1749 xxxx   800   863 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    96 xxxx   388   788 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    87 xxxx   388   788 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.39 xxxx  0.23  0.12 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.5 xxxx   0.9   0.4 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  71.0 xxxx  17.0  10.2 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     F    *     C     B    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx             31.8            xxxxxx           xxxxxx
ApproachLOS:         *                D                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.2

## TWO-WAY STOP CONTROL SUMMARY

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Saturday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS    Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 3 | 276 | 51 | 193 | 292 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 3 | 299 | 55 | 209 | 317 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 0 | 8 | 136 | 0 | 4 | 0 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 0 | 8 | 147 | 0 | 4 | 0 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 3 | 209 | 8 | | 147 | | 4 | |
| C(m) (vph) | 1247 | 1216 | 320 | | 745 | | 297 | |
| v/c | 0.00 | 0.17 | 0.03 | | 0.20 | | 0.01 | |
| 95% queue length | 0.01 | 0.62 | 0.08 | | 0.73 | | 0.04 | |
| Control Delay | 7.9 | 8.6 | 16.5 | | 11.0 | | 17.3 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 11.3 | | | 17.3 | |
| Approach LOS | | | | B | | | C | |

HCS+: Unsignalized Intersections Release 5.2
Phone:    Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: DK
Agency/Co.: RBF
Date Performed: 7/23/2007
Analysis Time Period: Saturday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 Without Project
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: Miraleste Dr
Intersection Orientation: NS    Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 3 | 276 | 51 | 193 | 292 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 1 | 75 | 14 | 52 | 79 | 2 |
| Hourly Flow Rate, HFR | 3 | 299 | 55 | 209 | 317 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 0 | 8 | 136 | 0 | 4 | 0 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 0 | 2 | 37 | 0 | 1 | 0 |
| Hourly Flow Rate, HFR | 0 | 8 | 147 | 0 | 4 | 0 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 299 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 324 | 354 | 1045 | 1047 | 299 | 1148 | 1098 | 320 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 305 | 740 | 305 | 742 | 738 | 410 | 738 | 360 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 299 | 320 |
| Potential Capacity | 745 | 725 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 745 | 725 |
| Probability of Queue free St. | 0.80 | 1.00 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 354 | 324 |
| Potential Capacity | 1216 | 1247 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1216 | 1247 |
| Probability of Queue free St. | 0.83 | 1.00 |
| Maj L-Shared Prob Q free St. | | 1.00 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1047 | 1098 |
| Potential Capacity | 230 | 215 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.83 |
| Movement Capacity | 190 | 178 |
| Probability of Queue free St. | 0.98 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1045 | 1148 |
| Potential Capacity | 209 | 177 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.81 | 0.81 |
| Maj. L, Min T Adj. Imp Factor. | 0.86 | 0.85 |
| Cap. Adj. factor due to Impeding mvmnt | 0.86 | 0.68 |
| Movement Capacity | 179 | 121 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 305 | 738 |
| Potential Capacity | 666 | 427 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.83 |
| Movement Capacity | 664 | 354 |
| Probability of Queue free St. | 0.99 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 742 | 360 |
| Potential Capacity | 425 | 630 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 1.00 |
| Movement Capacity | 352 | 628 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1047 | 1098 |
| Potential Capacity | 230 | 215 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.83 |
| Movement Capacity | 190 | 178 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.98 | 0.73 |
| C t | 320 | 297 |
| Probability of Queue free St. | 0.98 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 305 | 738 |
| Potential Capacity | 709 | 413 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.83 |
| Movement Capacity | 707 | 342 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 740 | 410 |
| Potential Capacity | 412 | 623 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.79 |
| Movement Capacity | 337 | 493 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1045 | 1148 |
| Potential Capacity | 209 | 177 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.81 | 0.81 |
| Maj. L, Min T Adj. Imp Factor. | 0.86 | 0.85 |
| Cap. Adj. factor due to Impeding mvmnt | 0.86 | 0.68 |
| Movement Capacity | 179 | 121 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.41 | 1.36 |
| C t | 308 | 233 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | 0 | 8 | 147 | 0 | 4 | 0 |
| Movement Capacity (vph) | 308 | 320 | 745 | 233 | 297 | 725 |
| Shared Lane Capacity (vph) | 320 | | | | 297 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | 308 | 320 | 745 | 233 | 297 | 725 |
| Volume | 0 | 8 | 147 | 0 | 4 | 0 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 320 | | | | 297 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 3 | 209 | 8 | | 147 | | 4 | |
| C(m) (vph) | 1247 | 1216 | 320 | | 745 | | 297 | |
| v/c | 0.00 | 0.17 | 0.03 | | 0.20 | | 0.01 | |
| 95% queue length | 0.01 | 0.62 | 0.08 | | 0.73 | | 0.04 | |
| Control Delay | 7.9 | 8.6 | 16.5 | | 11.0 | | 17.3 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 11.3 | | | 17.3 | |
| Approach LOS | | | | B | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 1.00 | 0.83 |
| v(il), Volume for stream 2 or 5 | 299 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 1.00 | |
| d(M,LT), Delay for stream 1 or 4 | 7.9 | 8.6 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.0 | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF LOS ANGELES
AM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #7 WESTERN AVENUE/CAPITOL DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.074 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 180 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 0 1 0 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 13 | 1332 | 208 | 132 | 907 | 85 | 132 | 74 | 44 | 190 | 53 | 165 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 14 | 1391 | 217 | 138 | 947 | 89 | 138 | 77 | 46 | 198 | 55 | 172 |
| Added Vol: | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 1 | 1 | 0 |
| Cumulative: | 1 | 96 | 39 | 52 | 113 | 2 | 3 | 9 | 0 | 48 | 7 | 63 |
| Initial Fut: | 15 | 1487 | 256 | 190 | 1061 | 95 | 142 | 86 | 46 | 247 | 63 | 235 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 16 | 1616 | 278 | 206 | 1153 | 103 | 154 | 94 | 50 | 269 | 69 | 256 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1616 | 278 | 206 | 1153 | 103 | 154 | 94 | 50 | 269 | 69 | 256 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 16 | 1616 | 278 | 206 | 1153 | 103 | 154 | 94 | 50 | 269 | 69 | 256 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.62 | 0.38 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 886 | 539 | 1425 | 1425 | 1425 | 1425 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.57 | 0.20 | 0.14 | 0.40 | 0.07 | 0.17 | 0.17 | 0.04 | 0.19 | 0.05 | 0.18 |
| Crit Volume: | | 808 | | 206 | | | | 248 | | 269 | | |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF LOS ANGELES
AM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #8 WESTERN AVENUE/CRESTWOOD STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.858 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 140 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Split Phase | | | Split Phase | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 0 1 0 | | | 1 0 0 1 0 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 93 | 1394 | 149 | 23 | 1107 | 128 | 179 | 31 | 104 | 83 | 10 | 25 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 97 | 1455 | 156 | 24 | 1156 | 134 | 187 | 32 | 109 | 87 | 10 | 26 |
| Added Vol: | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 23 | 86 | 15 | 15 | 98 | 25 | 26 | 8 | 23 | 15 | 7 | 15 |
| Initial Fut: | 120 | 1541 | 171 | 39 | 1256 | 159 | 213 | 40 | 132 | 102 | 17 | 41 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 131 | 1675 | 185 | 42 | 1365 | 172 | 231 | 44 | 143 | 110 | 19 | 45 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 131 | 1675 | 185 | 42 | 1365 | 172 | 231 | 44 | 143 | 110 | 19 | 45 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 131 | 1675 | 185 | 42 | 1365 | 172 | 231 | 44 | 143 | 110 | 19 | 45 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 0.23 | 0.77 | 1.00 | 0.30 | 0.70 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 1425 | 335 | 1090 | 1425 | 425 | 1000 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.59 | 0.13 | 0.03 | 0.48 | 0.12 | 0.16 | 0.13 | 0.13 | 0.08 | 0.04 | 0.04 |
| Crit Volume: | | 838 | | 42 | | | 231 | | | 110 | | |
| Crit Moves: | | **** | | **** | | | **** | | | **** | | |

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
      FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF LOS ANGELES
                                 AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         1.516
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        180              Level Of Service:                  F
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted       Prot+Permit        Permitted       Prot+Permit
Rights:             Ovl            Include           Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  1  1  0    1  0  0  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       6 1612   635   189 1193    20    60  402    32   360  211   176
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:    6 1683   663   197 1245    21    63  420    33   376  220   184
Added Vol:      0    0     0     0    0     2     0    0     0     0    1     0
Cumulative:     0   64     0    18   90    14     9    0     0     0    0    15
Initial Fut:    6 1747   663   215 1335    37    72  420    33   376  221   199
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     7 1899   721   234 1452    40    78  456    36   409  241   216
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    7 1899   721   234 1452    40    78  456    36   409  241   216
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    7 1899   721   234 1452    40    78  456    36   409  241   216
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 1.95  0.05  1.00 0.93  0.07  1.00 1.00  1.00
Final Sat.:  1375 2750  1375  1375 2676    74  1375 1274   101  1375 1375  1375
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.69  0.52  0.17 0.54  0.54  0.06 0.36  0.36  0.30 0.17  0.16
Crit Volume:       949         234                     492         409
Crit Moves:       ****        ****                    ****        ****
*******************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
      FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF LOS ANGELES
                                 AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.659
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:         59              Level Of Service:                  B
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     172  902   103    75  760    29    16  116   115   128  174    76
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:  180  942   108    78  793    30    17  121   120   134  182    79
Added Vol:      0    0     0     0    0     0     0    0     0     0    1     0
Cumulative:     0   50     0    10   65     2     2    0     0     0    0    11
Initial Fut:  180  992   108    88  858    32    19  121   120   134  183    90
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   195 1078   117    96  933    35    20  132   131   145  199    98
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  195 1078   117    96  933    35    20  132   131   145  199    98
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  195 1078   117    96  933    35    20  132   131   145  199    98
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1425  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14 0.38  0.08  0.07 0.33  0.02  0.01 0.09  0.09  0.10 0.14  0.07
Crit Volume:  195                    467               132         145
Crit Moves:  ****                   ****              ****        ****
*******************************************************************************
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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF LOS ANGELES
AM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #11 WESTERN AVENUE/WEST 25TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.814 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 108 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Ovl | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 2 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 27 | 156 | 24 | 112 | 131 | 508 | 540 | 215 | 34 | 48 | 355 | 274 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 28 | 163 | 25 | 117 | 137 | 530 | 564 | 224 | 35 | 50 | 371 | 286 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 |
| Cumulative: | 0 | 3 | 0 | 15 | 2 | 42 | 31 | 108 | 0 | 0 | 93 | 11 |
| Initial Fut: | 28 | 166 | 25 | 132 | 139 | 572 | 595 | 333 | 35 | 50 | 467 | 297 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 31 | 180 | 27 | 143 | 151 | 622 | 646 | 362 | 39 | 54 | 507 | 323 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 31 | 180 | 27 | 143 | 151 | 622 | 646 | 362 | 39 | 54 | 507 | 323 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 31 | 180 | 27 | 143 | 151 | 622 | 711 | 362 | 39 | 54 | 507 | 323 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 2850 | 2850 | 1425 | 1425 | 1425 | 1425 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.06 | 0.02 | 0.10 | 0.05 | 0.44 | 0.25 | 0.13 | 0.03 | 0.04 | 0.36 | 0.23 |
| Crit Volume: | 31 | | | | | 622 | 0 | | | | 507 | |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF LOS ANGELES
PM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #7 WESTERN AVENUE/CAPITOL DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.048 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 180 | Level Of Service: | F |

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| Control: | Protected | Protected | Permitted | Permitted |
| Rights: | Include | Include | Include | Include |
| Min. Green: | 0 0 0 | 0 0 0 | 0 0 0 | 0 0 0 |
| Lanes: | 1 0 2 0 1 | 1 0 2 0 1 | 0 1 0 0 1 | 1 0 1 0 1 |

| Volume Module: | NB L | NB T | NB R | SB L | SB T | SB R | EB L | EB T | EB R | WB L | WB T | WB R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Vol: | 75 | 1098 | 86 | 185 | 1294 | 50 | 76 | 65 | 30 | 153 | 104 | 162 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 78 | 1146 | 90 | 193 | 1351 | 52 | 79 | 68 | 31 | 160 | 109 | 169 |
| Added Vol: | 0 | 1 | 0 | 0 | 1 | 3 | 2 | 1 | 0 | 1 | 1 | 0 |
| Cumulative: | 4 | 155 | 75 | 97 | 82 | 1 | 1 | 22 | 0 | 99 | 20 | 63 |
| Initial Fut: | 82 | 1302 | 165 | 290 | 1434 | 56 | 82 | 91 | 31 | 260 | 130 | 232 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 89 | 1416 | 179 | 315 | 1559 | 61 | 90 | 99 | 34 | 282 | 141 | 252 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 89 | 1416 | 179 | 315 | 1559 | 61 | 90 | 99 | 34 | 282 | 141 | 252 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 89 | 1416 | 179 | 315 | 1559 | 61 | 90 | 99 | 34 | 282 | 141 | 252 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.48 | 0.52 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 677 | 748 | 1425 | 1425 | 1425 | 1425 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.50 | 0.13 | 0.22 | 0.55 | 0.04 | 0.13 | 0.13 | 0.02 | 0.20 | 0.10 | 0.18 |
| Crit Volume: | | 708 | | 315 | | | | 188 | | 282 | | |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF LOS ANGELES
PM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #8 WESTERN AVENUE/CRESTWOOD STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.893 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 180 | Level Of Service: | D |

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| Control: | Permitted | Permitted | Split Phase | Split Phase |
| Rights: | Include | Include | Include | Include |
| Min. Green: | 0 0 0 | 0 0 0 | 0 0 0 | 0 0 0 |
| Lanes: | 1 0 2 0 1 | 1 0 2 0 1 | 1 0 0 1 0 | 1 0 0 1 0 |

| Volume Module: | NB L | NB T | NB R | SB L | SB T | SB R | EB L | EB T | EB R | WB L | WB T | WB R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Vol: | 47 | 1197 | 302 | 50 | 1246 | 117 | 89 | 49 | 45 | 194 | 82 | 61 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 49 | 1250 | 315 | 52 | 1301 | 122 | 93 | 51 | 47 | 203 | 86 | 64 |
| Added Vol: | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 31 | 128 | 39 | 39 | 92 | 32 | 31 | 19 | 30 | 40 | 20 | 40 |
| Initial Fut: | 80 | 1379 | 354 | 91 | 1395 | 154 | 124 | 70 | 77 | 243 | 106 | 104 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 87 | 1499 | 385 | 99 | 1516 | 168 | 135 | 76 | 84 | 264 | 115 | 113 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 87 | 1499 | 385 | 99 | 1516 | 168 | 135 | 76 | 84 | 264 | 115 | 113 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 87 | 1499 | 385 | 99 | 1516 | 168 | 135 | 76 | 84 | 264 | 115 | 113 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 0.48 | 0.52 | 1.00 | 0.50 | 0.50 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 1425 | 679 | 746 | 1425 | 719 | 706 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.53 | 0.27 | 0.07 | 0.53 | 0.12 | 0.09 | 0.11 | 0.11 | 0.19 | 0.16 | 0.16 |
| Crit Volume: | | 749 | | 99 | | | | | 160 | 264 | | |
| Crit Moves: | | **** | | **** | | | | | **** | **** | | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF LOS ANGELES
PM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #9 WESTERN AVENUE/1ST STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.438 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 180 | Level Of Service: | F |

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| Control: | Permitted | Prot+Permit | Permitted | Prot+Permit |
| Rights: | Ovl | Include | Include | Ovl |
| Min. Green: | 0 0 0 | 0 0 0 | 0 0 0 | 0 0 0 |
| Lanes: | 1 0 2 0 1 | 1 0 1 1 0 | 1 0 0 1 0 | 1 0 1 0 1 |

| | NB L | NB T | NB R | SB L | SB T | SB R | EB L | EB T | EB R | WB L | WB T | WB R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 36 | 1259 | 215 | 178 | 1458 | 61 | 42 | 184 | 21 | 714 | 276 | 156 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 38 | 1314 | 224 | 186 | 1522 | 64 | 44 | 192 | 22 | 745 | 288 | 163 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 |
| Cumulative: | 0 | 116 | 0 | 25 | 111 | 18 | 18 | 0 | 0 | 0 | 0 | 26 |
| Initial Fut: | 38 | 1430 | 224 | 211 | 1633 | 84 | 63 | 192 | 22 | 745 | 289 | 189 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 41 | 1555 | 244 | 229 | 1775 | 91 | 68 | 209 | 24 | 810 | 314 | 205 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 41 | 1555 | 244 | 229 | 1775 | 91 | 68 | 209 | 24 | 810 | 314 | 205 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 41 | 1555 | 244 | 229 | 1775 | 91 | 68 | 209 | 24 | 810 | 314 | 205 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.90 | 0.10 | 1.00 | 0.90 | 0.10 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2711 | 139 | 1425 | 1279 | 146 | 1425 | 1425 | 1425 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.55 | 0.17 | 0.16 | 0.65 | 0.65 | 0.05 | 0.16 | 0.16 | 0.57 | 0.22 | 0.14 |
| Crit Volume: | | 777 | | 229 | | | | | 233 | 810 | | |
| Crit Moves: | | **** | | **** | | | | | **** | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF LOS ANGELES
PM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.868 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 152 | Level Of Service: | D |

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| Control: | Protected | Protected | Permitted | Permitted |
| Rights: | Include | Include | Include | Include |
| Min. Green: | 0 0 0 | 0 0 0 | 0 0 0 | 0 0 0 |
| Lanes: | 1 0 2 0 1 | 1 0 2 0 1 | 1 0 1 0 1 | 1 0 1 0 1 |

| | NB L | NB T | NB R | SB L | SB T | SB R | EB L | EB T | EB R | WB L | WB T | WB R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 150 | 668 | 65 | 75 | 1123 | 53 | 40 | 171 | 222 | 166 | 122 | 52 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Cumulative: | 0 | 78 | 0 | 23 | 76 | 5 | 5 | 0 | 0 | 0 | 0 | 23 |
| Initial Fut: | 150 | 746 | 65 | 98 | 1199 | 58 | 45 | 171 | 222 | 166 | 123 | 75 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 186 | 242 | 180 | 134 | 82 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 186 | 242 | 180 | 134 | 82 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 186 | 242 | 180 | 134 | 82 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.28 | 0.05 | 0.07 | 0.46 | 0.04 | 0.03 | 0.13 | 0.17 | 0.13 | 0.09 | 0.06 |
| Crit Volume: | 163 | | | | 652 | | | | 242 | 180 | | |
| Crit Moves: | **** | | | | **** | | | | **** | **** | | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CITY OF LOS ANGELES
PM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #11 WESTERN AVENUE/WEST 25TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.805 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 102 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Permitted | | | Permitted | | | Protected | | | Protected | |
| Rights: | | Include | | | Ovl | | | Include | | | Include | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 2 0 2 0 1 | | | 1 0 1 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 54 | 106 | 55 | 206 | 215 | 369 | 477 | 306 | 35 | 71 | 290 | 176 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 56 | 111 | 57 | 215 | 224 | 385 | 498 | 319 | 37 | 74 | 303 | 184 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 |
| Cumulative: | 0 | 1 | 0 | 15 | 1 | 49 | 47 | 135 | 0 | 0 | 163 | 16 |
| Initial Fut: | 56 | 112 | 57 | 230 | 225 | 434 | 545 | 455 | 37 | 74 | 468 | 200 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 61 | 121 | 62 | 250 | 245 | 472 | 592 | 495 | 40 | 81 | 508 | 217 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 61 | 121 | 62 | 250 | 245 | 472 | 592 | 495 | 40 | 81 | 508 | 217 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 61 | 121 | 62 | 250 | 245 | 472 | 652 | 495 | 40 | 81 | 508 | 217 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 2850 | 2850 | 1425 | 1425 | 1425 | 1425 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.04 | 0.18 | 0.09 | 0.33 | 0.23 | 0.17 | 0.03 | 0.06 | 0.36 | 0.15 |
| Crit Volume: | | | 62 | 250 | | | 326 | | | | 508 | |
| Crit Moves: | | | **** | **** | | | **** | | | | **** | |

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------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
                                AM PEAK HOUR
------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
******************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
******************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        0.754
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):     18.3
Optimal Cycle:       62             Level Of Service:                B
******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  1  1  0   1  0  1  1  0   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      59 1382    21   16  878    15   65   21   249   81   47    46
Growth Adj:  1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04
Initial Bse:   62 1443    22   17  917    16   68   22   260   85   49    48
Added Vol:      0    1     0    0    5     0    0    0     0    0    0     0
Cumulative:     0  165     0    2  175     2    3    0     0    0    0     3
Initial Fut:   62 1609    22   19 1097    18   71   22   260   85   49    51
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92
PHF Volume:    67 1749    24   20 1192    19   77   24   283   92   53    55
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   67 1749    24   20 1192    19   77   24   283   92   53    55
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   67 1749    24   20 1192    19   77   24   283   92   53    55
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.95 0.95  0.95 0.95 0.95  0.95 0.65 0.65  0.85 0.73 0.73  0.85
Lanes:       1.00 1.97  0.03 1.00 1.97  0.03 0.76 0.24  1.00 0.63 0.37  1.00
Final Sat.:  1805 3554    48 1805 3546    57  943  292  1615  880  511  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.49  0.49 0.01 0.34  0.34 0.08 0.08  0.17 0.10 0.10  0.03
Crit Moves:       ****       ****                       ****
Green/Cycle: 0.07 0.65  0.65 0.01 0.60  0.60 0.23 0.23  0.23 0.23 0.23  0.23
Volume/Cap:  0.56 0.75  0.75 0.75 0.56  0.56 0.35 0.35  0.75 0.45 0.45  0.15
Delay/Veh:   51.1 13.3  13.3 124.0 12.3 12.3 32.8 32.8  44.1 33.9 33.9  30.7
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:  51.1 13.3  13.3 124.0 12.3 12.3 32.8 32.8  44.1 33.9 33.9  30.7
LOS by Move:    D    B     B    F    B     B    C    C     D    C    C     C
HCM2kAvgQ:      3   21    21    2   12    12    3    3    10    4    4     1
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
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------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
                                AM PEAK HOUR
------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
******************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
******************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        0.968
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):     34.9
Optimal Cycle:      156             Level Of Service:                C
******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   0  1  0  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      13 1332   208  132  907    85  132   74    44  190   53   165
Growth Adj:  1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04
Initial Bse:   14 1391   217  138  947    89  138   77    46  198   55   172
Added Vol:      0    0     0    0    1     4    1    0     0    1    1     0
Cumulative:     1   96    39   52  113     2    3    9     0   48    7    63
Initial Fut:   15 1487   256  190 1061    95  142   86    46  247   63   235
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92
PHF Volume:    16 1616   278  206 1153   103  154   94    50  269   69   256
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   16 1616   278  206 1153   103  154   94    50  269   69   256
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   16 1616   278  206 1153   103  154   94    50  269   69   256
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.95 0.95  0.85 0.95 0.95  0.85 0.76 0.76  0.85 0.46 1.00  0.85
Lanes:       1.00 2.00  1.00 1.00 2.00  1.00 0.62 0.38  1.00 1.00 1.00  1.00
Final Sat.:  1805 3610  1615 1805 3610  1615  900  548  1615  868 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.45  0.17 0.11 0.32  0.06 0.17 0.17  0.03 0.31 0.04  0.16
Crit Moves:       ****       ****                                 ****
Green/Cycle: 0.02 0.46  0.46 0.12 0.56  0.56 0.32 0.32  0.32 0.32 0.32  0.32
Volume/Cap:  0.57 0.97  0.37 0.97 0.57  0.11 0.54 0.54  0.10 0.97 0.11  0.50
Delay/Veh:   73.1 41.4  17.8 96.4 14.3  10.2 29.1 29.1  24.0 78.7 24.1  28.2
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:  73.1 41.4  17.8 96.4 14.3  10.2 29.1 29.1  24.0 78.7 24.1  28.2
LOS by Move:    E    D     B    F    B     B    C    C     C    E    C     C
HCM2kAvgQ:      1   32     6   10   12     1    7    7     1   13    1     7
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.764
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):       17.2
Optimal Cycle:       64              Level Of Service:                  B
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Permitted        Permitted       Split Phase      Split Phase
Rights:         Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  2  0  1   1  0  0  1  0   1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      93 1394   149    23 1107   128   179   31   104    83   10    25
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   97 1455   156    24 1156   134   187   32   109    87   10    26
Added Vol:      0    0     0     0    2     0     0    0     0     0    0     0
Cumulative:    23   86    15    15   98    25    26    8    23    15    7    15
Initial Fut:  120 1541   171    39 1256   159   213   40   132   102   17    41
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   131 1675   185    42 1365   172   231   44   143   110   19    45
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  131 1675   185    42 1365   172   231   44   143   110   19    45
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  131 1675   185    42 1365   172   231   44   143   110   19    45
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.14 0.95  0.85  0.08 0.95  0.85  0.95 0.89  0.89  0.95 0.90  0.90
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.23  0.77  1.00 0.30  0.70
Final Sat.:   262 3610  1615   148 3610  1615  1805  395  1287  1805  507  1194
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.50 0.46  0.11  0.29 0.38  0.11  0.13 0.11  0.11  0.06 0.04  0.04
Crit Moves:  ****                              ****             ****
Green/Cycle: 0.65 0.65  0.65  0.65 0.65  0.65  0.17 0.17  0.17  0.08 0.08  0.08
Volume/Cap:  0.76 0.71  0.18  0.44 0.58  0.16  0.76 0.66  0.66  0.76 0.47  0.47
Delay/Veh:   30.3 12.3   6.9  11.7 10.1   6.9  50.7 44.7  44.7  66.2 46.5  46.5
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  30.3 12.3   6.9  11.7 10.1   6.9  50.7 44.7  44.7  66.2 46.5  46.5
LOS by Move:    C    B     A     B    B     A     D    D     D     E    D     D
HCM2kAvgQ:      5   18     2     1   13     2     9    7     7     5    2     2
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         1.187
Loss Time (sec):     10 (Y+R=4.0 sec) Average Delay (sec/veh):       86.4
Optimal Cycle:      180              Level Of Service:                  F
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Permitted       Prot+Permit       Permitted       Prot+Permit
Rights:           Ovl            Include          Include            Ovl
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       1  0  2  0  1   1  0  1  1  0   1  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       6 1612   635   189 1193    20    60  402    32   360  211   176
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:    6 1683   663   197 1245    21    63  420    33   376  220   184
Added Vol:      0    0     0     0    0     2     0    0     0     0    1     0
Cumulative:     0   64     0    18   90    14     9    0     0     0    0    15
Initial Fut:    6 1747   663   215 1335    37    72  420    33   376  221   199
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     7 1899   721   234 1452    40    78  456    36   409  241   216
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    7 1899   721   234 1452    40    78  456    36   409  241   216
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    7 1899   721   234 1452    40    78  456    36   409  241   216
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.95  0.85  0.33 0.95  0.95  0.95 0.99  0.99  0.71 1.00  0.85
Lanes:       1.00 2.00  1.00  1.00 1.95  0.05  1.00 0.93  0.07  1.00 1.00  1.00
Final Sat.:  1805 3610  1615   631 3499    97  1805 1741   139  1351 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.53  0.45  0.37 0.41  0.41  0.04 0.26  0.26  0.30 0.13  0.13
Crit Moves:       ****        ****                   ****       ****
Green/Cycle: 0.00 0.41  0.59  0.51 0.51  0.51  0.10 0.21  0.21  0.29 0.29  0.39
Volume/Cap:  0.81 1.27  0.75  0.90 0.81  0.81  0.44 1.27  1.27  1.03 0.44  0.34
Delay/Veh:  245.2  157  18.5  57.8 23.3  23.3  44.3  181 180.6  84.7 29.7  21.9
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh: 245.2  157  18.5  57.8 23.3  23.3  44.3  181 180.6  84.7 29.7  21.9
LOS by Move:    F    F     B     E    C     C     D    F     F     F    C     C
HCM2kAvgQ:      1   58    18    10   22    22     3   30    30    19    6     5
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.551 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 22.2 |
| Optimal Cycle: | 40 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 172 | 902 | 103 | 75 | 760 | 29 | 16 | 116 | 115 | 128 | 174 | 76 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 180 | 942 | 108 | 78 | 793 | 30 | 17 | 121 | 120 | 134 | 182 | 79 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Cumulative: | 0 | 50 | 0 | 10 | 65 | 2 | 2 | 0 | 0 | 0 | 0 | 11 |
| Initial Fut: | 180 | 992 | 108 | 88 | 858 | 32 | 19 | 121 | 120 | 134 | 183 | 90 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 132 | 131 | 145 | 199 | 98 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 132 | 131 | 145 | 199 | 98 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 132 | 131 | 145 | 199 | 98 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.46 | 1.00 | 0.85 | 0.59 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 876 | 1900 | 1615 | 1121 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.30 | 0.07 | 0.05 | 0.26 | 0.02 | 0.02 | 0.07 | 0.08 | 0.13 | 0.10 | 0.06 |
| Crit Moves: | **** | | | | **** | | | | | **** | | |
| Green/Cycle: | 0.20 | 0.56 | 0.56 | 0.10 | 0.47 | 0.47 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| Volume/Cap: | 0.55 | 0.53 | 0.13 | 0.53 | 0.55 | 0.05 | 0.10 | 0.29 | 0.34 | 0.55 | 0.44 | 0.26 |
| Delay/Veh: | 38.1 | 13.8 | 10.3 | 45.7 | 19.4 | 14.4 | 30.2 | 31.8 | 32.4 | 36.1 | 33.4 | 31.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 38.1 | 13.8 | 10.3 | 45.7 | 19.4 | 14.4 | 30.2 | 31.8 | 32.4 | 36.1 | 33.4 | 31.5 |
| LOS by Move: | D | B | B | D | B | B | C | C | C | D | C | C |
| HCM2kAvgQ: | 6 | 11 | 2 | 4 | 11 | 1 | 1 | 3 | 4 | 5 | 5 | 3 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 WESTERN AVENUE/WEST 25TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.724 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 27.3 |
| Optimal Cycle: | 57 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Ovl | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 2 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 27 | 156 | 24 | 112 | 131 | 508 | 544 | 215 | 34 | 48 | 355 | 274 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 28 | 163 | 25 | 117 | 137 | 530 | 568 | 224 | 35 | 50 | 371 | 286 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 |
| Cumulative: | 0 | 3 | 0 | 16 | 2 | 41 | 31 | 108 | 0 | 0 | 93 | 11 |
| Initial Fut: | 28 | 166 | 25 | 133 | 139 | 571 | 599 | 333 | 35 | 50 | 467 | 297 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 31 | 180 | 27 | 144 | 151 | 621 | 651 | 362 | 39 | 54 | 507 | 323 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 31 | 180 | 27 | 144 | 151 | 621 | 651 | 362 | 39 | 54 | 507 | 323 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 31 | 180 | 27 | 144 | 151 | 621 | 651 | 362 | 39 | 54 | 507 | 323 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.65 | 0.95 | 0.85 | 0.63 | 0.95 | 0.85 | 0.92 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1235 | 3610 | 1615 | 1201 | 3610 | 1615 | 3502 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.05 | 0.02 | 0.12 | 0.04 | 0.38 | 0.19 | 0.10 | 0.02 | 0.03 | 0.27 | 0.20 |
| Crit Moves: | | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.53 | 0.26 | 0.48 | 0.48 | 0.14 | 0.37 | 0.37 |
| Volume/Cap: | 0.09 | 0.18 | 0.06 | 0.44 | 0.15 | 0.72 | 0.72 | 0.21 | 0.05 | 0.21 | 0.72 | 0.54 |
| Delay/Veh: | 27.1 | 27.8 | 26.8 | 30.9 | 27.5 | 20.9 | 36.9 | 15.0 | 13.8 | 38.1 | 30.9 | 25.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 27.1 | 27.8 | 26.8 | 30.9 | 27.5 | 20.9 | 36.9 | 15.0 | 13.8 | 38.1 | 30.9 | 25.9 |
| LOS by Move: | C | C | C | C | C | C | D | B | B | D | C | C |
| HCM2kAvgQ: | 1 | 2 | 1 | 4 | 2 | 16 | 11 | 3 | 1 | 2 | 15 | 8 |

Note: Queue reported is the number of cars per lane.

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.647 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 10.3 |
| Optimal Cycle: | 48 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Protected | | | Protected | | | Permitted | | | Permitted | |
| Rights: | | Include | | | Include | | | Include | | | Include | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | | 1 0 1 1 0 | | | 1 0 1 1 0 | | | 0 1 0 0 1 | | | 0 1 0 0 1 | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 62 | 1239 | 63 | 49 | 1375 | 16 | 31 | 13 | 72 | 53 | 4 | 19 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 65 | 1294 | 66 | 51 | 1436 | 17 | 32 | 14 | 75 | 55 | 4 | 20 |
| Added Vol: | 0 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 0 | 224 | 0 | 1 | 175 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Initial Fut: | 65 | 1520 | 66 | 52 | 1615 | 18 | 33 | 14 | 75 | 55 | 4 | 21 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 70 | 1652 | 71 | 57 | 1755 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 70 | 1652 | 71 | 57 | 1755 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 70 | 1652 | 71 | 57 | 1755 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.95 | 0.95 | 0.73 | 0.73 | 0.85 | 0.69 | 0.69 | 0.85 |
| Lanes: | 1.00 | 1.92 | 0.08 | 1.00 | 1.98 | 0.02 | 0.71 | 0.29 | 1.00 | 0.93 | 0.07 | 1.00 |
| Final Sat.: | 1805 | 3439 | 149 | 1805 | 3564 | 39 | 983 | 400 | 1615 | 1224 | 92 | 1615 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.48 | 0.48 | 0.03 | 0.49 | 0.49 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.01 |
| Crit Moves: | **** | | | | **** | | | | **** | | | |
| Green/Cycle: | 0.06 | 0.77 | 0.77 | 0.05 | 0.76 | 0.76 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| Volume/Cap: | 0.65 | 0.62 | 0.62 | 0.62 | 0.65 | 0.65 | 0.47 | 0.47 | 0.65 | 0.63 | 0.63 | 0.18 |
| Delay/Veh: | 58.7 | 5.5 | 5.5 | 59.2 | 6.1 | 6.1 | 47.3 | 47.3 | 55.8 | 56.4 | 56.4 | 43.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 58.7 | 5.5 | 5.5 | 59.2 | 6.1 | 6.1 | 47.3 | 47.3 | 55.8 | 56.4 | 56.4 | 43.8 |
| LOS by Move: | E | A | A | E | A | A | D | D | E | E | E | D |
| HCM2kAvgQ: | 3 | 13 | 13 | 3 | 14 | 14 | 2 | 2 | 4 | 3 | 3 | 1 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 WESTERN AVENUE/CAPITOL DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.942 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 35.9 |
| Optimal Cycle: | 131 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Protected | | | Protected | | | Permitted | | | Permitted | |
| Rights: | | Include | | | Include | | | Include | | | Include | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 0 1 0 0 1 | | | 1 0 1 0 1 | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 75 | 1098 | 86 | 185 | 1294 | 50 | 76 | 65 | 30 | 153 | 104 | 162 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 78 | 1146 | 90 | 193 | 1351 | 52 | 79 | 68 | 31 | 160 | 109 | 169 |
| Added Vol: | 0 | 1 | 0 | 0 | 1 | 3 | 2 | 1 | 0 | 1 | 1 | 0 |
| Cumulative: | 4 | 155 | 75 | 97 | 82 | 1 | 1 | 22 | 0 | 99 | 20 | 63 |
| Initial Fut: | 82 | 1302 | 165 | 290 | 1434 | 56 | 82 | 91 | 31 | 260 | 130 | 232 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 89 | 1416 | 179 | 315 | 1559 | 61 | 90 | 99 | 34 | 282 | 141 | 252 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 89 | 1416 | 179 | 315 | 1559 | 61 | 90 | 99 | 34 | 282 | 141 | 252 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 89 | 1416 | 179 | 315 | 1559 | 61 | 90 | 99 | 34 | 282 | 141 | 252 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.77 | 0.77 | 0.85 | 0.53 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.48 | 0.52 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 698 | 770 | 1615 | 1005 | 1900 | 1615 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.39 | 0.11 | 0.17 | 0.43 | 0.04 | 0.13 | 0.13 | 0.02 | 0.28 | 0.07 | 0.16 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.06 | 0.42 | 0.42 | 0.19 | 0.54 | 0.54 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |
| Volume/Cap: | 0.80 | 0.94 | 0.27 | 0.94 | 0.80 | 0.07 | 0.43 | 0.43 | 0.07 | 0.94 | 0.25 | 0.52 |
| Delay/Veh: | 78.5 | 40.1 | 19.4 | 74.4 | 21.1 | 11.0 | 28.9 | 28.9 | 25.2 | 71.0 | 26.8 | 30.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 78.5 | 40.1 | 19.4 | 74.4 | 21.1 | 11.0 | 28.9 | 28.9 | 25.2 | 71.0 | 26.8 | 30.2 |
| LOS by Move: | E | D | B | E | C | B | C | C | C | E | C | C |
| HCM2kAvgQ: | 5 | 27 | 4 | 14 | 22 | 1 | 5 | 5 | 1 | 13 | 3 | 7 |

Note: Queue reported is the number of cars per lane.

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 WESTERN AVENUE/CRESTWOOD STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.843 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 21.9 |
| Optimal Cycle: | 83 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Split Phase | | | Split Phase | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 0 1 0 | | | 1 0 0 1 0 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 47 | 1197 | 302 | 50 | 1246 | 117 | 89 | 49 | 45 | 194 | 82 | 61 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 49 | 1250 | 315 | 52 | 1301 | 122 | 93 | 51 | 47 | 203 | 86 | 64 |
| Added Vol: | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 31 | 128 | 39 | 39 | 92 | 32 | 31 | 19 | 30 | 40 | 20 | 40 |
| Initial Fut: | 80 | 1379 | 354 | 91 | 1395 | 154 | 124 | 70 | 77 | 243 | 106 | 104 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 87 | 1499 | 385 | 99 | 1516 | 168 | 135 | 76 | 84 | 264 | 115 | 113 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 87 | 1499 | 385 | 99 | 1516 | 168 | 135 | 76 | 84 | 264 | 115 | 113 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 87 | 1499 | 385 | 99 | 1516 | 168 | 135 | 76 | 84 | 264 | 115 | 113 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.10 | 0.95 | 0.85 | 0.10 | 0.95 | 0.85 | 0.95 | 0.92 | 0.92 | 0.95 | 0.93 | 0.93 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 0.48 | 0.52 | 1.00 | 0.50 | 0.50 |
| Final Sat.: | 182 | 3610 | 1615 | 190 | 3610 | 1615 | 1805 | 835 | 917 | 1805 | 888 | 872 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.48 | 0.42 | 0.24 | 0.52 | 0.42 | 0.10 | 0.07 | 0.09 | 0.09 | 0.15 | 0.13 | 0.13 |
| Crit Moves: | | | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.11 | 0.11 | 0.11 | 0.17 | 0.17 | 0.17 |
| Volume/Cap: | 0.77 | 0.67 | 0.39 | 0.84 | 0.68 | 0.17 | 0.69 | 0.84 | 0.84 | 0.84 | 0.75 | 0.75 |
| Delay/Veh: | 41.1 | 13.2 | 9.8 | 54.8 | 13.4 | 8.2 | 52.9 | 71.3 | 71.3 | 58.5 | 49.0 | 49.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 41.1 | 13.2 | 9.8 | 54.8 | 13.4 | 8.2 | 52.9 | 71.3 | 71.3 | 58.5 | 49.0 | 49.0 |
| LOS by Move: | D | B | A | D | B | A | D | E | E | E | D | D |
| HCM2kAvgQ: | 4 | 16 | 6 | 5 | 17 | 2 | 5 | 7 | 7 | 11 | 8 | 8 |

Note: Queue reported is the number of cars per lane.

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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 WESTERN AVENUE/1ST STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.227 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 117.6 |
| Optimal Cycle: | 180 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Prot+Permit | | | Permitted | | | Prot+Permit | | |
| Rights: | Ovl | | | Include | | | Include | | | Ovl | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 1 1 0 | | | 1 0 0 1 0 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 36 | 1259 | 215 | 178 | 1458 | 61 | 42 | 184 | 21 | 714 | 276 | 156 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 38 | 1314 | 224 | 186 | 1522 | 64 | 44 | 192 | 22 | 745 | 288 | 163 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 |
| Cumulative: | 0 | 116 | 0 | 25 | 111 | 18 | 18 | 0 | 0 | 0 | 0 | 26 |
| Initial Fut: | 38 | 1430 | 224 | 211 | 1633 | 84 | 63 | 192 | 22 | 745 | 289 | 189 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 41 | 1555 | 244 | 229 | 1775 | 91 | 68 | 209 | 24 | 810 | 314 | 205 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 41 | 1555 | 244 | 229 | 1775 | 91 | 68 | 209 | 24 | 810 | 314 | 205 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 41 | 1555 | 244 | 229 | 1775 | 91 | 68 | 209 | 24 | 810 | 314 | 205 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.40 | 0.94 | 0.94 | 0.56 | 0.99 | 0.99 | 0.74 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.90 | 0.10 | 1.00 | 0.90 | 0.10 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 761 | 3410 | 175 | 1074 | 1680 | 192 | 1415 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.43 | 0.15 | 0.30 | 0.52 | 0.52 | 0.06 | 0.12 | 0.12 | 0.57 | 0.17 | 0.13 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.02 | 0.34 | 0.70 | 0.43 | 0.43 | 0.43 | 0.10 | 0.10 | 0.10 | 0.46 | 0.46 | 0.56 |
| Volume/Cap: | 1.22 | 1.26 | 0.22 | 0.89 | 1.22 | 1.22 | 0.64 | 1.26 | 1.26 | 1.12 | 0.36 | 0.23 |
| Delay/Veh: | 278.8 | 155 | 5.4 | 47.6 | 136 | 135.6 | 56.1 | 197 | 196.9 | 97.7 | 18.0 | 11.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 278.8 | 155 | 5.4 | 47.6 | 136 | 135.6 | 56.1 | 197 | 196.9 | 97.7 | 18.0 | 11.4 |
| LOS by Move: | F | F | A | D | F | F | E | F | F | F | B | B |
| HCM2kAvgQ: | 4 | 48 | 3 | 10 | 54 | 54 | 3 | 16 | 16 | 40 | 6 | 3 |

Note: Queue reported is the number of cars per lane.

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
                                PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
*******************************************************************************
Cycle (sec):         100            Critical Vol./Cap.(X):         0.709
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):        24.5
Optimal Cycle:        55            Level Of Service:                  C
*******************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     144  640    62     72 1076    51     38  164   213   159  117    50
Growth Adj:  1.04 1.04  1.04   1.04 1.04  1.04   1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:  150  668    65     75 1123    53     40  171   222   166  122    52
Added Vol:      0    0     0      0    0     0      0    0     0     0    1     0
Cumulative:     0   78     0     23   76     5      5    0     0     0    0    23
Initial Fut:  150  746    65     98 1199    58     45  171   222   166  123    75
User Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92   0.92 0.92  0.92   0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   163  811    70    107 1304    63     49  186   242   180  134    82
Reduct Vol:     0    0     0      0    0     0      0    0     0     0    0     0
Reduced Vol:  163  811    70    107 1304    63     49  186   242   180  134    82
PCE Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  163  811    70    107 1304    63     49  186   242   180  134    82
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900   1900 1900  1900   1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.95  0.85   0.95 0.95  0.85   0.60 1.00  0.85  0.51 1.00  0.85
Lanes:       1.00 2.00  1.00   1.00 2.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1805 3610  1615   1805 3610  1615   1142 1900  1615   967 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.09 0.22  0.04   0.06 0.36  0.04   0.04 0.10  0.15  0.19 0.07  0.05
Crit Moves:  ****                   ****                          ****
Green/Cycle: 0.13 0.50  0.50   0.13 0.51  0.51   0.26 0.26  0.26  0.26 0.26  0.26
Volume/Cap:  0.71 0.45  0.09   0.45 0.71  0.08   0.16 0.37  0.57  0.71 0.27  0.19
Delay/Veh:   51.6 16.0  12.9   41.3 20.2  12.6   28.6 30.6  33.8  42.3 29.5  28.8
User DelAdj: 1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  51.6 16.0  12.9   41.3 20.2  12.6   28.6 30.6  33.8  42.3 29.5  28.8
LOS by Move:    D    B     B      D    C     B      C    C     C     D    C     C
HCM2kAvgQ:      6    8     1      4   17     1      1    5     7     7    3     2
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CALTRANS
                                PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
*******************************************************************************
Cycle (sec):         100            Critical Vol./Cap.(X):         0.703
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):        27.0
Optimal Cycle:        54            Level Of Service:                  C
*******************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Protected        Protected
Rights:           Include            Ovl             Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    2  0  2  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54  106    55    206  215   369    477  306    35    71  290   176
Growth Adj:  1.04 1.04  1.04   1.04 1.04  1.04   1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   56  111    57    215  224   385    498  319    37    74  303   184
Added Vol:      0    0     0      0    0     0      0    1     0     0    2     0
Cumulative:     0    1     0     15    1    49     47  135     0     0  163    16
Initial Fut:   56  112    57    230  225   434    545  455    37    74  468   200
User Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92   0.92 0.92  0.92   0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    61  121    62    250  245   472    592  495    40    81  508   217
Reduct Vol:     0    0     0      0    0     0      0    0     0     0    0     0
Reduced Vol:   61  121    62    250  245   472    592  495    40    81  508   217
PCE Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   61  121    62    250  245   472    592  495    40    81  508   217
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900   1900 1900  1900   1900 1900  1900  1900 1900  1900
Adjustment:  0.55 0.95  0.85   0.67 0.95  0.85   0.92 0.95  0.85  0.95 1.00  0.85
Lanes:       1.00 2.00  1.00   1.00 2.00  1.00   2.00 2.00  1.00  1.00 1.00  1.00
Final Sat.:  1036 3610  1615   1275 3610  1615   3502 3610  1615  1805 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.03  0.04   0.20 0.07  0.29   0.17 0.14  0.02  0.04 0.27  0.13
Crit Moves:                    ****              ****                   ****
Green/Cycle: 0.28 0.28  0.28   0.28 0.28  0.52   0.24 0.47  0.47  0.15 0.38  0.38
Volume/Cap:  0.21 0.12  0.14   0.70 0.24  0.56   0.70 0.29  0.05  0.29 0.70  0.35
Delay/Veh:   28.0 27.0  27.2   38.6 28.0  17.2   37.4 16.5  14.5  38.2 29.3  22.5
User DelAdj: 1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  28.0 27.0  27.2   38.6 28.0  17.2   37.4 16.5  14.5  38.2 29.3  22.5
LOS by Move:    C    C     C      D    C     B      D    B     B     D    C     C
HCM2kAvgQ:      2    1     1      8    3    10     10    5     1     2   14     5
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CMP
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.901
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: E

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 1 1 0 | | | 1 0 1 1 0 | | | 0 1 0 0 1 | | | 0 1 0 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 59 | 1382 | 21 | 16 | 878 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 62 | 1443 | 22 | 17 | 917 | 16 | 68 | 22 | 260 | 85 | 49 | 48 |
| Added Vol: | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 0 | 165 | 0 | 2 | 175 | 2 | 3 | 0 | 0 | 0 | 0 | 3 |
| Initial Fut: | 62 | 1609 | 22 | 19 | 1097 | 18 | 71 | 22 | 260 | 85 | 49 | 51 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 67 | 1749 | 24 | 20 | 1192 | 19 | 77 | 24 | 283 | 92 | 53 | 55 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 67 | 1749 | 24 | 20 | 1192 | 19 | 77 | 24 | 283 | 92 | 53 | 55 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 67 | 1749 | 24 | 20 | 1192 | 19 | 77 | 24 | 283 | 92 | 53 | 55 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.97 | 0.03 | 1.00 | 1.97 | 0.03 | 0.76 | 0.24 | 1.00 | 0.63 | 0.37 | 1.00 |
| Final Sat.: | 1600 | 3157 | 43 | 1600 | 3149 | 51 | 1222 | 378 | 1600 | 1013 | 587 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.55 | 0.55 | 0.01 | 0.38 | 0.38 | 0.05 | 0.06 | 0.18 | 0.06 | 0.09 | 0.03 |
| Crit Moves: | | **** | | **** | | | | | **** | **** | | |

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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CMP
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 0.687
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 1 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 172 | 902 | 103 | 75 | 760 | 29 | 16 | 116 | 115 | 128 | 174 | 76 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 180 | 942 | 108 | 78 | 793 | 30 | 17 | 121 | 120 | 134 | 182 | 79 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Cumulative: | 0 | 50 | 0 | 10 | 65 | 2 | 2 | 0 | 0 | 0 | 0 | 11 |
| Initial Fut: | 180 | 992 | 108 | 88 | 858 | 32 | 19 | 121 | 120 | 134 | 183 | 90 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 132 | 131 | 145 | 199 | 98 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 132 | 131 | 145 | 199 | 98 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 132 | 131 | 145 | 199 | 98 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.12 | 0.34 | 0.07 | 0.06 | 0.29 | 0.02 | 0.01 | 0.08 | 0.08 | 0.09 | 0.12 | 0.06 |
| Crit Moves: | **** | | | | **** | | | **** | | **** | | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CMP
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.787
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 1 1 0 | | | 1 0 1 1 0 | | | 0 1 0 0 1 | | | 0 1 0 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 62 | 1239 | 63 | 49 | 1375 | 16 | 31 | 13 | 72 | 53 | 4 | 19 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 65 | 1294 | 66 | 51 | 1436 | 17 | 32 | 14 | 75 | 55 | 4 | 20 |
| Added Vol: | 0 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 0 | 224 | 0 | 1 | 175 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Initial Fut: | 65 | 1520 | 66 | 52 | 1615 | 18 | 33 | 14 | 75 | 55 | 4 | 21 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 70 | 1652 | 71 | 57 | 1755 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 70 | 1652 | 71 | 57 | 1755 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 70 | 1652 | 71 | 57 | 1755 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.92 | 0.08 | 1.00 | 1.98 | 0.02 | 0.71 | 0.29 | 1.00 | 0.93 | 0.07 | 1.00 |
| Final Sat.: | 1600 | 3067 | 133 | 1600 | 3165 | 35 | 1137 | 463 | 1600 | 1488 | 112 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.54 | 0.54 | 0.04 | 0.55 | 0.55 | 0.02 | 0.03 | 0.05 | 0.04 | 0.04 | 0.01 |
| Crit Moves: | **** | | | | **** | | | | **** | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITHOUT PROJECT CONDITIONS - CMP
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 0.873
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 88 Level Of Service: D

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 1 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 150 | 668 | 65 | 75 | 1123 | 53 | 40 | 171 | 222 | 166 | 122 | 52 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Cumulative: | 0 | 78 | 0 | 23 | 76 | 5 | 5 | 0 | 0 | 0 | 0 | 23 |
| Initial Fut: | 150 | 746 | 65 | 98 | 1199 | 58 | 45 | 171 | 222 | 166 | 123 | 75 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 186 | 242 | 180 | 134 | 82 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 186 | 242 | 180 | 134 | 82 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 186 | 242 | 180 | 134 | 82 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.25 | 0.04 | 0.07 | 0.41 | 0.04 | 0.03 | 0.12 | 0.15 | 0.11 | 0.08 | 0.05 |
| Crit Moves: | **** | | | | **** | | | | **** | **** | | |

# Forecast Year 2012 With Project Conditions

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                  AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Average Delay (sec/veh):    257.3      Worst Case Level Of Service: F[766.9]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  397   180   379  351     0     0    0     0   156    0   416
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  397   180   379  351     0     0    0     0   156    0   416
Added Vol:       0    5    35     0   16     0     0    0     0   105    0     0
Cumulative:      0    1     4     4    3     0     0    0     0     4    0     4
Initial Fut:     0  403   219   383  370     0     0    0     0   265    0   420
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  438   238   416  402     0     0    0     0   288    0   457
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  438   238   416  402     0     0    0     0   288    0   457
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   676 xxxx xxxxx  xxxx xxxx xxxxx  1792 xxxx   557
Potent Cap.: xxxx xxxx xxxxx   925 xxxx xxxxx  xxxx xxxx xxxxx    90 xxxx   534
Move Cap.:   xxxx xxxx xxxxx   925 xxxx xxxxx  xxxx xxxx xxxxx    58 xxxx   534
Volume/Cap:  xxxx xxxx  xxxx  0.45 xxxx  xxxx  xxxx xxxx  xxxx  4.95 xxxx  0.86
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   2.4 xxxx xxxxx  xxxx xxxx xxxxx  32.1 xxxx   9.1
Control Del:xxxxx xxxx xxxxx  12.0 xxxx xxxxx xxxxx xxxx xxxxx  1920 xxxx  39.7
LOS by Move:    *    *     *     B    *     *     *    *     *     F    *     E
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx            xxxxxx           xxxxxx            766.9
ApproachLOS:        *                 *                *                 F
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                  AM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.606
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         40              Level Of Service:                   B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:      0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0   0  1  0  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        6    0    15   214    6    37    48  185    31   139  117   208
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     6    0    15   214    6    37    48  185    31   139  117   208
Added Vol:      14    0    40     0    0     0     0    0    41   122    0     0
Cumulative:      0    0     0     4    0     0     0    6     0     0    8     4
Initial Fut:    20    0    55   218    6    37    48  191    72   261  125   212
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     22    0    60   237    7    40    52  208    78   284  136   230
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    22    0    60   237    7    40    52  208    78   284  136   230
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    22    0    60   237    7    40    52  208    78   284  136   230
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.27 0.00  0.73  0.97 0.03  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:    427    0  1173  1557   43  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.01 0.00  0.05  0.15 0.15  0.03  0.03 0.13  0.05  0.18 0.08  0.14
Crit Moves:                ****  ****                   ****        ****
********************************************************************************
```

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
*******************************************************************************
Average Delay (sec/veh):      4.5       Worst Case Level Of Service: E[ 36.1]
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   27    0    74  188  384     0     0  466    52
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0   27    0    74  188  384     0     0  466    52
Added Vol:      0    0     0   11    0     3    8    0     0     0    0    32
Cumulative:     0    0     0    3    0    12   10  136     0     0  127     1
Initial Fut:    0    0     0   41    0    89  206  520     0     0  593    85
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0   45    0    97  224  565     0     0  645    92
Reduct Vol:     0    0     0    0    0     0    0    0     0     0    0     0
FinalVolume:    0    0     0   45    0    97  224  565     0     0  645    92
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1658 xxxx   645   737 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   109 xxxx   476   878 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    87 xxxx   476   878 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.51 xxxx  0.20  0.26 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   2.2 xxxx   0.8   1.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  83.0 xxxx  14.5  10.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     F    *     B     B    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             36.1            xxxxxx           xxxxxx
ApproachLOS:        *                 E                *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #5 MIRALESTE DRIVE/1ST STREET
*******************************************************************************
Average Delay (sec/veh):      6.0       Worst Case Level Of Service: C[ 15.0]
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled       Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  284   103  342  163     0    0    0     0    26    0   164
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  284   103  342  163     0    0    0     0    26    0   164
Added Vol:      0    8     0   11    3     0    0    0     0     0    0    32
Cumulative:     0    2     0    2    2     0    0    0     0     0    0     2
Initial Fut:    0  294   103  355  168     0    0    0     0    26    0   198
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  320   112  386  183     0    0    0     0    28    0   215
Reduct Vol:     0    0     0    0    0     0    0    0     0     0    0     0
FinalVolume:    0  320   112  386  183     0    0    0     0    28    0   215
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   432 xxxx xxxxx  xxxx xxxx xxxxx  1274 xxxx   320
Potent Cap.: xxxx xxxx xxxxx  1139 xxxx xxxxx  xxxx xxxx xxxxx   186 xxxx   726
Move Cap.:   xxxx xxxx xxxxx  1139 xxxx xxxxx  xxxx xxxx xxxxx   137 xxxx   726
Volume/Cap:  xxxx xxxx  xxxx  0.34 xxxx  xxxx  xxxx xxxx  xxxx  0.21 xxxx  0.30
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.5 xxxx xxxxx  xxxx xxxx xxxxx   0.7 xxxx   1.2
Control Del:xxxxx xxxx xxxxx   9.8 xxxx xxxxx xxxxx xxxx xxxxx  37.9 xxxx  12.0
LOS by Move:    *    *     *     A    *     *     *    *     *     E    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx            xxxxxx             15.0
ApproachLOS:        *                *                 *                 C
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: AM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 WITH PROJECT
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: MIRALESTE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 17 | 422 | 130 | 198 | 426 | 3 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 18 | 458 | 141 | 215 | 463 | 3 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 40 | 14 | 301 | 4 | 4 | 15 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 43 | 15 | 327 | 4 | 4 | 16 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 18 | 215 | 58 | | 327 | | 24 | |
| C(m) (vph) | 1106 | 988 | 218 | | 607 | | 0 | |
| v/c | 0.02 | 0.22 | 0.27 | | 0.54 | | | |
| 95% queue length | 0.05 | 0.83 | 1.03 | | 3.21 | | | |
| Control Delay | 8.3 | 9.7 | 27.4 | | 17.6 | | | |
| LOS | A | A | D | | C | | F | |
| Approach Delay | | | | 19.1 | | | | |
| Approach LOS | | | | C | | | | |

HCS+: Unsignalized Intersections Release 5.21
Phone: Fax:
E-Mail:

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: AM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 WITH PROJECT
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: MIRALESTE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 17 | 422 | 130 | 198 | 426 | 3 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 5 | 115 | 35 | 54 | 116 | 1 |
| Hourly Flow Rate, HFR | 18 | 458 | 141 | 215 | 463 | 3 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 40 | 14 | 301 | 4 | 4 | 15 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 11 | 4 | 82 | 1 | 1 | 4 |
| Hourly Flow Rate, HFR | 43 | 15 | 327 | 4 | 4 | 16 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 458 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 466 | 599 | 1398 | 1390 | 458 | 1630 | 1529 | 464 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 494 | 904 | 494 | 896 | 894 | 736 | 894 | 635 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 458 | 464 |
| Potential Capacity | 607 | 602 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 607 | 602 |
| Probability of Queue free St. | 0.46 | 0.97 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 599 | 466 |
| Potential Capacity | 988 | 1106 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 988 | 1106 |
| Probability of Queue free St. | 0.78 | 0.98 |
| Maj L-Shared Prob Q free St. | | 0.98 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1390 | 1529 |
| Potential Capacity | 144 | 118 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.76 | 0.76 |
| Movement Capacity | 110 | 90 |
| Probability of Queue free St. | 0.94 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1398 | 1630 |
| Potential Capacity | 119 | 82 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.75 | 0.72 |
| Maj. L, Min T Adj. Imp Factor. | 0.81 | 0.78 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.36 |
| Movement Capacity | 93 | 30 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 494 | 894 |
| Potential Capacity | 550 | 362 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.98 | 0.78 |
| Movement Capacity | 538 | 283 |
| Probability of Queue free St. | 0.97 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 896 | 635 |
| Potential Capacity | 362 | 476 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.98 |
| Movement Capacity | 283 | 465 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1390 | 1529 |
| Potential Capacity | 144 | 118 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.76 | 0.76 |
| Movement Capacity | 110 | 90 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 2.76 | 1.21 |
| C t | 239 | 196 |
| Probability of Queue free St. | 0.94 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 494 | 894 |
| Potential Capacity | 561 | 338 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.98 | 0.78 |
| Movement Capacity | 549 | 264 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 904 | 736 |
| Potential Capacity | 334 | 414 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 0.44 |
| Movement Capacity | 251 | 182 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1398 | 1630 |
| Potential Capacity | 119 | 82 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.75 | 0.72 |
| Maj. L, Min T Adj. Imp Factor. | 0.81 | 0.78 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.36 |
| Movement Capacity | 93 | 30 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.26 | -3.71 |
| C t | 212 | 0 |

Worksheet 8-Shared Lane Calculations

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume (vph) | 43 | 15 | 327 | 4 | 4 | 16 |
| Movement Capacity (vph) | 212 | 239 | 607 | 0 | 196 | 602 |
| Shared Lane Capacity (vph) | 218 | | | | 0 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| C sep | 212 | 239 | 607 | 0 | 196 | 602 |
| Volume | 43 | 15 | 327 | 4 | 4 | 16 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 218 | | | | 0 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 18 | 215 | 58 | | 327 | | 24 | |
| C(m) (vph) | 1106 | 988 | 218 | | 607 | | 0 | |
| v/c | 0.02 | 0.22 | 0.27 | | 0.54 | | | |
| 95% queue length | 0.05 | 0.83 | 1.03 | | 3.21 | | | |
| Control Delay | 8.3 | 9.7 | 27.4 | | 17.6 | | | |
| LOS | A | A | D | | C | | F | |
| Approach Delay | | | | 19.1 | | | | |
| Approach LOS | | | | C | | | | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.98 | 0.78 |
| v(il), Volume for stream 2 or 5 | 458 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.98 | |
| d(M,LT), Delay for stream 1 or 4 | 8.3 | 9.7 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.2 | |

```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        0.908
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      104             Level Of Service:                 E
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       1  0  1  1  0    1  0  1  1  0    0  1  0  0  1    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      59 1382    21    16  878    15    65   21   249    81   47    46
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   62 1443    22    17  917    16    68   22   260    85   49    48
Added Vol:      0   22     0     0   65     0     0    0     0     0    0     0
Cumulative:     0  165     0     2  175     2     3    0     0     0    0     3
Initial Fut:   62 1630    22    19 1157    18    71   22   260    85   49    51
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    67 1772    24    20 1257    19    77   24   283    92   53    55
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   67 1772    24    20 1257    19    77   24   283    92   53    55
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   67 1772    24    20 1257    19    77   24   283    92   53    55
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.97  0.03  1.00 1.97  0.03  0.76 0.24  1.00  0.63 0.37  1.00
Final Sat.:  1600 3158    42  1600 3152    48  1222  378  1600  1013  587  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.56  0.56  0.01 0.40  0.40  0.05 0.06  0.18  0.06 0.09  0.03
Crit Moves:       ****        ****                         ****  ****
********************************************************************************
```





```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):        1.077
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180             Level Of Service:                 F
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       1  0  2  0  1    1  0  2  0  1    0  1  0  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      13 1332   208   132  907    85   132   74    44   190   53   165
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   14 1391   217   138  947    89   138   77    46   198   55   172
Added Vol:      0    5     3     0   16    49    16    5     0     8   16     0
Cumulative:     1   96    39    52  113     2     3    9     0    48    7    63
Initial Fut:   15 1492   259   190 1076   140   157   91    46   254   78   235
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    16 1621   282   206 1169   152   170   99    50   276   85   256
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   16 1621   282   206 1169   152   170   99    50   276   85   256
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   16 1621   282   206 1169   152   170   99    50   276   85   256
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.63 0.37  1.00  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1011  589  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.51  0.18  0.13 0.37  0.09  0.11 0.17  0.03  0.17 0.05  0.16
Crit Moves:       ****        ****                  ****        ****
********************************************************************************
```

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
*******************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        0.866
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       86              Level Of Service:                 D
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted         Permitted       Split Phase      Split Phase
Rights:           Include           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  0  1  0    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      93 1394   149    23 1107   128   179   31   104    83   10    25
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   97 1455   156    24 1156   134   187   32   109    87   10    26
Added Vol:      0    8     0     0   24     0     0    0     0     0    0     0
Cumulative:    23   86    15    15   98    25    26    8    23    15    7    15
Initial Fut:  120 1549   171    39 1278   159   213   40   132   102   17    41
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   131 1684   185    42 1389   172   231   44   143   110   19    45
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  131 1684   185    42 1389   172   231   44   143   110   19    45
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  131 1684   185    42 1389   172   231   44   143   110   19    45
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.23  0.77  1.00 0.30  0.70
Final Sat.:  1600 3200  1600  1600 3200  1600  1600  376  1224  1600  477  1123
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.53  0.12  0.03 0.43  0.11  0.14 0.12  0.12  0.07 0.04  0.04
Crit Moves:       ****        ****              ****              ****
*******************************************************************************
```





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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
*******************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        1.465
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180              Level Of Service:                 F
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted       Prot+Permit        Permitted       Prot+Permit
Rights:             Ovl             Include          Include            Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  1  1  0    1  0  0  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       6 1612   635   189 1193    20    60  402    32   360  211   176
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:    6 1683   663   197 1245    21    63  420    33   376  220   184
Added Vol:      0    0     0     0    0    24     8    3     0     0    8     0
Cumulative:     0   64     0    18   90    14     9    0     0     0    0    15
Initial Fut:    6 1747   663   215 1335    59    80  423    33   376  228   199
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     7 1899   721   234 1452    64    87  459    36   409  248   216
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    7 1899   721   234 1452    64    87  459    36   409  248   216
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    7 1899   721   234 1452    64    87  459    36   409  248   216
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 1.92  0.08  1.00 0.93  0.07  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2730   120  1425 1321   104  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.67  0.51  0.16 0.53  0.53  0.06 0.35  0.35  0.29 0.17  0.15
Crit Volume:       949         234                     496         409
Crit Moves:       ****        ****                    ****        ****
*******************************************************************************
```

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                 AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
*******************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):          0.661
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        59             Level Of Service:                   B
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     172  902   103    75  760    29    16  116   115   128  174    76
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:  180  942   108    78  793    30    17  121   120   134  182    79
Added Vol:      0    0     0     0    0     0     0    3     0     0    8     0
Cumulative:     0   50     0    10   65     2     2    0     0     0    0    11
Initial Fut:  180  992   108    88  858    32    19  124   120   134  190    90
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   195 1078   117    96  933    35    20  135   131   145  206    98
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  195 1078   117    96  933    35    20  135   131   145  206    98
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  195 1078   117    96  933    35    20  135   131   145  206    98
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1425  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14 0.38  0.08  0.07 0.33  0.02  0.01 0.09  0.09  0.10 0.14  0.07
Crit Volume:  195                    467              135         145
Crit Moves:  ****                   ****             ****        ****
*******************************************************************************
```





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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                 AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
*******************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):          0.835
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       121             Level Of Service:                   D
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Protected        Protected
Rights:           Include            Ovl           Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    2  0  2  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      27  156    24   112  131   508   544  215    34    48  355   274
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   28  163    25   117  137   530   568  224    35    50  371   286
Added Vol:      0    0     0     0    0     0     0   11     0     0   32     0
Cumulative:     0    3     0    16    2    41    31  108     0     0   93    11
Initial Fut:   28  166    25   133  139   571   599  343    35    50  496   297
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    31  180    27   144  151   621   651  373    39    54  539   323
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   31  180    27   144  151   621   651  373    39    54  539   323
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
FinalVolume:   31  180    27   144  151   621   716  373    39    54  539   323
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  2.00 2.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  2850 2850  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.06  0.02  0.10 0.05  0.44  0.25 0.13  0.03  0.04 0.38  0.23
Crit Volume:   31                           621     0                    539
Crit Moves:  ****                          ****  ****                   ****
*******************************************************************************
```

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---------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                  PM PEAK HOUR
---------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
*********************************************************************************
Average Delay (sec/veh):    300.2      Worst Case Level Of Service: F[715.3]
*********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  138   157   419  200     0     0    0     0   293    0   351
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  138   157   419  200     0     0    0     0   293    0   351
Added Vol:       0   10    63     0    9     0     0    0     0    61    0     0
Cumulative:      0    0    10    10    1     0     0    0     0    10    0    10
Initial Fut:     0  148   230   429  210     0     0    0     0   364    0   361
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  161   250   466  228     0     0    0     0   396    0   392
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  161   250   466  228     0     0    0     0   396    0   392
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   411 xxxx xxxxx  xxxx xxxx xxxxx  1447 xxxx   286
Potent Cap.: xxxx xxxx xxxxx  1159 xxxx xxxxx  xxxx xxxx xxxxx   146 xxxx   758
Move Cap.:   xxxx xxxx xxxxx  1159 xxxx xxxxx  xxxx xxxx xxxxx   100 xxxx   758
Volume/Cap:  xxxx xxxx  xxxx  0.40 xxxx  xxxx  xxxx xxxx  xxxx  3.94 xxxx  0.52
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   2.0 xxxx xxxxx  xxxx xxxx xxxxx  40.6 xxxx   3.0
Control Del:xxxxx xxxx xxxxx  10.2 xxxx xxxxx xxxxx xxxx xxxxx  1410 xxxx  14.7
LOS by Move:    *    *     *     B    *     *     *    *     *     F    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx            xxxxxx            xxxxxx            715.3
ApproachLOS:        *                 *                 *                F
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
```





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---------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                  PM PEAK HOUR
---------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
*********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.451
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         31              Level Of Service:                  A
*********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0   0  1  0  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       33    2    97    71    1    24    22  103    10    30  187   103
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    33    2    97    71    1    24    22  103    10    30  187   103
Added Vol:      24    0    73     0    0     0     0    0    24    70    0     0
Cumulative:      0    0     0    10    0     0     0    4     0     0    5    10
Initial Fut:    57    2   170    81    1    24    22  107    34   100  192   113
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     62    2   185    88    1    26    24  116    37   109  209   123
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    62    2   185    88    1    26    24  116    37   109  209   123
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    62    2   185    88    1    26    24  116    37   109  209   123
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.25 0.01  0.74  0.99 0.01  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:    398   14  1188  1580   20  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.04 0.16  0.16  0.06 0.06  0.02  0.01 0.07  0.02  0.07 0.13  0.08
Crit Moves:        ****        ****                  ****        ****
*********************************************************************************
```

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH

Average Delay (sec/veh): 5.8 Worst Case Level Of Service: E[ 47.5]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | |
| Rights: | | Include | | | Include | | | Include | | | Include | |
| Lanes: | | 0 0 0 0 0 | | | 1 0 0 0 1 | | | 1 0 1 0 0 | | | 0 0 1 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 40 | 0 | 106 | 111 | 549 | 0 | 0 | 391 | 49 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 0 | 40 | 0 | 106 | 111 | 549 | 0 | 0 | 391 | 49 |
| Added Vol: | 0 | 0 | 0 | 19 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 19 |
| Cumulative: | 0 | 0 | 0 | 1 | 0 | 8 | 7 | 173 | 0 | 0 | 204 | 0 |
| Initial Fut: | 0 | 0 | 0 | 60 | 0 | 119 | 123 | 722 | 0 | 0 | 595 | 68 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 0 | 0 | 65 | 0 | 129 | 134 | 785 | 0 | 0 | 647 | 74 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 0 | 0 | 65 | 0 | 129 | 134 | 785 | 0 | 0 | 647 | 74 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 6.4 | xxxx | 6.2 | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 3.5 | xxxx | 3.3 | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 1699 | xxxx | 647 | 721 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 103 | xxxx | 475 | 890 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | 91 | xxxx | 475 | 890 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.72 | xxxx | 0.27 | 0.15 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 3.6 | xxxx | 1.1 | 0.5 | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | 111.2 | xxxx | 15.4 | 9.8 | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | F | * | C | A | * | * | * | * | * |
| Movement: | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | | xxxxxx | | | 47.5 | | | xxxxxx | | | xxxxxx | |
| ApproachLOS: | | * | | | E | | | * | | | * | |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 MIRALESTE DRIVE/1ST STREET

Average Delay (sec/veh): 4.9 Worst Case Level Of Service: C[ 15.3]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Uncontrolled | | | Uncontrolled | | | Stop Sign | | | Stop Sign | |
| Rights: | | Include | | | Include | | | Include | | | Include | |
| Lanes: | | 0 0 1 0 1 | | | 1 0 1 0 0 | | | 0 0 0 0 0 | | | 1 0 0 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 251 | 44 | 199 | 372 | 0 | 0 | 0 | 0 | 44 | 0 | 174 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 251 | 44 | 199 | 372 | 0 | 0 | 0 | 0 | 44 | 0 | 174 |
| Added Vol: | 0 | 5 | 0 | 19 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| Cumulative: | 0 | 5 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Initial Fut: | 0 | 261 | 44 | 223 | 382 | 0 | 0 | 0 | 0 | 44 | 0 | 198 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 284 | 48 | 242 | 415 | 0 | 0 | 0 | 0 | 48 | 0 | 215 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 284 | 48 | 242 | 415 | 0 | 0 | 0 | 0 | 48 | 0 | 215 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | xxxx | 6.2 |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | xxxx | 3.3 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 332 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1184 | xxxx | 284 |
| Potent Cap.: | xxxx | xxxx | xxxxx | 1239 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 211 | xxxx | 760 |
| Move Cap.: | xxxx | xxxx | xxxxx | 1239 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 179 | xxxx | 760 |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.20 | xxxx | xxxx | xxxx | xxxx | xxxx | 0.27 | xxxx | 0.28 |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 0.7 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1.0 | xxxx | 1.2 |
| Control Del: | xxxxx | xxxx | xxxxx | 8.6 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 32.2 | xxxx | 11.6 |
| LOS by Move: | * | * | * | A | * | * | * | * | * | D | * | B |
| Movement: | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | | xxxxxx | | | xxxxxx | | | xxxxxx | | | 15.3 | |
| ApproachLOS: | | * | | | * | | | * | | | C | |

Note: Queue reported is the number of cars per lane.

HCS+: Unsignalized Intersections Release 5.21

## TWO-WAY STOP CONTROL SUMMARY

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: PM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 WITH PROJECT
Project ID: Marymount
East/West Street: Via Colinita
North/South Street:
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 7 | 422 | 69 | 203 | 500 | 2 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 7 | 458 | 74 | 220 | 543 | 2 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 47 | 6 | 255 | 2 | 5 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 51 | 6 | 277 | 2 | 5 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 7 | 220 | 57 | | 277 | | 13 | |
| C(m) (vph) | 1034 | 1046 | 205 | | 607 | | 0 | |
| v/c | 0.01 | 0.21 | 0.28 | | 0.46 | | | |
| 95% queue length | 0.02 | 0.79 | 1.09 | | 2.38 | | | |
| Control Delay | 8.5 | 9.4 | 29.2 | | 15.8 | | | |
| LOS | A | A | D | | C | | F | |
| Approach Delay | | | | 18.1 | | | | |
| Approach LOS | | | | C | | | | |

HCS+: Unsignalized Intersections Release 5.21
Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: PM Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 WITH PROJECT
Project ID: Marymount
East/West Street: Via Colinita
North/South Street:
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 7 | 422 | 69 | 203 | 500 | 2 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 2 | 115 | 19 | 55 | 136 | 1 |
| Hourly Flow Rate, HFR | 7 | 458 | 74 | 220 | 543 | 2 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 47 | 6 | 255 | 2 | 5 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 13 | 2 | 69 | 1 | 1 | 2 |
| Hourly Flow Rate, HFR | 51 | 6 | 277 | 2 | 5 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 458 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5
Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 545 | 532 | 1462 | 1457 | 458 | 1634 | 1530 | 544 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 472 | 990 | 472 | 985 | 984 | 650 | 984 | 546 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 458 | 544 |
| Potential Capacity | 607 | 543 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 607 | 543 |
| Probability of Queue free St. | 0.54 | 0.99 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 532 | 545 |
| Potential Capacity | 1046 | 1034 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1046 | 1034 |
| Probability of Queue free St. | 0.79 | 0.99 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1457 | 1530 |
| Potential Capacity | 131 | 118 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.78 |
| Movement Capacity | 102 | 92 |
| Probability of Queue free St. | 0.97 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1462 | 1634 |
| Potential Capacity | 108 | 82 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.76 | 0.76 |
| Maj. L, Min T Adj. Imp Factor. | 0.82 | 0.82 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.44 |
| Movement Capacity | 87 | 36 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 472 | 984 |
| Potential Capacity | 562 | 329 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.79 |
| Movement Capacity | 557 | 260 |
| Probability of Queue free St. | 0.99 | 0.98 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 985 | 546 |
| Potential Capacity | 329 | 521 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.99 |
| Movement Capacity | 260 | 516 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1457 | 1530 |
| Potential Capacity | 131 | 118 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.78 |
| Movement Capacity | 102 | 92 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.01 | 0.82 |
| C t | 229 | 204 |
| Probability of Queue free St. | 0.97 | 0.98 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 472 | 984 |
| Potential Capacity | 576 | 302 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.79 |
| Movement Capacity | 571 | 238 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 990 | 650 |
| Potential Capacity | 299 | 461 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.77 | 0.53 |
| Movement Capacity | 229 | 246 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1462 | 1634 |
| Potential Capacity | 108 | 82 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.76 | 0.76 |
| Maj. L, Min T Adj. Imp Factor. | 0.82 | 0.82 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.44 |
| Movement Capacity | 87 | 36 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.59 | -20.20 |
| C t | 203 | 0 |

Worksheet 8-Shared Lane Calculations

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume (vph) | 51 | 6 | 277 | 2 | 5 | 6 |
| Movement Capacity (vph) | 203 | 229 | 607 | 0 | 204 | 543 |
| Shared Lane Capacity (vph) | 205 | | | | 0 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| C sep | 203 | 229 | 607 | 0 | 204 | 543 |
| Volume | 51 | 6 | 277 | 2 | 5 | 6 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 205 | | | | 0 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 7 | 220 | 57 | | 277 | | 13 | |
| C(m) (vph) | 1034 | 1046 | 205 | | 607 | | 0 | |
| v/c | 0.01 | 0.21 | 0.28 | | 0.46 | | | |
| 95% queue length | 0.02 | 0.79 | 1.09 | | 2.38 | | | |
| Control Delay | 8.5 | 9.4 | 29.2 | | 15.8 | | | |
| LOS | A | A | D | | C | | F | |
| Approach Delay | | | | 18.1 | | | | |
| Approach LOS | | | | C | | | | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.99 | 0.79 |
| v(il), Volume for stream 2 or 5 | 458 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.5 | 9.4 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.1 | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.799 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 66 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 1 1 0 | | | 1 0 1 1 0 | | | 0 1 0 0 1 | | | 0 1 0 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 62 | 1239 | 63 | 49 | 1375 | 16 | 31 | 13 | 72 | 53 | 4 | 19 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 65 | 1294 | 66 | 51 | 1436 | 17 | 32 | 14 | 75 | 55 | 4 | 20 |
| Added Vol: | 0 | 39 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 0 | 224 | 0 | 1 | 175 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Initial Fut: | 65 | 1557 | 66 | 52 | 1649 | 18 | 33 | 14 | 75 | 55 | 4 | 21 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 70 | 1692 | 71 | 57 | 1792 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 70 | 1692 | 71 | 57 | 1792 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 70 | 1692 | 71 | 57 | 1792 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.92 | 0.08 | 1.00 | 1.98 | 0.02 | 0.71 | 0.29 | 1.00 | 0.93 | 0.07 | 1.00 |
| Final Sat.: | 1600 | 3070 | 130 | 1600 | 3166 | 34 | 1137 | 463 | 1600 | 1488 | 112 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.55 | 0.55 | 0.04 | 0.57 | 0.57 | 0.02 | 0.03 | 0.05 | 0.04 | 0.04 | 0.01 |
| Crit Moves: | **** | | | | **** | | | | **** | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 WESTERN AVENUE/CAPITOL DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.064 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 180 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 0 1 0 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 75 | 1098 | 86 | 185 | 1294 | 50 | 76 | 65 | 30 | 153 | 104 | 162 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 78 | 1146 | 90 | 193 | 1351 | 52 | 79 | 68 | 31 | 160 | 109 | 169 |
| Added Vol: | 0 | 10 | 5 | 0 | 9 | 28 | 29 | 10 | 0 | 5 | 9 | 0 |
| Cumulative: | 4 | 155 | 75 | 97 | 82 | 1 | 1 | 22 | 0 | 99 | 20 | 63 |
| Initial Fut: | 82 | 1311 | 170 | 290 | 1442 | 81 | 109 | 100 | 31 | 264 | 138 | 232 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 89 | 1425 | 185 | 315 | 1567 | 88 | 119 | 109 | 34 | 287 | 150 | 252 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 89 | 1425 | 185 | 315 | 1567 | 88 | 119 | 109 | 34 | 287 | 150 | 252 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 89 | 1425 | 185 | 315 | 1567 | 88 | 119 | 109 | 34 | 287 | 150 | 252 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.52 | 0.48 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 836 | 764 | 1600 | 1600 | 1600 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.45 | 0.12 | 0.20 | 0.49 | 0.06 | 0.07 | 0.14 | 0.02 | 0.18 | 0.09 | 0.16 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                               PM PEAK HOUR
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
********************************************************************************
Cycle (sec):        100            Critical Vol./Cap.(X):        0.900
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      100            Level Of Service:                 D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  0  1  0    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      47 1197   302    50 1246   117    89   49    45   194   82    61
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   49 1250   315    52 1301   122    93   51    47   203   86    64
Added Vol:      0   15     0     0   14     0     0    0     0     0    0     0
Cumulative:    31  128    39    39   92    32    31   19    30    40   20    40
Initial Fut:   80 1393   354    91 1407   154   124   70    77   243  106   104
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    87 1514   385    99 1529   168   135   76    84   264  115   113
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   87 1514   385    99 1529   168   135   76    84   264  115   113
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   87 1514   385    99 1529   168   135   76    84   264  115   113
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.48  0.52  1.00 0.50  0.50
Final Sat.:  1600 3200  1600  1600 3200  1600  1600  763   837  1600  807   793
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.47  0.24  0.06 0.48  0.10  0.08 0.10  0.10  0.16 0.14  0.14
Crit Moves:       ****        ****                          ****  ****
********************************************************************************
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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                               PM PEAK HOUR
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #9 WESTERN AVENUE/1ST STREET
********************************************************************************
Cycle (sec):        100            Critical Vol./Cap.(X):        1.442
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180            Level Of Service:                 F
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted       Prot+Permit       Permitted       Prot+Permit
Rights:            Ovl            Include          Include            Ovl
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  0  1    1  0  1  1  0    1  0  0  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      36 1259   215   178 1458    61    42  184    21   714  276   156
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   38 1314   224   186 1522    64    44  192    22   745  288   163
Added Vol:      0    0     0     0    0    14    15    5     0     0    5     0
Cumulative:     0  116     0    25  111    18    18    0     0     0    0    26
Initial Fut:   38 1430   224   211 1633    96    77  197    22   745  293   189
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    41 1555   244   229 1775   104    84  214    24   810  319   205
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   41 1555   244   229 1775   104    84  214    24   810  319   205
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   41 1555   244   229 1775   104    84  214    24   810  319   205
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 1.89  0.11  1.00 0.90  0.10  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2692   158  1425 1282   143  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.55  0.17  0.16 0.66  0.66  0.06 0.17  0.17  0.57 0.22  0.14
Crit Volume:       777         229                           238   810
Crit Moves:       ****        ****                          ****  ****
********************************************************************************
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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
*******************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.868
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       152              Level Of Service:                  D
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     144  640    62    72 1076    51    38  164   213   159  117    50
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:  150  668    65    75 1123    53    40  171   222   166  122    52
Added Vol:      0    0     0     0    0     0     0    5     0     0    5     0
Cumulative:     0   78     0    23   76     5     5    0     0     0    0    23
Initial Fut:  150  746    65    98 1199    58    45  176   222   166  127    75
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   163  811    70   107 1304    63    49  192   242   180  138    82
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  163  811    70   107 1304    63    49  192   242   180  138    82
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  163  811    70   107 1304    63    49  192   242   180  138    82
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1425  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.28  0.05  0.07 0.46  0.04  0.03 0.13  0.17  0.13 0.10  0.06
Crit Volume:  163                   652                     242   180
Crit Moves:  ****                  ****                    ****  ****
*******************************************************************************
```





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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                PM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
*******************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.818
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       110              Level Of Service:                  D
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Protected        Protected
Rights:           Include            Ovl            Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   2  0  2  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54  106    55   206  215   369   477  306    35    71  290   176
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   56  111    57   215  224   385   498  319    37    74  303   184
Added Vol:      0    0     0     0    0     0     0   19     0     0   19     0
Cumulative:     0    1     0    15    1    49    47  135     0     0  163    16
Initial Fut:   56  112    57   230  225   434   545  473    37    74  485   200
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    61  121    62   250  245   472   592  515    40    81  527   217
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   61  121    62   250  245   472   592  515    40    81  527   217
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
FinalVolume:   61  121    62   250  245   472   652  515    40    81  527   217
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  2.00 2.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  2850 2850  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.04  0.04  0.18 0.09  0.33  0.23 0.18  0.03  0.06 0.37  0.15
Crit Volume:               62   250               326                     527
Crit Moves:              ****  ****              ****                    ****
*******************************************************************************
```

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                         WEEKDAY (11:00-1:00) PEAK HOUR
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Average Delay (sec/veh):    153.4      Worst Case Level Of Service: F[398.2]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  144   161   283  232     0     0    0     0   254    0   220
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  144   161   283  232     0     0    0     0   254    0   220
Added Vol:       0   10    64     0   12     0     0    0     0    79    0     0
Cumulative:      0    1    11    11    3     0     0    0     0    10    0    10
Initial Fut:     0  155   236   294  247     0     0    0     0   343    0   230
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  168   257   320  268     0     0    0     0   373    0   250
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  168   257   320  268     0     0    0     0   373    0   250
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   425 xxxx xxxxx  xxxx xxxx xxxxx  1204 xxxx   297
Potent Cap.: xxxx xxxx xxxxx  1145 xxxx xxxxx  xxxx xxxx xxxxx   205 xxxx   747
Move Cap.:   xxxx xxxx xxxxx  1145 xxxx xxxxx  xxxx xxxx xxxxx   161 xxxx   747
Volume/Cap:  xxxx xxxx  xxxx  0.28 xxxx  xxxx  xxxx xxxx  xxxx  2.32 xxxx  0.33
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.1 xxxx xxxxx  xxxx xxxx xxxxx  31.0 xxxx   1.5
Control Del:xxxxx xxxx xxxxx   9.4 xxxx xxxxx xxxxx xxxx xxxxx 657.0 xxxx  12.2
LOS by Move:     *    *     *     A    *     *     *    *     *     F    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            398.2
ApproachLOS:        *                *                *                F
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```





```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                         WEEKDAY (11:00-1:00) PEAK HOUR
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.478
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        32               Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:      0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0   0  1  0  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       21   15    76    68    6     8    13   94    30    75  126    82
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    21   15    76    68    6     8    13   94    30    75  126    82
Added Vol:      25    0    74     0    0     0     0    0    30    91    0     0
Cumulative:      0    0     0    11    0     0     0    6     0     0    8    10
Initial Fut:    46   15   150    79    6     8    13  100    60   166  134    92
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     50   16   163    86    7     9    14  109    65   180  146   100
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    50   16   163    86    7     9    14  109    65   180  146   100
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    50   16   163    86    7     9    14  109    65   180  146   100
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.22 0.07  0.71  0.93 0.07  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:    349  114  1137  1487  113  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.03 0.14  0.14  0.05 0.06  0.01  0.01 0.07  0.04  0.11 0.09  0.06
Crit Moves:         ****        ****                   ****        ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                         WEEKDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      3.4       Worst Case Level Of Service: C[ 23.4]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    47    0    73    51  336     0     0  315    23
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    47    0    73    51  336     0     0  315    23
Added Vol:      0    0     0    20    0     5     6    0     0     0    0    24
Cumulative:     0    0     0     3    0    13    11  200     0     0  152     1
Initial Fut:    0    0     0    70    0    91    68  536     0     0  467    48
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0    76    0    99    74  583     0     0  508    52
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    76    0    99    74  583     0     0  508    52
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1238 xxxx   508   560 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   196 xxxx   569  1021 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   185 xxxx   569  1021 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.41 xxxx  0.17  0.07 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.8 xxxx   0.6   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  37.4 xxxx  12.7   8.8 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     E    *     B     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx             23.4             xxxxxx           xxxxxx
ApproachLOS:         *                C                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.21

## TWO-WAY STOP CONTROL SUMMARY

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: Weekday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 WITH PROJECT
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: MIRALESTE
Intersection Orientation: NS          Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 6 | 301 | 53 | 222 | 354 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 6 | 327 | 57 | 241 | 384 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 36 | 18 | 267 | 4 | 3 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 39 | 19 | 290 | 4 | 3 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 6 | 241 | 58 | | 290 | | 13 | |
| C(m) (vph) | 1179 | 1186 | 252 | | 719 | | 161 | |
| v/c | 0.01 | 0.20 | 0.23 | | 0.40 | | 0.08 | |
| 95% queue length | 0.02 | 0.76 | 0.87 | | 1.96 | | 0.26 | |
| Control Delay | 8.1 | 8.8 | 23.5 | | 13.3 | | 29.3 | |
| LOS | A | A | C | | B | | D | |
| Approach Delay | | | | 15.0+ | | | 29.3 | |
| Approach LOS | | | | C | | | D | |

HCS+: Unsignalized Intersections Release 5.21

Phone:          Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: Weekday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 WITH PROJECT
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: MIRALESTE
Intersection Orientation: NS          Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 6 | 301 | 53 | 222 | 354 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 2 | 82 | 14 | 60 | 96 | 2 |
| Hourly Flow Rate, HFR | 6 | 327 | 57 | 241 | 384 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 36 | 18 | 267 | 4 | 3 | 6 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 10 | 5 | 73 | 1 | 1 | 2 |
| Hourly Flow Rate, HFR | 39 | 19 | 290 | 4 | 3 | 6 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 327 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 391 | 384 | 1213 | 1212 | 327 | 1392 | 1266 | 388 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 339 | 874 | 339 | 873 | 870 | 522 | 870 | 396 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 327 | 388 |
| Potential Capacity | 719 | 665 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 719 | 665 |
| Probability of Queue free St. | 0.60 | 0.99 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 384 | 391 |
| Potential Capacity | 1186 | 1179 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1186 | 1179 |
| Probability of Queue free St. | 0.80 | 0.99 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1212 | 1266 |
| Potential Capacity | 184 | 171 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.79 |
| Movement Capacity | 146 | 135 |
| Probability of Queue free St. | 0.93 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1213 | 1392 |
| Potential Capacity | 160 | 121 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.78 | 0.74 |
| Maj. L, Min T Adj. Imp Factor. | 0.83 | 0.80 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.47 |
| Movement Capacity | 132 | 57 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 339 | 870 |
| Potential Capacity | 643 | 372 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.80 |
| Movement Capacity | 639 | 296 |
| Probability of Queue free St. | 0.97 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 873 | 396 |
| Potential Capacity | 370 | 607 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.80 | 0.99 |
| Movement Capacity | 295 | 603 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1212 | 1266 |
| Potential Capacity | 184 | 171 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.79 | 0.79 |
| Movement Capacity | 146 | 135 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.45 | 0.71 |
| C t | 266 | 246 |
| Probability of Queue free St. | 0.93 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 339 | 870 |
| Potential Capacity | 680 | 349 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.80 |
| Movement Capacity | 676 | 278 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 874 | 522 |
| Potential Capacity | 347 | 542 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.58 |
| Movement Capacity | 271 | 312 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1213 | 1392 |
| Potential Capacity | 160 | 121 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.78 | 0.74 |
| Maj. L, Min T Adj. Imp Factor. | 0.83 | 0.80 |
| Cap. Adj. factor due to Impeding mvmnt | 0.82 | 0.47 |
| Movement Capacity | 132 | 57 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 4.09 | 15.79 |
| C t | 246 | 67 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | 39 | 19 | 290 | 4 | 3 | 6 |
| Movement Capacity (vph) | 246 | 266 | 719 | 67 | 246 | 665 |
| Shared Lane Capacity (vph) | 252 | | | | 161 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | 246 | 266 | 719 | 67 | 246 | 665 |
| Volume | 39 | 19 | 290 | 4 | 3 | 6 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 252 | | | | 161 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 6 | 241 | 58 | | 290 | | 13 | |
| C(m) (vph) | 1179 | 1186 | 252 | | 719 | | 161 | |
| v/c | 0.01 | 0.20 | 0.23 | | 0.40 | | 0.08 | |
| 95% queue length | 0.02 | 0.76 | 0.87 | | 1.96 | | 0.26 | |
| Control Delay | 8.1 | 8.8 | 23.5 | | 13.3 | | 29.3 | |
| LOS | A | A | C | | B | | D | |
| Approach Delay | | | | 15.0+ | | | 29.3 | |
| Approach LOS | | | | C | | | D | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.99 | 0.80 |
| v(il), Volume for stream 2 or 5 | 327 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.1 | 8.8 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.1 | |

```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                         WEEKDAY (2:00-4:00) PEAK HOUR
-------------------------------------------------------------------------------

                       Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
*******************************************************************************
Average Delay (sec/veh):    172.3       Worst Case Level Of Service: F[525.6]
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  1  0   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  242   197   342  262     0     0    0     0   208    0   278
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  242   197   342  262     0     0    0     0   208    0   278
Added Vol:       0   13    81     0    8     0     0    0     0    51    0     0
Cumulative:      0    1    14    14    3     0     0    0     0    13    0    13
Initial Fut:     0  256   292   356  273     0     0    0     0   272    0   291
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:      0  278   317   387  297     0     0    0     0   296    0   316
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  278   317   387  297     0     0    0     0   296    0   316
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   596 xxxx xxxxx  xxxx xxxx xxxxx  1508 xxxx   437
Potent Cap.: xxxx xxxx xxxxx   991 xxxx xxxxx  xxxx xxxx xxxxx   134 xxxx   624
Move Cap.:   xxxx xxxx xxxxx   991 xxxx xxxxx  xxxx xxxx xxxxx    93 xxxx   624
Volume/Cap:  xxxx xxxx  xxxx  0.39 xxxx  xxxx  xxxx xxxx  xxxx  3.16 xxxx  0.51
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.9 xxxx xxxxx  xxxx xxxx xxxxx  29.1 xxxx   2.9
Control Del:xxxxx xxxx xxxxx  10.9 xxxx xxxxx xxxxx xxxx xxxxx  1070 xxxx  16.6
LOS by Move:     *    *     *     B    *     *     *    *     *     F    *     C
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx            xxxxxx            xxxxxx             525.6
ApproachLOS:          *                 *                 *                 F
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```





```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                         WEEKDAY (2:00-4:00) PEAK HOUR
-------------------------------------------------------------------------------

                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
*******************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.626
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        42               Level Of Service:                  B
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:      0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0   0  1  0  0  1   1  0  1  0  1   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       21    7   116   229    4    52    32  141    21    58  135   143
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    21    7   116   229    4    52    32  141    21    58  135   143
Added Vol:      31    0    94     0    0     0     0    0    20    59    0     0
Cumulative:      0    0     0    14    0     0     0    5     0     0    7    13
Initial Fut:    52    7   210   243    4    52    32  146    41   117  142   156
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     57    8   228   264    4    57    35  159    45   127  154   170
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    57    8   228   264    4    57    35  159    45   127  154   170
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    57    8   228   264    4    57    35  159    45   127  154   170
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.19 0.03  0.78  0.98 0.02  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:    309   42  1249  1574   26  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.04 0.18  0.18  0.17 0.17  0.04  0.02 0.10  0.03  0.08 0.10  0.11
Crit Moves:        ****        ****                   ****        ****
*******************************************************************************
```

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                         WEEKDAY (2:00-4:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):     12.7       Worst Case Level Of Service: F[ 90.9]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    45    0   128   198  510     0     0  350    47
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    45    0   128   198  510     0     0  350    47
Added Vol:      0    0     0    25    0     6     4    0     0     0    0    16
Cumulative:     0    0     0     3    0    11     8  173     0     0  207     1
Initial Fut:    0    0     0    73    0   145   210  683     0     0  557    64
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0    79    0   158   228  742     0     0  605    70
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    79    0   158   228  742     0     0  605    70
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1804 xxxx   605   675 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    88 xxxx   501   926 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    71 xxxx   501   926 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  1.11 xxxx  0.31  0.25 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   6.0 xxxx   1.3   1.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx 240.7 xxxx  15.4  10.2 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     F    *     C     B    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx              90.9            xxxxxx           xxxxxx
ApproachLOS:         *                 F                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.21

## TWO-WAY STOP CONTROL SUMMARY

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: Afternoon Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 WITH PROJECT
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: MIRALESTE
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 L | 2 T | 3 R | 4 L | 5 T | 6 R |
| Volume | 11 | 311 | 42 | 314 | 442 | 5 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 11 | 338 | 45 | 341 | 480 | 5 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
| Volume | 52 | 20 | 239 | 1 | 2 | 14 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 56 | 21 | 259 | 1 | 2 | 15 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | No / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 11 | 341 | 77 | | 259 | | 18 | |
| C(m) (vph) | 1088 | 1187 | 148 | | 709 | | 0 | |
| v/c | 0.01 | 0.29 | 0.52 | | 0.37 | | | |
| 95% queue length | 0.03 | 1.20 | 2.53 | | 1.68 | | | |
| Control Delay | 8.3 | 9.3 | 53.1 | | 13.0 | | | |
| LOS | A | A | F | | B | | F | |
| Approach Delay | | | | 22.2 | | | | |
| Approach LOS | | | | C | | | | |

HCS+: Unsignalized Intersections Release 5.21
Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: Afternoon Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 WITH PROJECT
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: MIRALESTE
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 L | 2 T | 3 R | 4 L | 5 T | 6 R |
|---|---|---|---|---|---|---|
| Volume | 11 | 311 | 42 | 314 | 442 | 5 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 3 | 85 | 11 | 85 | 120 | 1 |
| Hourly Flow Rate, HFR | 11 | 338 | 45 | 341 | 480 | 5 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume | 52 | 20 | 239 | 1 | 2 | 14 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 14 | 5 | 65 | 0 | 1 | 4 |
| Hourly Flow Rate, HFR | 56 | 21 | 259 | 1 | 2 | 15 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | No / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 338 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 485 | 383 | 1533 | 1527 | 338 | 1686 | 1569 | 482 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 360 | 1173 | 360 | 1167 | 1164 | 522 | 1164 | 405 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 338 | 482 |
| Potential Capacity | 709 | 588 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 709 | 588 |
| Probability of Queue free St. | 0.63 | 0.97 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 383 | 485 |
| Potential Capacity | 1187 | 1088 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1187 | 1088 |
| Probability of Queue free St. | 0.71 | 0.99 |
| Maj L-Shared Prob Q free St. | | 0.99 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1527 | 1569 |
| Potential Capacity | 119 | 112 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.70 | 0.70 |
| Movement Capacity | 84 | 79 |
| Probability of Queue free St. | 0.88 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1533 | 1686 |
| Potential Capacity | 96 | 75 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.69 | 0.62 |
| Maj. L, Min T Adj. Imp Factor. | 0.76 | 0.70 |
| Cap. Adj. factor due to Impeding mvmnt | 0.74 | 0.45 |
| Movement Capacity | 71 | 33 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 360 | 1164 |
| Potential Capacity | 630 | 271 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.71 |
| Movement Capacity | 622 | 193 |
| Probability of Queue free St. | 0.97 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 1167 | 405 |
| Potential Capacity | 270 | 602 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.71 | 0.99 |
| Movement Capacity | 192 | 594 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1527 | 1569 |
| Potential Capacity | 119 | 112 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.70 | 0.70 |
| Movement Capacity | 84 | 79 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 5.55 | 0.66 |
| C t | 169 | 161 |
| Probability of Queue free St. | 0.88 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 360 | 1164 |
| Potential Capacity | 662 | 239 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.99 | 0.71 |
| Movement Capacity | 654 | 170 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 1173 | 522 |
| Potential Capacity | 236 | 542 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.69 | 0.61 |
| Movement Capacity | 162 | 328 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1533 | 1686 |
| Potential Capacity | 96 | 75 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.69 | 0.62 |
| Maj. L, Min T Adj. Imp Factor. | 0.76 | 0.70 |
| Cap. Adj. factor due to Impeding mvmnt | 0.74 | 0.45 |
| Movement Capacity | 71 | 33 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 7.29 | -2.98 |
| C t | 142 | 0 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | 56 | 21 | 259 | 1 | 2 | 15 |
| Movement Capacity (vph) | 142 | 169 | 709 | 0 | 161 | 588 |
| Shared Lane Capacity (vph) | 148 | | | | 0 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | 142 | 169 | 709 | 0 | 161 | 588 |
| Volume | 56 | 21 | 259 | 1 | 2 | 15 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 148 | | | | 0 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 11 | 341 | 77 | | 259 | | 18 | |
| C(m) (vph) | 1088 | 1187 | 148 | | 709 | | 0 | |
| v/c | 0.01 | 0.29 | 0.52 | | 0.37 | | | |
| 95% queue length | 0.03 | 1.20 | 2.53 | | 1.68 | | | |
| Control Delay | 8.3 | 9.3 | 53.1 | | 13.0 | | | |
| LOS | A | A | F | | B | | F | |
| Approach Delay | | | | 22.2 | | | | |
| Approach LOS | | | | C | | | | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.99 | 0.71 |
| v(il), Volume for stream 2 or 5 | 338 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 0.99 | |
| d(M,LT), Delay for stream 1 or 4 | 8.3 | 9.3 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.1 | |

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                      SATURDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Average Delay (sec/veh):     29.3       Worst Case Level Of Service: F[ 75.1]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:       0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  161   123   296  158     0     0    0     0   127    0   259
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  161   123   296  158     0     0    0     0   127    0   259
Added Vol:      0    5    31     0    7     0     0    0     0    42    0     0
Cumulative:     0    3    17    17    1     0     0    0     0    17    0    17
Initial Fut:    0  169   171   313  166     0     0    0     0   186    0   276
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  184   186   340  180     0     0    0     0   202    0   300
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  184   186   340  180     0     0    0     0   202    0   300
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   370 xxxx xxxxx  xxxx xxxx xxxxx  1138 xxxx   277
Potent Cap.: xxxx xxxx xxxxx  1200 xxxx xxxxx  xxxx xxxx xxxxx   225 xxxx   767
Move Cap.:   xxxx xxxx xxxxx  1200 xxxx xxxxx  xxxx xxxx xxxxx   176 xxxx   767
Volume/Cap:  xxxx xxxx  xxxx  0.28 xxxx  xxxx  xxxx xxxx  xxxx  1.15 xxxx  0.39
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.2 xxxx xxxxx  xxxx xxxx xxxxx  10.5 xxxx   1.9
Control Del:xxxxx xxxx xxxxx   9.2 xxxx xxxxx xxxxx xxxx xxxxx 167.8 xxxx  12.7
LOS by Move:    *    *     *     A    *     *     *    *     *     F    *     B
Movement:    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      xxxxxx           xxxxxx           xxxxxx             75.1
ApproachLOS:         *                *                *                 F
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```





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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                      SATURDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 CREST DRIVE - COLLEGE ENTRANCE/PALOS VERDES DRIVE EAST
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.329
Loss Time (sec):       10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         26               Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       0  0  1! 0  0    0  1  0  0  1    1  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    3     4    65    0    17    19  143     3     1  106    53
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    3     4    65    0    17    19  143     3     1  106    53
Added Vol:     12    0    35     0    0     0     0    0    16    49    0     0
Cumulative:     0    0     0    17    0     0     0    8     0     0    6    17
Initial Fut:   12    3    39    82    0    17    19  151    19    50  112    70
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    13    3    42    89    0    18    21  164    21    54  122    76
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   13    3    42    89    0    18    21  164    21    54  122    76
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   13    3    42    89    0    18    21  164    21    54  122    76
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.22 0.06  0.72  1.00 0.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:   356   89  1156  1600    0  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.04  0.04  0.06 0.00  0.01  0.01 0.10  0.01  0.03 0.08  0.05
Crit Moves:       ****        ****                   ****        ****
********************************************************************************
```

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
           FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                      SATURDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #3 PALOS VERDES DRIVE EAST/PALOS VERDES DRIVE SOUTH
********************************************************************************
Average Delay (sec/veh):      3.4       Worst Case Level Of Service: E[ 38.9]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  0  0  0  1    1  0  1  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    30    0    70    75  406     0     0  412    55
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    30    0    70    75  406     0     0  412    55
Added Vol:      0    0     0     9    0     2     3    0     0     0    0    13
Cumulative:     0    0     0     1    0    12    14  289     0     0  324     3
Initial Fut:    0    0     0    40    0    84    92  695     0     0  736    71
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0    43    0    91   100  755     0     0  800    77
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    43    0    91   100  755     0     0  800    77
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1755 xxxx   800   877 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    95 xxxx   388   778 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    85 xxxx   388   778 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.51 xxxx  0.24  0.13 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   2.2 xxxx   0.9   0.4 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  84.7 xxxx  17.1  10.3 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     F    *     C     B    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx             38.9            xxxxxx           xxxxxx
ApproachLOS:         *                E                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.21

## TWO-WAY STOP CONTROL SUMMARY

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: Saturday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 WITH PROJECT
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: MIRALESTE
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 3 | 292 | 51 | 212 | 304 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 3 | 317 | 55 | 230 | 330 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | 0 | 8 | 162 | 0 | 4 | 0 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 0 | 8 | 176 | 0 | 4 | 0 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 3 | 230 | 8 | | 176 | | 4 | |
| C(m) (vph) | 1234 | 1198 | 294 | | 728 | | 271 | |
| v/c | 0.00 | 0.19 | 0.03 | | 0.24 | | 0.01 | |
| 95% queue length | 0.01 | 0.71 | 0.08 | | 0.94 | | 0.04 | |
| Control Delay | 7.9 | 8.7 | 17.6 | | 11.5 | | 18.5 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 11.8 | | | 18.5 | |
| Approach LOS | | | | B | | | C | |

HCS+: Unsignalized Intersections Release 5.21
Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: Saturday Mid-day Peak Hour
Intersection: Miraleste/Via Colinita
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 WITH PROJECT
Project ID: Marymount
East/West Street: Via Colinita
North/South Street: MIRALESTE
Intersection Orientation: NS Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 3 | 292 | 51 | 212 | 304 | 7 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 1 | 79 | 14 | 58 | 83 | 2 |
| Hourly Flow Rate, HFR | 3 | 317 | 55 | 230 | 330 | 7 |
| Percent Heavy Vehicles | 0 | -- | -- | 0 | -- | -- |
| Median Type/Storage | Raised curb | | | / 2 | | |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 1 | 1 | 0 |
| Configuration | LT | | R | L | | TR |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 0 | 8 | 162 | 0 | 4 | 0 |
| Peak Hour Factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Peak-15 Minute Volume | 0 | 2 | 44 | 0 | 1 | 0 |
| Hourly Flow Rate, HFR | 0 | 8 | 176 | 0 | 4 | 0 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | No | / |
| RT Channelized? | | | No | | | |
| Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
| Configuration | LT | | R | | LTR | |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | 317 | |
| Shared ln volume, major rt vehicles: | 0 | |
| Sat flow rate, major th vehicles: | 1700 | |
| Sat flow rate, major rt vehicles: | 1700 | |
| Number of major street through lanes: | 1 | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | 4.1 | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| | 2-stage | 4.1 | 4.1 | 6.1 | 5.5 | 6.2 | 6.1 | 5.5 | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | 2.20 | 3.50 | 4.00 | 3.30 | 3.50 | 4.00 | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t(f) | 2.2 | 2.2 | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 337 | 372 | 1119 | 1120 | 317 | 1236 | 1172 | 334 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | 323 | 796 | 323 | 797 | 794 | 442 | 794 | 378 |
| s | | 1500 | | 1500 | | 1500 | | 1500 |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | 317 | 334 |
| Potential Capacity | 728 | 712 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 728 | 712 |
| Probability of Queue free St. | 0.76 | 1.00 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | 372 | 337 |
| Potential Capacity | 1198 | 1234 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | 1198 | 1234 |
| Probability of Queue free St. | 0.81 | 1.00 |
| Maj L-Shared Prob Q free St. | | 1.00 |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | 1120 | 1172 |
| Potential Capacity | 208 | 194 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.81 |
| Movement Capacity | 168 | 156 |
| Probability of Queue free St. | 0.97 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | 1119 | 1236 |
| Potential Capacity | 186 | 154 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.79 | 0.78 |
| Maj. L, Min T Adj. Imp Factor. | 0.84 | 0.83 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.63 |
| Movement Capacity | 156 | 97 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 323 | 794 |
| Potential Capacity | 654 | 403 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.81 |
| Movement Capacity | 652 | 326 |
| Probability of Queue free St. | 0.99 | 0.99 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 797 | 378 |
| Potential Capacity | 401 | 619 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 1.00 |
| Movement Capacity | 324 | 617 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1120 | 1172 |
| Potential Capacity | 208 | 194 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.81 | 0.81 |
| Movement Capacity | 168 | 156 |
| Result for 2 stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.16 | 0.74 |
| C t | 294 | 271 |
| Probability of Queue free St. | 0.97 | 0.99 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | 323 | 794 |
| Potential Capacity | 693 | 384 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.81 |
| Movement Capacity | 691 | 310 |
| Part 2 - Second Stage | | |
| Conflicting Flows | 796 | 442 |
| Potential Capacity | 383 | 598 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.80 | 0.75 |
| Movement Capacity | 306 | 447 |
| Part 3 - Single Stage | | |
| Conflicting Flows | 1119 | 1236 |
| Potential Capacity | 186 | 154 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.79 | 0.78 |
| Maj. L, Min T Adj. Imp Factor. | 0.84 | 0.83 |
| Cap. Adj. factor due to Impeding mvmnt | 0.84 | 0.63 |
| Movement Capacity | 156 | 97 |
| Results for Two-stage process: | | |
| a | 0.95 | 0.95 |
| y | 3.64 | 1.77 |
| C t | 280 | 187 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | 0 | 8 | 176 | 0 | 4 | 0 |
| Movement Capacity (vph) | 280 | 294 | 728 | 187 | 271 | 712 |
| Shared Lane Capacity (vph) | 294 | | | | 271 | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | 280 | 294 | 728 | 187 | 271 | 712 |
| Volume | 0 | 8 | 176 | 0 | 4 | 0 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | 294 | | | | 271 | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | LT | L | LT | | R | | LTR | |
| v (vph) | 3 | 230 | 8 | | 176 | | 4 | |
| C(m) (vph) | 1234 | 1198 | 294 | | 728 | | 271 | |
| v/c | 0.00 | 0.19 | 0.03 | | 0.24 | | 0.01 | |
| 95% queue length | 0.01 | 0.71 | 0.08 | | 0.94 | | 0.04 | |
| Control Delay | 7.9 | 8.7 | 17.6 | | 11.5 | | 18.5 | |
| LOS | A | A | C | | B | | C | |
| Approach Delay | | | | 11.8 | | | 18.5 | |
| Approach LOS | | | | B | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 1.00 | 0.81 |
| v(il), Volume for stream 2 or 5 | 317 | |
| v(i2), Volume for stream 3 or 6 | 0 | |
| s(il), Saturation flow rate for stream 2 or 5 | 1700 | |
| s(i2), Saturation flow rate for stream 3 or 6 | 1700 | |
| P*(oj) | 1.00 | |
| d(M,LT), Delay for stream 1 or 4 | 7.9 | 8.7 |
| N, Number of major street through lanes | 1 | |
| d(rank,1) Delay for stream 2 or 5 | 0.0 | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
AM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #7 WESTERN AVENUE/CAPITOL DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.097 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 180 | Level Of Service: | F |

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Control: | Protected | Protected | Permitted | Permitted |
| Rights: | Include | Include | Include | Include |
| Lanes: | 1 0 2 0 1 | 1 0 2 0 1 | 0 1 0 0 1 | 1 0 1 0 1 |

| Movement: | NB L | NB T | NB R | SB L | SB T | SB R | EB L | EB T | EB R | WB L | WB T | WB R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 13 | 1332 | 208 | 132 | 907 | 85 | 132 | 74 | 44 | 190 | 53 | 165 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 14 | 1391 | 217 | 138 | 947 | 89 | 138 | 77 | 46 | 198 | 55 | 172 |
| Added Vol: | 0 | 5 | 3 | 0 | 16 | 49 | 16 | 5 | 0 | 8 | 16 | 0 |
| Cumulative: | 1 | 96 | 39 | 52 | 113 | 2 | 3 | 9 | 0 | 48 | 7 | 63 |
| Initial Fut: | 15 | 1492 | 259 | 190 | 1076 | 140 | 157 | 91 | 46 | 254 | 78 | 235 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 16 | 1621 | 282 | 206 | 1169 | 152 | 170 | 99 | 50 | 276 | 85 | 256 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1621 | 282 | 206 | 1169 | 152 | 170 | 99 | 50 | 276 | 85 | 256 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 16 | 1621 | 282 | 206 | 1169 | 152 | 170 | 99 | 50 | 276 | 85 | 256 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.63 | 0.37 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 901 | 524 | 1425 | 1425 | 1425 | 1425 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.57 | 0.20 | 0.14 | 0.41 | 0.11 | 0.19 | 0.19 | 0.04 | 0.19 | 0.06 | 0.18 |
| Crit Volume: | | 811 | | 206 | | | | 270 | | 276 | | |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
AM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #8 WESTERN AVENUE/CRESTWOOD STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.861 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 143 | Level Of Service: | D |

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Control: | Permitted | Permitted | Split Phase | Split Phase |
| Rights: | Include | Include | Include | Include |
| Lanes: | 1 0 2 0 1 | 1 0 2 0 1 | 1 0 0 1 0 | 1 0 0 1 0 |

| Movement: | NB L | NB T | NB R | SB L | SB T | SB R | EB L | EB T | EB R | WB L | WB T | WB R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 93 | 1394 | 149 | 23 | 1107 | 128 | 179 | 31 | 104 | 83 | 10 | 25 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 97 | 1455 | 156 | 24 | 1156 | 134 | 187 | 32 | 109 | 87 | 10 | 26 |
| Added Vol: | 0 | 8 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 23 | 86 | 15 | 15 | 98 | 25 | 26 | 8 | 23 | 15 | 7 | 15 |
| Initial Fut: | 120 | 1549 | 171 | 39 | 1278 | 159 | 213 | 40 | 132 | 102 | 17 | 41 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 131 | 1684 | 185 | 42 | 1389 | 172 | 231 | 44 | 143 | 110 | 19 | 45 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 131 | 1684 | 185 | 42 | 1389 | 172 | 231 | 44 | 143 | 110 | 19 | 45 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 131 | 1684 | 185 | 42 | 1389 | 172 | 231 | 44 | 143 | 110 | 19 | 45 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 0.23 | 0.77 | 1.00 | 0.30 | 0.70 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 1425 | 335 | 1090 | 1425 | 425 | 1000 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.59 | 0.13 | 0.03 | 0.49 | 0.12 | 0.16 | 0.13 | 0.13 | 0.08 | 0.04 | 0.04 |
| Crit Volume: | | 842 | | 42 | | | 231 | | | 110 | | |
| Crit Moves: | | **** | | **** | | | **** | | | **** | | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
AM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #9 WESTERN AVENUE/1ST STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.465 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 180 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Permitted | | | Prot+Permit | | | Permitted | | | Prot+Permit | |
| Rights: | | Ovl | | | Include | | | Include | | | Ovl | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 1 1 0 | | | 1 0 0 1 0 | | | 1 0 1 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 6 | 1612 | 635 | 189 | 1193 | 20 | 60 | 402 | 32 | 360 | 211 | 176 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 6 | 1683 | 663 | 197 | 1245 | 21 | 63 | 420 | 33 | 376 | 220 | 184 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 24 | 8 | 3 | 0 | 0 | 8 | 0 |
| Cumulative: | 0 | 64 | 0 | 18 | 90 | 14 | 9 | 0 | 0 | 0 | 0 | 15 |
| Initial Fut: | 6 | 1747 | 663 | 215 | 1335 | 59 | 80 | 423 | 33 | 376 | 228 | 199 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 7 | 1899 | 721 | 234 | 1452 | 64 | 87 | 459 | 36 | 409 | 248 | 216 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 7 | 1899 | 721 | 234 | 1452 | 64 | 87 | 459 | 36 | 409 | 248 | 216 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 7 | 1899 | 721 | 234 | 1452 | 64 | 87 | 459 | 36 | 409 | 248 | 216 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.92 | 0.08 | 1.00 | 0.93 | 0.07 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2730 | 120 | 1425 | 1321 | 104 | 1425 | 1425 | 1425 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.67 | 0.51 | 0.16 | 0.53 | 0.53 | 0.06 | 0.35 | 0.35 | 0.29 | 0.17 | 0.15 |
| Crit Volume: | | 949 | | 234 | | | | 496 | | 409 | | |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
AM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.661 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 59 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Protected | | | Protected | | | Permitted | | | Permitted | |
| Rights: | | Include | | | Include | | | Include | | | Include | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 1 0 1 | | | 1 0 1 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 172 | 902 | 103 | 75 | 760 | 29 | 16 | 116 | 115 | 128 | 174 | 76 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 180 | 942 | 108 | 78 | 793 | 30 | 17 | 121 | 120 | 134 | 182 | 79 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 8 | 0 |
| Cumulative: | 0 | 50 | 0 | 10 | 65 | 2 | 2 | 0 | 0 | 0 | 0 | 11 |
| Initial Fut: | 180 | 992 | 108 | 88 | 858 | 32 | 19 | 124 | 120 | 134 | 190 | 90 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 135 | 131 | 145 | 206 | 98 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 135 | 131 | 145 | 206 | 98 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 135 | 131 | 145 | 206 | 98 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.14 | 0.38 | 0.08 | 0.07 | 0.33 | 0.02 | 0.01 | 0.09 | 0.09 | 0.10 | 0.14 | 0.07 |
| Crit Volume: | 195 | | | | 467 | | | 135 | | 145 | | |
| Crit Moves: | **** | | | | **** | | | **** | | **** | | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
AM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #11 WESTERN AVENUE/WEST 25TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.833 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 120 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Ovl | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 2 0 2 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 27 | 156 | 24 | 112 | 131 | 505 | 540 | 215 | 34 | 48 | 355 | 274 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 28 | 163 | 25 | 117 | 137 | 527 | 564 | 224 | 35 | 50 | 371 | 286 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 32 | 0 |
| Cumulative: | 0 | 3 | 0 | 15 | 2 | 41 | 31 | 108 | 0 | 0 | 93 | 11 |
| Initial Fut: | 28 | 166 | 25 | 132 | 139 | 568 | 595 | 343 | 35 | 50 | 496 | 297 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 31 | 180 | 27 | 143 | 151 | 618 | 646 | 373 | 39 | 54 | 539 | 323 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 31 | 180 | 27 | 143 | 151 | 618 | 646 | 373 | 39 | 54 | 539 | 323 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 31 | 180 | 27 | 143 | 151 | 618 | 711 | 373 | 39 | 54 | 539 | 323 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 2850 | 2850 | 1425 | 1425 | 1425 | 1425 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.06 | 0.02 | 0.10 | 0.05 | 0.43 | 0.25 | 0.13 | 0.03 | 0.04 | 0.38 | 0.23 |
| Crit Volume: | 31 | | | | | 618 | 0 | | | | 539 | |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
                               PM PEAK HOUR
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
*******************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):         1.082
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180             Level Of Service:                  F
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Permitted         Permitted
Rights:            Include          Include           Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    0  1  0  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      75 1098    86   185 1294    50    76   65    30   153  104   162
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   78 1146    90   193 1351    52    79   68    31   160  109   169
Added Vol:      0   10     5     0    9    28    29   10     0     5    9     0
Cumulative:     4  155    75    97   82     1     1   22     0    99   20    63
Initial Fut:   82 1311   170   290 1442    81   109  100    31   264  138   232
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    89 1425   185   315 1567    88   119  109    34   287  150   252
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   89 1425   185   315 1567    88   119  109    34   287  150   252
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   89 1425   185   315 1567    88   119  109    34   287  150   252
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  0.52 0.48  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425   745  680  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.50  0.13  0.22 0.55  0.06  0.16 0.16  0.02  0.20 0.10  0.18
Crit Volume:        713         315                     227         287
Crit Moves:        ****        ****                    ****        ****
*******************************************************************************
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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
                               PM PEAK HOUR
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #8 WESTERN AVENUE/CRESTWOOD STREET
*******************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):         0.898
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180             Level Of Service:                  D
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted       Split Phase       Split Phase
Rights:            Include          Include           Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  0  1  0    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      47 1197   302    50 1246   117    89   49    45   194   82    61
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   49 1250   315    52 1301   122    93   51    47   203   86    64
Added Vol:      0   15     0     0   14     0     0    0     0     0    0     0
Cumulative:    31  128    39    39   92    32    31   19    30    40   20    40
Initial Fut:   80 1393   354    91 1407   154   124   70    77   243  106   104
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    87 1514   385    99 1529   168   135   76    84   264  115   113
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   87 1514   385    99 1529   168   135   76    84   264  115   113
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   87 1514   385    99 1529   168   135   76    84   264  115   113
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.48  0.52  1.00 0.50  0.50
Final Sat.:  1425 2850  1425  1425 2850  1425  1425  679   746  1425  719   706
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.53  0.27  0.07 0.54  0.12  0.09 0.11  0.11  0.19 0.16  0.16
Crit Volume:        757          99                           160   264
Crit Moves:        ****        ****                          ****  ****
*******************************************************************************
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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
PM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #9 WESTERN AVENUE/1ST STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 1.442
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Prot+Permit | | | Permitted | | | Prot+Permit | | |
| Rights: | Ovl | | | Include | | | Include | | | Ovl | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 1 1 0 | | | 1 0 0 1 0 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 36 | 1259 | 215 | 178 | 1458 | 61 | 42 | 184 | 21 | 714 | 276 | 156 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 38 | 1314 | 224 | 186 | 1522 | 64 | 44 | 192 | 22 | 745 | 288 | 163 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 14 | 15 | 5 | 0 | 0 | 5 | 0 |
| Cumulative: | 0 | 116 | 0 | 25 | 111 | 18 | 18 | 0 | 0 | 0 | 0 | 26 |
| Initial Fut: | 38 | 1430 | 224 | 211 | 1633 | 96 | 77 | 197 | 22 | 745 | 293 | 189 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 41 | 1555 | 244 | 229 | 1775 | 104 | 84 | 214 | 24 | 810 | 319 | 205 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 41 | 1555 | 244 | 229 | 1775 | 104 | 84 | 214 | 24 | 810 | 319 | 205 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 41 | 1555 | 244 | 229 | 1775 | 104 | 84 | 214 | 24 | 810 | 319 | 205 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.89 | 0.11 | 1.00 | 0.90 | 0.10 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2692 | 158 | 1425 | 1282 | 143 | 1425 | 1425 | 1425 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.55 | 0.17 | 0.16 | 0.66 | 0.66 | 0.06 | 0.17 | 0.17 | 0.57 | 0.22 | 0.14 |
| Crit Volume: | | 777 | | 229 | | | | | 238 | 810 | | |
| Crit Moves: | | **** | | **** | | | | | **** | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
PM PEAK HOUR

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 0.868
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 152 Level Of Service: D

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 1 0 1 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 150 | 668 | 65 | 75 | 1123 | 53 | 40 | 171 | 222 | 166 | 122 | 52 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Cumulative: | 0 | 78 | 0 | 23 | 76 | 5 | 5 | 0 | 0 | 0 | 0 | 23 |
| Initial Fut: | 150 | 746 | 65 | 98 | 1199 | 58 | 45 | 176 | 222 | 166 | 127 | 75 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 192 | 242 | 180 | 138 | 82 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 192 | 242 | 180 | 138 | 82 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 192 | 242 | 180 | 138 | 82 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1425 | 2850 | 1425 | 1425 | 2850 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.28 | 0.05 | 0.07 | 0.46 | 0.04 | 0.03 | 0.13 | 0.17 | 0.13 | 0.10 | 0.06 |
| Crit Volume: | 163 | | | | 652 | | | | 242 | 180 | | |
| Crit Moves: | **** | | | | **** | | | | **** | **** | | |

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 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
       FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
                               PM PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #11 WESTERN AVENUE/WEST 25TH STREET
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):        0.818
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       110                Level Of Service:                 D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    2  0  2  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54  106    55   206  215   369   477  306    35    71  290   176
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   56  111    57   215  224   385   498  319    37    74  303   184
Added Vol:      0    0     0     0    0     0     0   19     0     0   19     0
Cumulative:     0    1     0    15    1    49    47  135     0     0  163    16
Initial Fut:   56  112    57   230  225   434   545  473    37    74  485   200
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    61  121    62   250  245   472   592  515    40    81  527   217
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   61  121    62   250  245   472   592  515    40    81  527   217
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
FinalVolume:   61  121    62   250  245   472   652  515    40    81  527   217
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  2.00 2.00  1.00  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  2850 2850  1425  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.04  0.04  0.18 0.09  0.33  0.23 0.18  0.03  0.06 0.37  0.15
Crit Volume:              62   250              326                    527
Crit Moves:             ****  ****             ****                   ****
********************************************************************************
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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.761
Loss Time (sec): 10 (Y+R=4.0 sec) | Average Delay (sec/veh): 18.3
Optimal Cycle: 63 | Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 0 1 | 0 | 0 1 | 0 1 | 0 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 59 | 1382 | 21 | 16 | 878 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 62 | 1443 | 22 | 17 | 917 | 16 | 68 | 22 | 260 | 85 | 49 | 48 |
| Added Vol: | 0 | 22 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 0 | 165 | 0 | 2 | 175 | 2 | 3 | 0 | 0 | 0 | 0 | 3 |
| Initial Fut: | 62 | 1630 | 22 | 19 | 1157 | 18 | 71 | 22 | 260 | 85 | 49 | 51 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 67 | 1772 | 24 | 20 | 1257 | 19 | 77 | 24 | 283 | 92 | 53 | 55 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 67 | 1772 | 24 | 20 | 1257 | 19 | 77 | 24 | 283 | 92 | 53 | 55 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 67 | 1772 | 24 | 20 | 1257 | 19 | 77 | 24 | 283 | 92 | 53 | 55 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.65 | 0.65 | 0.85 | 0.73 | 0.73 | 0.85 |
| Lanes: | 1.00 | 1.97 | 0.03 | 1.00 | 1.97 | 0.03 | 0.76 | 0.24 | 1.00 | 0.63 | 0.37 | 1.00 |
| Final Sat.: | 1805 | 3555 | 48 | 1805 | 3549 | 54 | 939 | 290 | 1615 | 878 | 509 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.50 | 0.50 | 0.01 | 0.35 | 0.35 | 0.08 | 0.08 | 0.17 | 0.10 | 0.10 | 0.03 |
| Crit Moves: | | **** | | **** | | | | | **** | | | |
| Green/Cycle: | 0.06 | 0.66 | 0.66 | 0.01 | 0.61 | 0.61 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| Volume/Cap: | 0.58 | 0.76 | 0.76 | 0.76 | 0.58 | 0.58 | 0.36 | 0.36 | 0.76 | 0.46 | 0.46 | 0.15 |
| Delay/Veh: | 53.1 | 13.3 | 13.3 | 126.8 | 12.4 | 12.4 | 33.1 | 33.1 | 44.8 | 34.1 | 34.1 | 30.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 53.1 | 13.3 | 13.3 | 126.8 | 12.4 | 12.4 | 33.1 | 33.1 | 44.8 | 34.1 | 34.1 | 30.9 |
| LOS by Move: | D | B | B | F | B | B | C | C | D | C | C | C |
| HCM2kAvgQ: | 3 | 21 | 21 | 2 | 13 | 13 | 3 | 3 | 10 | 4 | 4 | 1 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 WESTERN AVENUE/CAPITOL DRIVE

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.994
Loss Time (sec): 10 (Y+R=4.0 sec) | Average Delay (sec/veh): 38.2
Optimal Cycle: 180 | Level Of Service: D

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 0 1 | 0 | 0 1 | 1 0 | 1 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 13 | 1332 | 208 | 132 | 907 | 85 | 132 | 74 | 44 | 190 | 53 | 165 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 14 | 1391 | 217 | 138 | 947 | 89 | 138 | 77 | 46 | 198 | 55 | 172 |
| Added Vol: | 0 | 5 | 3 | 0 | 16 | 49 | 16 | 5 | 0 | 8 | 16 | 0 |
| Cumulative: | 1 | 96 | 39 | 52 | 113 | 2 | 3 | 9 | 0 | 48 | 7 | 63 |
| Initial Fut: | 15 | 1492 | 259 | 190 | 1076 | 140 | 157 | 91 | 46 | 254 | 78 | 235 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 16 | 1621 | 282 | 206 | 1169 | 152 | 170 | 99 | 50 | 276 | 85 | 256 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1621 | 282 | 206 | 1169 | 152 | 170 | 99 | 50 | 276 | 85 | 256 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 16 | 1621 | 282 | 206 | 1169 | 152 | 170 | 99 | 50 | 276 | 85 | 256 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.75 | 0.75 | 0.85 | 0.44 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.63 | 0.37 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 902 | 525 | 1615 | 834 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.45 | 0.17 | 0.11 | 0.32 | 0.09 | 0.19 | 0.19 | 0.03 | 0.33 | 0.04 | 0.16 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.01 | 0.45 | 0.45 | 0.11 | 0.55 | 0.55 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| Volume/Cap: | 0.59 | 0.99 | 0.39 | 0.99 | 0.59 | 0.17 | 0.57 | 0.57 | 0.09 | 0.99 | 0.13 | 0.47 |
| Delay/Veh: | 78.4 | 48.2 | 18.5 | 105.0 | 15.3 | 11.2 | 29.0 | 29.0 | 23.0 | 85.5 | 23.4 | 27.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 78.4 | 48.2 | 18.5 | 105.0 | 15.3 | 11.2 | 29.0 | 29.0 | 23.0 | 85.5 | 23.4 | 27.1 |
| LOS by Move: | E | D | B | F | B | B | C | C | C | F | C | C |
| HCM2kAvgQ: | 1 | 34 | 6 | 11 | 13 | 2 | 7 | 7 | 1 | 13 | 2 | 7 |

Note: Queue reported is the number of cars per lane.

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 WESTERN AVENUE/CRESTWOOD STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.780 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 17.3 |
| Optimal Cycle: | 67 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Split Phase | | | Split Phase | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 0 1 0 | | | 1 0 0 1 0 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 93 | 1394 | 149 | 23 | 1107 | 128 | 179 | 31 | 104 | 83 | 10 | 25 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 97 | 1455 | 156 | 24 | 1156 | 134 | 187 | 32 | 109 | 87 | 10 | 26 |
| Added Vol: | 0 | 8 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 23 | 86 | 15 | 15 | 98 | 25 | 26 | 8 | 23 | 15 | 7 | 15 |
| Initial Fut: | 120 | 1549 | 171 | 39 | 1278 | 159 | 213 | 40 | 132 | 102 | 17 | 41 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 131 | 1684 | 185 | 42 | 1389 | 172 | 231 | 44 | 143 | 110 | 19 | 45 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 131 | 1684 | 185 | 42 | 1389 | 172 | 231 | 44 | 143 | 110 | 19 | 45 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 131 | 1684 | 185 | 42 | 1389 | 172 | 231 | 44 | 143 | 110 | 19 | 45 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.13 | 0.95 | 0.85 | 0.08 | 0.95 | 0.85 | 0.95 | 0.89 | 0.89 | 0.95 | 0.90 | 0.90 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 0.23 | 0.77 | 1.00 | 0.30 | 0.70 |
| Final Sat.: | 255 | 3610 | 1615 | 148 | 3610 | 1615 | 1805 | 395 | 1287 | 1805 | 507 | 1194 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.51 | 0.47 | 0.11 | 0.29 | 0.38 | 0.11 | 0.13 | 0.11 | 0.11 | 0.06 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | | | **** | | | **** | | |
| Green/Cycle: | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.16 | 0.16 | 0.16 | 0.08 | 0.08 | 0.08 |
| Volume/Cap: | 0.78 | 0.71 | 0.17 | 0.44 | 0.59 | 0.16 | 0.78 | 0.68 | 0.68 | 0.78 | 0.48 | 0.48 |
| Delay/Veh: | 32.7 | 12.0 | 6.7 | 11.3 | 9.9 | 6.6 | 52.5 | 45.8 | 45.8 | 69.0 | 46.8 | 46.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 32.7 | 12.0 | 6.7 | 11.3 | 9.9 | 6.6 | 52.5 | 45.8 | 45.8 | 69.0 | 46.8 | 46.8 |
| LOS by Move: | C | B | A | B | A | A | D | D | D | E | D | D |
| HCM2kAvgQ: | 5 | 18 | 2 | 1 | 13 | 2 | 9 | 7 | 7 | 5 | 3 | 3 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 WESTERN AVENUE/1ST STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.188 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 84.8 |
| Optimal Cycle: | 180 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Prot+Permit | | | Permitted | | | Prot+Permit | | |
| Rights: | Ovl | | | Include | | | Include | | | Ovl | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 1 1 0 | | | 1 0 0 1 0 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 6 | 1612 | 635 | 189 | 1193 | 20 | 60 | 402 | 32 | 360 | 211 | 176 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 6 | 1683 | 663 | 197 | 1245 | 21 | 63 | 420 | 33 | 376 | 220 | 184 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 24 | 8 | 3 | 0 | 0 | 8 | 0 |
| Cumulative: | 0 | 64 | 0 | 18 | 90 | 14 | 9 | 0 | 0 | 0 | 0 | 15 |
| Initial Fut: | 6 | 1747 | 663 | 215 | 1335 | 59 | 80 | 423 | 33 | 376 | 228 | 199 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 7 | 1899 | 721 | 234 | 1452 | 64 | 87 | 459 | 36 | 409 | 248 | 216 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 7 | 1899 | 721 | 234 | 1452 | 64 | 87 | 459 | 36 | 409 | 248 | 216 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 7 | 1899 | 721 | 234 | 1452 | 64 | 87 | 459 | 36 | 409 | 248 | 216 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.33 | 0.94 | 0.94 | 0.60 | 0.99 | 0.99 | 0.52 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.92 | 0.08 | 1.00 | 0.93 | 0.07 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 629 | 3437 | 152 | 1136 | 1741 | 138 | 981 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.53 | 0.45 | 0.37 | 0.42 | 0.42 | 0.08 | 0.26 | 0.26 | 0.42 | 0.13 | 0.13 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.00 | 0.41 | 0.59 | 0.51 | 0.51 | 0.51 | 0.21 | 0.21 | 0.21 | 0.39 | 0.39 | 0.49 |
| Volume/Cap: | 0.82 | 1.27 | 0.76 | 0.90 | 0.83 | 0.83 | 0.37 | 1.27 | 1.27 | 1.03 | 0.34 | 0.27 |
| Delay/Veh: | 251.3 | 158 | 18.6 | 45.0 | 24.0 | 24.0 | 35.0 | 181 | 181.3 | 77.1 | 22.0 | 15.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 251.3 | 158 | 18.6 | 45.0 | 24.0 | 24.0 | 35.0 | 181 | 181.3 | 77.1 | 22.0 | 15.4 |
| LOS by Move: | F | F | B | D | C | C | C | F | F | E | C | B |
| HCM2kAvgQ: | 1 | 59 | 18 | 10 | 23 | 23 | 3 | 31 | 31 | 19 | 5 | 4 |

Note: Queue reported is the number of cars per lane.

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.553 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 22.3 |
| Optimal Cycle: | 40 | Level Of Service: | C |

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| Control: | Protected | Protected | Permitted | Permitted |
| Rights: | Include | Include | Include | Include |
| Lanes: | 1 0 2 0 1 | 1 0 2 0 1 | 1 0 1 0 1 | 1 0 1 0 1 |

| Movement: | NB L | NB T | NB R | SB L | SB T | SB R | EB L | EB T | EB R | WB L | WB T | WB R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 172 | 902 | 103 | 75 | 760 | 29 | 16 | 116 | 115 | 128 | 174 | 76 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 180 | 942 | 108 | 78 | 793 | 30 | 17 | 121 | 120 | 134 | 182 | 79 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 8 | 0 |
| Cumulative: | 0 | 50 | 0 | 10 | 65 | 2 | 2 | 0 | 0 | 0 | 0 | 11 |
| Initial Fut: | 180 | 992 | 108 | 88 | 858 | 32 | 19 | 124 | 120 | 134 | 190 | 90 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 135 | 131 | 145 | 206 | 98 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 135 | 131 | 145 | 206 | 98 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 135 | 131 | 145 | 206 | 98 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.45 | 1.00 | 0.85 | 0.59 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 855 | 1900 | 1615 | 1112 | 1900 | 1615 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.30 | 0.07 | 0.05 | 0.26 | 0.02 | 0.02 | 0.07 | 0.08 | 0.13 | 0.11 | 0.06 |
| Crit Moves: | **** | | | | **** | | | | | **** | | |
| Green/Cycle: | 0.20 | 0.56 | 0.56 | 0.10 | 0.47 | 0.47 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| Volume/Cap: | 0.55 | 0.53 | 0.13 | 0.53 | 0.55 | 0.05 | 0.10 | 0.30 | 0.34 | 0.55 | 0.46 | 0.26 |
| Delay/Veh: | 38.2 | 13.9 | 10.3 | 45.7 | 19.5 | 14.5 | 30.1 | 31.8 | 32.2 | 36.1 | 33.4 | 31.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 38.2 | 13.9 | 10.3 | 45.7 | 19.5 | 14.5 | 30.1 | 31.8 | 32.2 | 36.1 | 33.4 | 31.4 |
| LOS by Move: | D | B | B | D | B | B | C | C | C | D | C | C |
| HCM2kAvgQ: | 6 | 11 | 2 | 4 | 11 | 1 | 1 | 4 | 4 | 5 | 6 | 3 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 WESTERN AVENUE/WEST 25TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.742 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 27.7 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| Control: | Permitted | Permitted | Protected | Protected |
| Rights: | Include | Ovl | Include | Include |
| Lanes: | 1 0 2 0 1 | 1 0 2 0 1 | 2 0 2 0 1 | 1 0 1 0 1 |

| Movement: | NB L | NB T | NB R | SB L | SB T | SB R | EB L | EB T | EB R | WB L | WB T | WB R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 27 | 156 | 24 | 112 | 131 | 508 | 544 | 215 | 34 | 48 | 355 | 274 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 28 | 163 | 25 | 117 | 137 | 530 | 568 | 224 | 35 | 50 | 371 | 286 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 32 | 0 |
| Cumulative: | 0 | 3 | 0 | 16 | 2 | 41 | 31 | 108 | 0 | 0 | 93 | 11 |
| Initial Fut: | 28 | 166 | 25 | 133 | 139 | 571 | 599 | 343 | 35 | 50 | 496 | 297 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 31 | 180 | 27 | 144 | 151 | 621 | 651 | 373 | 39 | 54 | 539 | 323 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 31 | 180 | 27 | 144 | 151 | 621 | 651 | 373 | 39 | 54 | 539 | 323 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 31 | 180 | 27 | 144 | 151 | 621 | 651 | 373 | 39 | 54 | 539 | 323 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.65 | 0.95 | 0.85 | 0.63 | 0.95 | 0.85 | 0.92 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1235 | 3610 | 1615 | 1201 | 3610 | 1615 | 3502 | 3610 | 1615 | 1805 | 1900 | 1615 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.05 | 0.02 | 0.12 | 0.04 | 0.38 | 0.19 | 0.10 | 0.02 | 0.03 | 0.28 | 0.20 |
| Crit Moves: | | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.52 | 0.25 | 0.49 | 0.49 | 0.14 | 0.38 | 0.38 |
| Volume/Cap: | 0.09 | 0.19 | 0.06 | 0.45 | 0.16 | 0.74 | 0.74 | 0.21 | 0.05 | 0.21 | 0.74 | 0.52 |
| Delay/Veh: | 27.6 | 28.3 | 27.3 | 31.5 | 28.1 | 22.5 | 37.9 | 14.6 | 13.4 | 38.3 | 30.8 | 24.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 27.6 | 28.3 | 27.3 | 31.5 | 28.1 | 22.5 | 37.9 | 14.6 | 13.4 | 38.3 | 30.8 | 24.7 |
| LOS by Move: | C | C | C | C | C | C | D | B | B | D | C | C |
| HCM2kAvgQ: | 1 | 2 | 1 | 4 | 2 | 16 | 11 | 3 | 1 | 2 | 16 | 8 |

Note: Queue reported is the number of cars per lane.

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.658 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 10.3 |
| Optimal Cycle: | 49 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 1 1 0 | | | 1 0 1 1 0 | | | 0 1 0 0 1 | | | 0 1 0 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 62 | 1239 | 63 | 49 | 1375 | 16 | 31 | 13 | 72 | 53 | 4 | 19 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 65 | 1294 | 66 | 51 | 1436 | 17 | 32 | 14 | 75 | 55 | 4 | 20 |
| Added Vol: | 0 | 39 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 0 | 224 | 0 | 1 | 175 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Initial Fut: | 65 | 1557 | 66 | 52 | 1649 | 18 | 33 | 14 | 75 | 55 | 4 | 21 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 70 | 1692 | 71 | 57 | 1792 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 70 | 1692 | 71 | 57 | 1792 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 70 | 1692 | 71 | 57 | 1792 | 19 | 36 | 15 | 82 | 60 | 5 | 23 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.95 | 0.95 | 0.73 | 0.73 | 0.85 | 0.69 | 0.69 | 0.85 |
| Lanes: | 1.00 | 1.92 | 0.08 | 1.00 | 1.98 | 0.02 | 0.71 | 0.29 | 1.00 | 0.93 | 0.07 | 1.00 |
| Final Sat.: | 1805 | 3443 | 145 | 1805 | 3564 | 38 | 981 | 399 | 1615 | 1224 | 92 | 1615 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.49 | 0.49 | 0.03 | 0.50 | 0.50 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.01 |
| Crit Moves: | **** | | | | **** | | | | **** | | | |
| Green/Cycle: | 0.06 | 0.77 | 0.77 | 0.05 | 0.76 | 0.76 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| Volume/Cap: | 0.66 | 0.64 | 0.64 | 0.64 | 0.66 | 0.66 | 0.48 | 0.48 | 0.66 | 0.64 | 0.64 | 0.18 |
| Delay/Veh: | 60.1 | 5.5 | 5.5 | 60.7 | 6.2 | 6.2 | 47.7 | 47.7 | 57.1 | 57.7 | 57.7 | 43.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 60.1 | 5.5 | 5.5 | 60.7 | 6.2 | 6.2 | 47.7 | 47.7 | 57.1 | 57.7 | 57.7 | 43.9 |
| LOS by Move: | E | A | A | E | A | A | D | D | E | E | E | D |
| HCM2kAvgQ: | 3 | 13 | 13 | 3 | 14 | 14 | 2 | 2 | 4 | 3 | 3 | 1 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 WESTERN AVENUE/CAPITOL DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.978 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 40.2 |
| Optimal Cycle: | 168 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 0 1 0 0 1 | | | 1 0 1 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 75 | 1098 | 86 | 185 | 1294 | 50 | 76 | 65 | 30 | 153 | 104 | 162 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 78 | 1146 | 90 | 193 | 1351 | 52 | 79 | 68 | 31 | 160 | 109 | 169 |
| Added Vol: | 0 | 10 | 5 | 0 | 9 | 28 | 29 | 10 | 0 | 5 | 9 | 0 |
| Cumulative: | 4 | 155 | 75 | 97 | 82 | 1 | 1 | 22 | 0 | 99 | 20 | 63 |
| Initial Fut: | 82 | 1311 | 170 | 290 | 1442 | 81 | 109 | 100 | 31 | 264 | 138 | 232 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 89 | 1425 | 185 | 315 | 1567 | 88 | 119 | 109 | 34 | 287 | 150 | 252 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 89 | 1425 | 185 | 315 | 1567 | 88 | 119 | 109 | 34 | 287 | 150 | 252 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 89 | 1425 | 185 | 315 | 1567 | 88 | 119 | 109 | 34 | 287 | 150 | 252 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.71 | 0.71 | 0.85 | 0.49 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 0.52 | 0.48 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 700 | 639 | 1615 | 922 | 1900 | 1615 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.39 | 0.11 | 0.17 | 0.43 | 0.05 | 0.17 | 0.17 | 0.02 | 0.31 | 0.08 | 0.16 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.06 | 0.40 | 0.40 | 0.18 | 0.52 | 0.52 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 |
| Volume/Cap: | 0.83 | 0.98 | 0.28 | 0.98 | 0.83 | 0.10 | 0.53 | 0.53 | 0.07 | 0.98 | 0.25 | 0.49 |
| Delay/Veh: | 86.0 | 48.0 | 20.3 | 85.0 | 23.4 | 12.1 | 29.3 | 29.3 | 23.8 | 80.3 | 25.5 | 28.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 86.0 | 48.0 | 20.3 | 85.0 | 23.4 | 12.1 | 29.3 | 29.3 | 23.8 | 80.3 | 25.5 | 28.3 |
| LOS by Move: | F | D | C | F | C | B | C | C | C | F | C | C |
| HCM2kAvgQ: | 5 | 29 | 4 | 15 | 23 | 1 | 6 | 6 | 1 | 13 | 3 | 7 |

Note: Queue reported is the number of cars per lane.

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 WESTERN AVENUE/CRESTWOOD STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 0.855
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 22.1
Optimal Cycle: 87 Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Permitted | | | Permitted | | | Split Phase | | | Split Phase | |
| Rights: | | Include | | | Include | | | Include | | | Include | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 0 1 0 | | | 1 0 0 1 0 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 47 | 1197 | 302 | 50 | 1246 | 117 | 89 | 49 | 45 | 194 | 82 | 61 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 49 | 1250 | 315 | 52 | 1301 | 122 | 93 | 51 | 47 | 203 | 86 | 64 |
| Added Vol: | 0 | 15 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 31 | 128 | 39 | 39 | 92 | 32 | 31 | 19 | 30 | 40 | 20 | 40 |
| Initial Fut: | 80 | 1393 | 354 | 91 | 1407 | 154 | 124 | 70 | 77 | 243 | 106 | 104 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 87 | 1514 | 385 | 99 | 1529 | 168 | 135 | 76 | 84 | 264 | 115 | 113 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 87 | 1514 | 385 | 99 | 1529 | 168 | 135 | 76 | 84 | 264 | 115 | 113 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 87 | 1514 | 385 | 99 | 1529 | 168 | 135 | 76 | 84 | 264 | 115 | 113 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.10 | 0.95 | 0.85 | 0.10 | 0.95 | 0.85 | 0.95 | 0.92 | 0.92 | 0.95 | 0.93 | 0.93 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 0.48 | 0.52 | 1.00 | 0.50 | 0.50 |
| Final Sat.: | 181 | 3610 | 1615 | 186 | 3610 | 1615 | 1805 | 835 | 917 | 1805 | 888 | 872 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.48 | 0.42 | 0.24 | 0.53 | 0.42 | 0.10 | 0.07 | 0.09 | 0.09 | 0.15 | 0.13 | 0.13 |
| Crit Moves: | | | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.11 | 0.11 | 0.11 | 0.17 | 0.17 | 0.17 |
| Volume/Cap: | 0.77 | 0.67 | 0.38 | 0.86 | 0.68 | 0.17 | 0.70 | 0.86 | 0.86 | 0.86 | 0.76 | 0.76 |
| Delay/Veh: | 41.6 | 13.1 | 9.6 | 57.9 | 13.2 | 8.0 | 53.9 | 73.8 | 73.8 | 60.5 | 50.0 | 50.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 41.6 | 13.1 | 9.6 | 57.9 | 13.2 | 8.0 | 53.9 | 73.8 | 73.8 | 60.5 | 50.0 | 50.0 |
| LOS by Move: | D | B | A | E | B | A | D | E | E | E | D | D |
| HCM2kAvgQ: | 4 | 16 | 6 | 5 | 17 | 2 | 5 | 7 | 7 | 11 | 8 | 8 |

Note: Queue reported is the number of cars per lane.

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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 WESTERN AVENUE/1ST STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 1.233
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 120.1
Optimal Cycle: 180 Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | | Permitted | | | Prot+Permit | | | Permitted | | | Prot+Permit | |
| Rights: | | Ovl | | | Include | | | Include | | | Ovl | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | | 1 0 2 0 1 | | | 1 0 1 1 0 | | | 1 0 0 1 0 | | | 1 0 1 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 36 | 1259 | 215 | 178 | 1458 | 61 | 42 | 184 | 21 | 714 | 276 | 156 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 38 | 1314 | 224 | 186 | 1522 | 64 | 44 | 192 | 22 | 745 | 288 | 163 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 14 | 15 | 5 | 0 | 0 | 5 | 0 |
| Cumulative: | 0 | 116 | 0 | 25 | 111 | 18 | 18 | 0 | 0 | 0 | 0 | 26 |
| Initial Fut: | 38 | 1430 | 224 | 211 | 1633 | 96 | 77 | 197 | 22 | 745 | 293 | 189 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 41 | 1555 | 244 | 229 | 1775 | 104 | 84 | 214 | 24 | 810 | 319 | 205 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 41 | 1555 | 244 | 229 | 1775 | 104 | 84 | 214 | 24 | 810 | 319 | 205 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 41 | 1555 | 244 | 229 | 1775 | 104 | 84 | 214 | 24 | 810 | 319 | 205 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.40 | 0.94 | 0.94 | 0.56 | 0.99 | 0.99 | 0.74 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.89 | 0.11 | 1.00 | 0.90 | 0.10 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 759 | 3383 | 198 | 1068 | 1684 | 187 | 1401 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.43 | 0.15 | 0.30 | 0.52 | 0.52 | 0.08 | 0.13 | 0.13 | 0.58 | 0.17 | 0.13 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.02 | 0.34 | 0.70 | 0.42 | 0.42 | 0.42 | 0.10 | 0.10 | 0.10 | 0.46 | 0.46 | 0.56 |
| Volume/Cap: | 1.24 | 1.26 | 0.22 | 0.89 | 1.24 | 1.24 | 0.77 | 1.26 | 1.26 | 1.13 | 0.37 | 0.23 |
| Delay/Veh: | 284.5 | 156 | 5.5 | 47.9 | 141 | 141.0 | 72.6 | 197 | 197.2 | 98.6 | 18.0 | 11.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 284.5 | 156 | 5.5 | 47.9 | 141 | 141.0 | 72.6 | 197 | 197.2 | 98.6 | 18.0 | 11.3 |
| LOS by Move: | F | F | A | D | F | F | E | F | F | F | B | B |
| HCM2kAvgQ: | 4 | 48 | 3 | 10 | 56 | 56 | 4 | 16 | 16 | 40 | 6 | 3 |

Note: Queue reported is the number of cars per lane.

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MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 0.712
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 24.6
Optimal Cycle: 56 Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 144 | 640 | 62 | 72 | 1076 | 51 | 38 | 164 | 213 | 159 | 117 | 50 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 150 | 668 | 65 | 75 | 1123 | 53 | 40 | 171 | 222 | 166 | 122 | 52 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Cumulative: | 0 | 78 | 0 | 23 | 76 | 5 | 5 | 0 | 0 | 0 | 0 | 23 |
| Initial Fut: | 150 | 746 | 65 | 98 | 1199 | 58 | 45 | 176 | 222 | 166 | 127 | 75 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 192 | 242 | 180 | 138 | 82 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 192 | 242 | 180 | 138 | 82 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 163 | 811 | 70 | 107 | 1304 | 63 | 49 | 192 | 242 | 180 | 138 | 82 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.60 | 1.00 | 0.85 | 0.50 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1131 | 1900 | 1615 | 952 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.22 | 0.04 | 0.06 | 0.36 | 0.04 | 0.04 | 0.10 | 0.15 | 0.19 | 0.07 | 0.05 |
| Crit Moves: | **** | | | | **** | | | | | **** | | |
| Green/Cycle: | 0.13 | 0.50 | 0.50 | 0.13 | 0.51 | 0.51 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| Volume/Cap: | 0.71 | 0.45 | 0.09 | 0.45 | 0.71 | 0.08 | 0.16 | 0.38 | 0.56 | 0.71 | 0.27 | 0.19 |
| Delay/Veh: | 51.9 | 16.2 | 13.0 | 41.4 | 20.4 | 12.7 | 28.4 | 30.4 | 33.4 | 42.4 | 29.3 | 28.6 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 51.9 | 16.2 | 13.0 | 41.4 | 20.4 | 12.7 | 28.4 | 30.4 | 33.4 | 42.4 | 29.3 | 28.6 |
| LOS by Move: | D | B | B | D | C | B | C | C | C | D | C | C |
| HCM2kAvgQ: | 6 | 8 | 1 | 4 | 17 | 1 | 1 | 5 | 7 | 7 | 3 | 2 |

Note: Queue reported is the number of cars per lane.





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CALTRANS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 WESTERN AVENUE/WEST 25TH STREET

Cycle (sec): 100 Critical Vol./Cap.(X): 0.714
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): 27.2
Optimal Cycle: 56 Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Ovl | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 2 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 54 | 106 | 55 | 206 | 215 | 369 | 477 | 306 | 35 | 71 | 290 | 176 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 56 | 111 | 57 | 215 | 224 | 385 | 498 | 319 | 37 | 74 | 303 | 184 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 19 | 0 |
| Cumulative: | 0 | 1 | 0 | 15 | 1 | 49 | 47 | 135 | 0 | 0 | 163 | 16 |
| Initial Fut: | 56 | 112 | 57 | 230 | 225 | 434 | 545 | 473 | 37 | 74 | 485 | 200 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 61 | 121 | 62 | 250 | 245 | 472 | 592 | 515 | 40 | 81 | 527 | 217 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 61 | 121 | 62 | 250 | 245 | 472 | 592 | 515 | 40 | 81 | 527 | 217 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 61 | 121 | 62 | 250 | 245 | 472 | 592 | 515 | 40 | 81 | 527 | 217 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.54 | 0.95 | 0.85 | 0.67 | 0.95 | 0.85 | 0.92 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1034 | 3610 | 1615 | 1275 | 3610 | 1615 | 3502 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.03 | 0.04 | 0.20 | 0.07 | 0.29 | 0.17 | 0.14 | 0.02 | 0.04 | 0.28 | 0.13 |
| Crit Moves: | | | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.51 | 0.24 | 0.48 | 0.48 | 0.15 | 0.39 | 0.39 |
| Volume/Cap: | 0.22 | 0.12 | 0.14 | 0.71 | 0.25 | 0.57 | 0.71 | 0.30 | 0.05 | 0.30 | 0.71 | 0.35 |
| Delay/Veh: | 28.3 | 27.3 | 27.5 | 39.5 | 28.3 | 17.8 | 38.0 | 16.1 | 14.1 | 38.5 | 29.2 | 21.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 28.3 | 27.3 | 27.5 | 39.5 | 28.3 | 17.8 | 38.0 | 16.1 | 14.1 | 38.5 | 29.2 | 21.9 |
| LOS by Move: | C | C | C | D | C | B | D | B | B | D | C | C |
| HCM2kAvgQ: | 2 | 1 | 1 | 8 | 3 | 10 | 10 | 5 | 1 | 2 | 15 | 5 |

Note: Queue reported is the number of cars per lane.

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CMP
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.908 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 104 | Level Of Service: | E |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 1 1 0 | | | 1 0 1 1 0 | | | 0 1 0 0 1 | | | 0 1 0 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 59 | 1382 | 21 | 16 | 878 | 15 | 65 | 21 | 249 | 81 | 47 | 46 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 62 | 1443 | 22 | 17 | 917 | 16 | 68 | 22 | 260 | 85 | 49 | 48 |
| Added Vol: | 0 | 22 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative: | 0 | 165 | 0 | 2 | 175 | 2 | 3 | 0 | 0 | 0 | 0 | 3 |
| Initial Fut: | 62 | 1630 | 22 | 19 | 1157 | 18 | 71 | 22 | 260 | 85 | 49 | 51 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 67 | 1772 | 24 | 20 | 1257 | 19 | 77 | 24 | 283 | 92 | 53 | 55 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 67 | 1772 | 24 | 20 | 1257 | 19 | 77 | 24 | 283 | 92 | 53 | 55 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 67 | 1772 | 24 | 20 | 1257 | 19 | 77 | 24 | 283 | 92 | 53 | 55 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.97 | 0.03 | 1.00 | 1.97 | 0.03 | 0.76 | 0.24 | 1.00 | 0.63 | 0.37 | 1.00 |
| Final Sat.: | 1600 | 3158 | 42 | 1600 | 3152 | 48 | 1222 | 378 | 1600 | 1013 | 587 | 1600 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.56 | 0.56 | 0.01 | 0.40 | 0.40 | 0.05 | 0.06 | 0.18 | 0.06 | 0.09 | 0.03 |
| Crit Moves: | | **** | | **** | | | | | **** | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CMP
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 WESTERN AVENUE/9TH STREET

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.689 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 49 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 1 0 1 | | | 1 0 1 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 172 | 902 | 103 | 75 | 760 | 29 | 16 | 116 | 115 | 128 | 174 | 76 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 180 | 942 | 108 | 78 | 793 | 30 | 17 | 121 | 120 | 134 | 182 | 79 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 8 | 0 |
| Cumulative: | 0 | 50 | 0 | 10 | 65 | 2 | 2 | 0 | 0 | 0 | 0 | 11 |
| Initial Fut: | 180 | 992 | 108 | 88 | 858 | 32 | 19 | 124 | 120 | 134 | 190 | 90 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 135 | 131 | 145 | 206 | 98 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 135 | 131 | 145 | 206 | 98 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 195 | 1078 | 117 | 96 | 933 | 35 | 20 | 135 | 131 | 145 | 206 | 98 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.12 | 0.34 | 0.07 | 0.06 | 0.29 | 0.02 | 0.01 | 0.08 | 0.08 | 0.09 | 0.13 | 0.06 |
| Crit Moves: | **** | | | | **** | | | **** | | **** | | |

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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
              FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CMP
                                PM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 WESTERN AVENUE/TOSCANINI DRIVE
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.799
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        66               Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Lanes:       1  0  1  1  0    1  0  1  1  0    0  1  0  0  1    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     62 1239    63    49 1375    16    31   13    72    53    4    19
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:  65 1294    66    51 1436    17    32   14    75    55    4    20
Added Vol:     0   39     0     0   38     0     0    0     0     0    0     0
Cumulative:    0  224     0     1  175     1     1    0     0     0    0     1
Initial Fut:  65 1557    66    52 1649    18    33   14    75    55    4    21
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   70 1692    71    57 1792    19    36   15    82    60    5    23
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  70 1692    71    57 1792    19    36   15    82    60    5    23
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  70 1692    71    57 1792    19    36   15    82    60    5    23
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.92  0.08  1.00 1.98  0.02  0.71 0.29  1.00  0.93 0.07  1.00
Final Sat.:  1600 3070   130  1600 3166    34  1137  463  1600  1488  112  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.55  0.55  0.04 0.57  0.57  0.02 0.03  0.05  0.04 0.04  0.01
Crit Moves:  ****                  ****                   ****  ****
********************************************************************************
```





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--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
              FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CMP
                                PM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #10 WESTERN AVENUE/9TH STREET
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.873
Loss Time (sec):      10 (Y+R=4.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        88               Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Lanes:       1  0  2  0  1    1  0  2  0  1    1  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    144  640    62    72 1076    51    38  164   213   159  117    50
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse: 150  668    65    75 1123    53    40  171   222   166  122    52
Added Vol:     0    0     0     0    0     0     0    5     0     0    5     0
Cumulative:    0   78     0    23   76     5     5    0     0     0    0    23
Initial Fut: 150  746    65    98 1199    58    45  176   222   166  127    75
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:  163  811    70   107 1304    63    49  192   242   180  138    82
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 163  811    70   107 1304    63    49  192   242   180  138    82
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 163  811    70   107 1304    63    49  192   242   180  138    82
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1600 1600  1600  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.25  0.04  0.07 0.41  0.04  0.03 0.12  0.15  0.11 0.09  0.05
Crit Moves:  ****                  ****                   ****  ****
********************************************************************************
```

# Mitigated Forecast Year 2012
# With Project Conditions

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-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
      MITIGATED FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                 AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.963
Loss Time (sec):       10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        146              Level Of Service:                  E
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include            Ovl
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  397   180   379  351     0     0    0     0   156    0   416
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0  397   180   379  351     0     0    0     0   156    0   416
Added Vol:     0    5    35     0   16     0     0    0     0   105    0     0
Cumulative:    0    1     4     4    3     0     0    0     0     4    0     4
Initial Fut:   0  403   219   383  370     0     0    0     0   265    0   420
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    0  438   238   416  402     0     0    0     0   288    0   457
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0  438   238   416  402     0     0    0     0   288    0   457
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0  438   238   416  402     0     0    0     0   288    0   457
OvlAdjVol:                                                                  40
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.65  0.35  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Final Sat.:     0 1037   563  1600 1600     0     0    0     0  1600    0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.42  0.42  0.26 0.25  0.00  0.00 0.00  0.00  0.18 0.00  0.29
OvlAdjV/S:                                                                0.03
Crit Moves:       ****        ****                                ****
*******************************************************************************
```





```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
      MITIGATED FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                                 AM PEAK HOUR
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         1.002
Loss Time (sec):       10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        180              Level Of Service:                  F
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       1  0  2  0  1    1  0  2  0  1    1  0  0  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     13 1332   208   132  907    85   132   74    44   190   53   165
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:  14 1391   217   138  947    89   138   77    46   198   55   172
Added Vol:     0    5     3     0   16    49    16    5     0     8   16     0
Cumulative:    1   96    39    52  113     2     3    9     0    48    7    63
Initial Fut:  15 1492   259   190 1076   140   157   91    46   254   78   235
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   16 1621   282   206 1169   152   170   99    50   276   85   256
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  16 1621   282   206 1169   152   170   99    50   276   85   256
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  16 1621   282   206 1169   152   170   99    50   276   85   256
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.67  0.33  1.00 1.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1600 1064   536  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.51  0.18  0.13 0.37  0.09  0.11 0.09  0.09  0.17 0.05  0.16
Crit Moves:       ****        ****              ****                        ****
*******************************************************************************
```

HCS+: Unsignalized Intersections Release 5.21

## TWO-WAY STOP CONTROL SUMMARY

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: AM Peak Hour
Intersection: PV Dr East/PV Dr South
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 With Project
Project ID: Marymount
East/West Street: Palos Verdes Dr South
North/South Street: Palos Verdes Drive East
Intersection Orientation: EW Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 206 | 520 | | | 593 | 85 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | | | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 223 | 565 | | | 644 | 92 |
| Percent Heavy Vehicles | 0 | -- | -- | | -- | -- |
| Median Type/Storage | Raised curb | | | / 1 | | |
| RT Channelized? | | | | | | No |
| Lanes | 1 | 1 | | | 1 | 1 |
| Configuration | L | T | | | T | R |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | | | | 41 | | 89 |
| Peak Hour Factor, PHF | | | | 0.92 | | 0.92 |
| Hourly Flow Rate, HFR | | | | 44 | | 96 |
| Percent Heavy Vehicles | | | | 0 | | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | / |
| Lanes | | | | 1 | | 1 |
| Configuration | | | | L | | R |

### Delay, Queue Length, and Level of Service

| Approach | EB | WB | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | L | | | | | L | | R |
| v (vph) | 223 | | | | | 44 | | 96 |
| C(m) (vph) | 879 | | | | | 193 | | 476 |
| v/c | 0.25 | | | | | 0.23 | | 0.20 |
| 95% queue length | 1.01 | | | | | 0.85 | | 0.75 |
| Control Delay | 10.5 | | | | | 29.1 | | 14.5 |
| LOS | B | | | | | D | | B |
| Approach Delay | | | | | | | 19.1 | |
| Approach LOS | | | | | | | C | |

HCS+: Unsignalized Intersections Release 5.21
Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: AM Peak Hour
Intersection: PV Dr East/PV Dr South
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 With Project
Project ID: Marymount
East/West Street: Palos Verdes Dr South
North/South Street: Palos Verdes Drive East
Intersection Orientation: EW Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 206 | 520 | | | 593 | 85 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | | | 0.92 | 0.92 |
| Peak-15 Minute Volume | 56 | 141 | | | 161 | 23 |
| Hourly Flow Rate, HFR | 223 | 565 | | | 644 | 92 |
| Percent Heavy Vehicles | 0 | -- | -- | | -- | -- |
| Median Type/Storage | Raised curb | | | / 1 | | |
| RT Channelized? | | | | | | No |
| Lanes | 1 | 1 | | | 1 | 1 |
| Configuration | L | T | | | T | R |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | | | | 41 | | 89 |
| Peak Hour Factor, PHF | | | | 0.92 | | 0.92 |
| Peak-15 Minute Volume | | | | 11 | | 24 |
| Hourly Flow Rate, HFR | | | | 44 | | 96 |
| Percent Heavy Vehicles | | | | 0 | | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | / |
| RT Channelized? | | | | | | No |
| Lanes | | | | 1 | | 1 |
| Configuration | | | | L | | R |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | | |
| Shared ln volume, major rt vehicles: | | |
| Sat flow rate, major th vehicles: | | |
| Sat flow rate, major rt vehicles: | | |
| Number of major street through lanes: | | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | | | | | 7.1 | | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | | | | | 0 | | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | | | | | 0.70 | | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | | | | | 6.4 | | 6.2 |
| | 2-stage | 4.1 | | | | | 5.4 | | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | | | | | 3.50 | | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | | | | | 0 | | 0 |
| t(f) | 2.2 | | | | | 3.5 | | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5
Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 736 | | | | | 1655 | | 644 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | | | | | 644 | 1011 | | |
| s | | | | | | 1500 | | |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | | 644 |
| Potential Capacity | | 476 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | | 476 |
| Probability of Queue free St. | 1.00 | 0.80 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | | 736 |
| Potential Capacity | | 879 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | | 879 |
| Probability of Queue free St. | 1.00 | 0.75 |
| Maj L-Shared Prob Q free St. | | |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | | |
| Potential Capacity | | |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 0.75 |
| Movement Capacity | | |
| Probability of Queue free St. | 1.00 | 1.00 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | | 1655 |
| Potential Capacity | | 109 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.75 | |
| Maj. L, Min T Adj. Imp Factor. | 0.80 | |
| Cap. Adj. factor due to Impeding mvmnt | 0.64 | 0.75 |
| Movement Capacity | | 81 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | | |
| Potential Capacity | 320 | 471 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 1.00 |
| Movement Capacity | 239 | 471 |
| Probability of Queue free St. | 1.00 | 1.00 |
| Part 2 - Second Stage | | |
| Conflicting Flows | | |
| Potential Capacity | 428 | 320 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.75 |
| Movement Capacity | 428 | 239 |
| Part 3 - Single Stage | | |
| Conflicting Flows | | |
| Potential Capacity | | |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 0.75 |
| Movement Capacity | | |
| Result for 2 stage process: | | |
| a | 0.91 | 0.91 |
| y | | |
| C t | | |
| Probability of Queue free St. | 1.00 | 1.00 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | | 644 |
| Potential Capacity | 355 | 527 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 1.00 |
| Movement Capacity | 265 | 527 |
| Part 2 - Second Stage | | |
| Conflicting Flows | | 1011 |
| Potential Capacity | 476 | 355 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.80 | 0.75 |
| Movement Capacity | 380 | 265 |
| Part 3 - Single Stage | | |
| Conflicting Flows | | 1655 |
| Potential Capacity | | 109 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.75 | |
| Maj. L, Min T Adj. Imp Factor. | 0.80 | |
| Cap. Adj. factor due to Impeding mvmnt | 0.64 | 0.75 |
| Movement Capacity | | 81 |
| Results for Two-stage process: | | |
| a | 0.91 | 0.91 |
| y | | 2.42 |
| C t | | 193 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | | | | 44 | | 96 |
| Movement Capacity (vph) | | | | 193 | | 476 |
| Shared Lane Capacity (vph) | | | | | | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | | | | 193 | | 476 |
| Volume | | | | 44 | | 96 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | | | | | | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | L | | | | | L | | R |
| v (vph) | 223 | | | | | 44 | | 96 |
| C(m) (vph) | 879 | | | | | 193 | | 476 |
| v/c | 0.25 | | | | | 0.23 | | 0.20 |
| 95% queue length | 1.01 | | | | | 0.85 | | 0.75 |
| Control Delay | 10.5 | | | | | 29.1 | | 14.5 |
| LOS | B | | | | | D | | B |
| Approach Delay | | | | | | | 19.1 | |
| Approach LOS | | | | | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.75 | 1.00 |
| v(il), Volume for stream 2 or 5 | | |
| v(i2), Volume for stream 3 or 6 | | |
| s(il), Saturation flow rate for stream 2 or 5 | | |
| s(i2), Saturation flow rate for stream 3 or 6 | | |
| P*(oj) | | |
| d(M,LT), Delay for stream 1 or 4 | 10.5 | |
| N, Number of major street through lanes | | |
| d(rank,1) Delay for stream 2 or 5 | | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
MITIGATED FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.896 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 98 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Ovl | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 0 1 0 | | | 1 0 1 0 0 | | | 0 0 0 0 0 | | | 1 0 0 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 138 | 157 | 419 | 200 | 0 | 0 | 0 | 0 | 293 | 0 | 351 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 138 | 157 | 419 | 200 | 0 | 0 | 0 | 0 | 293 | 0 | 351 |
| Added Vol: | 0 | 10 | 63 | 0 | 9 | 0 | 0 | 0 | 0 | 61 | 0 | 0 |
| Cumulative: | 0 | 0 | 10 | 10 | 1 | 0 | 0 | 0 | 0 | 10 | 0 | 10 |
| Initial Fut: | 0 | 148 | 230 | 429 | 210 | 0 | 0 | 0 | 0 | 364 | 0 | 361 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 161 | 250 | 466 | 228 | 0 | 0 | 0 | 0 | 396 | 0 | 392 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 161 | 250 | 466 | 228 | 0 | 0 | 0 | 0 | 396 | 0 | 392 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 161 | 250 | 466 | 228 | 0 | 0 | 0 | 0 | 396 | 0 | 392 |
| OvlAdjVol: | | | | | | | | | | | | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 0.39 | 0.61 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 626 | 974 | 1600 | 1600 | 0 | 0 | 0 | 0 | 1600 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.26 | 0.26 | 0.29 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 0.25 |
| OvlAdjV/S: | | | | | | | | | | | | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |





MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
MITIGATED FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 WESTERN AVENUE/CAPITOL DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.011 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 180 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 0 1 0 | | | 1 0 1 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 75 | 1098 | 86 | 185 | 1294 | 50 | 76 | 65 | 30 | 153 | 104 | 162 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 78 | 1146 | 90 | 193 | 1351 | 52 | 79 | 68 | 31 | 160 | 109 | 169 |
| Added Vol: | 0 | 10 | 5 | 0 | 9 | 28 | 29 | 10 | 0 | 5 | 9 | 0 |
| Cumulative: | 4 | 155 | 75 | 97 | 82 | 1 | 1 | 22 | 0 | 99 | 20 | 63 |
| Initial Fut: | 82 | 1311 | 170 | 290 | 1442 | 81 | 109 | 100 | 31 | 264 | 138 | 232 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 89 | 1425 | 185 | 315 | 1567 | 88 | 119 | 109 | 34 | 287 | 150 | 252 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 89 | 1425 | 185 | 315 | 1567 | 88 | 119 | 109 | 34 | 287 | 150 | 252 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 89 | 1425 | 185 | 315 | 1567 | 88 | 119 | 109 | 34 | 287 | 150 | 252 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 0.76 | 0.24 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 1218 | 382 | 1600 | 1600 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.45 | 0.12 | 0.20 | 0.49 | 0.06 | 0.07 | 0.09 | 0.09 | 0.18 | 0.09 | 0.16 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |

HCS+: Unsignalized Intersections Release 5.21

## TWO-WAY STOP CONTROL SUMMARY

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: PM PEAK HOUR
Intersection: PV Dr East/PV Dr South
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 With Project
Project ID:
East/West Street: Palos Verdes Dr South
North/South Street: Palos Verdes Drive East
Intersection Orientation: EW Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 L | 2 T | 3 R | 4 L | 5 T | 6 R |
| Volume | 123 | 722 | | | 595 | 68 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | | | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 133 | 784 | | | 646 | 73 |
| Percent Heavy Vehicles | 0 | -- | -- | | -- | -- |
| Median Type/Storage | Raised curb / 1 | | | | | |
| RT Channelized? | | | | | | No |
| Lanes | 1 | 1 | | | 1 | 1 |
| Configuration | L | T | | | T | R |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
| Volume | | | | 60 | | 119 |
| Peak Hour Factor, PHF | | | | 0.92 | | 0.92 |
| Hourly Flow Rate, HFR | | | | 65 | | 129 |
| Percent Heavy Vehicles | | | | 0 | | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | / |
| Lanes | | | | 1 | | 1 |
| Configuration | | | | L | | R |

### Delay, Queue Length, and Level of Service

| Approach | EB | WB | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | L | | | | | L | | R |
| v (vph) | 133 | | | | | 65 | | 129 |
| C(m) (vph) | 892 | | | | | 206 | | 475 |
| v/c | 0.15 | | | | | 0.32 | | 0.27 |
| 95% queue length | 0.52 | | | | | 1.29 | | 1.09 |
| Control Delay | 9.7 | | | | | 30.3 | | 15.4 |
| LOS | A | | | | | D | | C |
| Approach Delay | | | | | | | 20.4 | |
| Approach LOS | | | | | | | C | |

HCS+: Unsignalized Intersections Release 5.21
Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: PM PEAK HOUR
Intersection: PV Dr East/PV Dr South
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 With Project
Project ID:
East/West Street: Palos Verdes Dr South
North/South Street: Palos Verdes Drive East
Intersection Orientation: EW Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 L | 2 T | 3 R | 4 L | 5 T | 6 R |
|---|---|---|---|---|---|---|
| Volume | 123 | 722 | | | 595 | 68 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | | | 0.92 | 0.92 |
| Peak-15 Minute Volume | 33 | 196 | | | 162 | 18 |
| Hourly Flow Rate, HFR | 133 | 784 | | | 646 | 73 |
| Percent Heavy Vehicles | 0 | -- | -- | | -- | -- |
| Median Type/Storage | Raised curb / 1 | | | | | |
| RT Channelized? | | | | | | No |
| Lanes | 1 | 1 | | | 1 | 1 |
| Configuration | L | T | | | T | R |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume | | | | 60 | | 119 |
| Peak Hour Factor, PHF | | | | 0.92 | | 0.92 |
| Peak-15 Minute Volume | | | | 16 | | 32 |
| Hourly Flow Rate, HFR | | | | 65 | | 129 |
| Percent Heavy Vehicles | | | | 0 | | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | / |
| RT Channelized? | | | | | | No |
| Lanes | | | | 1 | | 1 |
| Configuration | | | | L | | R |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

### Upstream Signal Data

| | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|
| S2 Left-Turn | | | | | | | |
| Through | | | | | | | |

S5 Left-Turn
Through

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | | |
| Shared ln volume, major rt vehicles: | | |
| Sat flow rate, major th vehicles: | | |
| Sat flow rate, major rt vehicles: | | |
| Number of major street through lanes: | | |

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | | | | | 7.1 | | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | | | | | 0 | | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | | | | | 0.70 | | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | | | | | 6.4 | | 6.2 |
| | 2-stage | 4.1 | | | | | 5.4 | | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | | | | | 3.50 | | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | | | | | 0 | | 0 |
| t(f) | 2.2 | | | | | 3.5 | | 3.3 |

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 719 | | | | | 1696 | | 646 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | | | | | 646 | 1050 | | |
| s | | | | | | 1500 | | |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | | 646 |
| Potential Capacity | | 475 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | | 475 |
| Probability of Queue free St. | 1.00 | 0.73 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | | 719 |
| Potential Capacity | | 892 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | | 892 |
| Probability of Queue free St. | 1.00 | 0.85 |
| Maj L-Shared Prob Q free St. | | |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | | |
| Potential Capacity | | |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.85 | 0.85 |
| Movement Capacity | | |
| Probability of Queue free St. | 1.00 | 1.00 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | | 1696 |
| Potential Capacity | | 103 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.85 | |
| Maj. L, Min T Adj. Imp Factor. | 0.89 | |
| Cap. Adj. factor due to Impeding mvmnt | 0.65 | 0.85 |
| Movement Capacity | | 88 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| **Part 1 - First Stage** | | |
| Conflicting Flows | | |
| Potential Capacity | 307 | 470 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.85 | 1.00 |
| Movement Capacity | 261 | 470 |
| Probability of Queue free St. | 1.00 | 1.00 |
| **Part 2 - Second Stage** | | |
| Conflicting Flows | | |
| Potential Capacity | 436 | 307 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.85 |
| Movement Capacity | 436 | 261 |
| **Part 3 - Single Stage** | | |
| Conflicting Flows | | |
| Potential Capacity | | |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.85 | 0.85 |
| Movement Capacity | | |
| **Result for 2 stage process:** | | |
| a | 0.91 | 0.91 |
| y | | |
| C t | | |
| Probability of Queue free St. | 1.00 | 1.00 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| **Part 1 - First Stage** | | |
| Conflicting Flows | | 646 |
| Potential Capacity | 340 | 526 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.85 | 1.00 |
| Movement Capacity | 289 | 526 |
| **Part 2 - Second Stage** | | |
| Conflicting Flows | | 1050 |
| Potential Capacity | 472 | 340 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.73 | 0.85 |
| Movement Capacity | 344 | 289 |
| **Part 3 - Single Stage** | | |
| Conflicting Flows | | 1696 |
| Potential Capacity | | 103 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.85 | |
| Maj. L, Min T Adj. Imp Factor. | 0.89 | |
| Cap. Adj. factor due to Impeding mvmnt | 0.65 | 0.85 |
| Movement Capacity | | 88 |
| **Results for Two-stage process:** | | |
| a | 0.91 | 0.91 |
| y | | 2.18 |
| C t | | 206 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | | | | 65 | | 129 |
| Movement Capacity (vph) | | | | 206 | | 475 |
| Shared Lane Capacity (vph) | | | | | | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | | | | 206 | | 475 |
| Volume | | | | 65 | | 129 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | | | | | | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | L | | | | | L | | R |
| v (vph) | 133 | | | | | 65 | | 129 |
| C(m) (vph) | 892 | | | | | 206 | | 475 |
| v/c | 0.15 | | | | | 0.32 | | 0.27 |

| | | | | |
|---|---|---|---|---|
| 95% queue length | 0.52 | 1.29 | | 1.09 |
| Control Delay | 9.7 | 30.3 | | 15.4 |
| LOS | A | D | | C |
| Approach Delay | | | 20.4 | |
| Approach LOS | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.85 | 1.00 |
| v(il), Volume for stream 2 or 5 | | |
| v(i2), Volume for stream 3 or 6 | | |
| s(il), Saturation flow rate for stream 2 or 5 | | |
| s(i2), Saturation flow rate for stream 3 or 6 | | |
| P*(oj) | | |
| d(M,LT), Delay for stream 1 or 4 | 9.7 | |
| N, Number of major street through lanes | | |
| d(rank,1) Delay for stream 2 or 5 | | |

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
      MITIGATED FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                        WEEKDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):        0.798
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        66               Level Of Service:                 C
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include            Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  144   161   283  232     0     0    0     0   254    0   220
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  144   161   283  232     0     0    0     0   254    0   220
Added Vol:      0   10    64     0   12     0     0    0     0    79    0     0
Cumulative:     0    1    11    11    3     0     0    0     0    10    0    10
Initial Fut:    0  155   236   294  247     0     0    0     0   343    0   230
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  168   257   320  268     0     0    0     0   373    0   250
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  168   257   320  268     0     0    0     0   373    0   250
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0  168   257   320  268     0     0    0     0   373    0   250
OvlAdjVol:                                                                    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.40  0.60  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Final Sat.:     0  634   966  1600 1600     0     0    0     0  1600    0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.27  0.27  0.20 0.17  0.00  0.00 0.00  0.00  0.23 0.00  0.16
OvlAdjV/S:                                                                 0.00
Crit Moves:       ****        ****                              ****
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.21

## TWO-WAY STOP CONTROL SUMMARY

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: Weekday Mid-day Peak Hour
Intersection: PV Dr East/PV Dr South
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 With Project
Project ID: Marymount
East/West Street: Palos Verdes Dr South
North/South Street: Palos Verdes Drive East
Intersection Orientation: EW Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 L | 2 T | 3 R | 4 L | 5 T | 6 R |
| Volume | 68 | 536 | | | 467 | 48 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | | | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 73 | 582 | | | 507 | 52 |
| Percent Heavy Vehicles | 0 | -- | -- | | -- | -- |
| Median Type/Storage | Raised curb | | / 1 | | | |
| RT Channelized? | | | | | | No |
| Lanes | 1 | 1 | | | 1 | 1 |
| Configuration | L | T | | | T | R |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
| Volume | | | | 70 | | 91 |
| Peak Hour Factor, PHF | | | | 0.92 | | 0.92 |
| Hourly Flow Rate, HFR | | | | 76 | | 98 |
| Percent Heavy Vehicles | | | | 0 | | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | / |
| Lanes | | | | 1 | | 1 |
| Configuration | | | | L | | R |

### Delay, Queue Length, and Level of Service

| Approach | EB | WB | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | L | | | | | L | | R |
| v (vph) | 73 | | | | | 76 | | 98 |
| C(m) (vph) | 1022 | | | | | 316 | | 570 |
| v/c | 0.07 | | | | | 0.24 | | 0.17 |
| 95% queue length | 0.23 | | | | | 0.92 | | 0.62 |
| Control Delay | 8.8 | | | | | 20.0 | | 12.6 |
| LOS | A | | | | | C | | B |
| Approach Delay | | | | | | | 15.8 | |
| Approach LOS | | | | | | | C | |

HCS+: Unsignalized Intersections Release 5.21
Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: Weekday Mid-day Peak Hour
Intersection: PV Dr East/PV Dr South
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 With Project
Project ID: Marymount
East/West Street: Palos Verdes Dr South
North/South Street: Palos Verdes Drive East
Intersection Orientation: EW Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 L | 2 T | 3 R | 4 L | 5 T | 6 R |
|---|---|---|---|---|---|---|
| Volume | 68 | 536 | | | 467 | 48 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | | | 0.92 | 0.92 |
| Peak-15 Minute Volume | 18 | 146 | | | 127 | 13 |
| Hourly Flow Rate, HFR | 73 | 582 | | | 507 | 52 |
| Percent Heavy Vehicles | 0 | -- | -- | | -- | -- |
| Median Type/Storage | Raised curb | | / 1 | | | |
| RT Channelized? | | | | | | No |
| Lanes | 1 | 1 | | | 1 | 1 |
| Configuration | L | T | | | T | R |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume | | | | 70 | | 91 |
| Peak Hour Factor, PHF | | | | 0.92 | | 0.92 |
| Peak-15 Minute Volume | | | | 19 | | 25 |
| Hourly Flow Rate, HFR | | | | 76 | | 98 |
| Percent Heavy Vehicles | | | | 0 | | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | / | | | / |
| RT Channelized? | | | | | | No |
| Lanes | | | | 1 | | 1 |
| Configuration | | | | L | | R |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | | |
| Shared ln volume, major rt vehicles: | | |
| Sat flow rate, major th vehicles: | | |
| Sat flow rate, major rt vehicles: | | |
| Number of major street through lanes: | | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | | | | | 7.1 | | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | | | | | 0 | | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | | | | | 0.70 | | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | | | | | 6.4 | | 6.2 |
| | 2-stage | 4.1 | | | | | 5.4 | | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | | | | | 3.50 | | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | | | | | 0 | | 0 |
| t(f) | 2.2 | | | | | 3.5 | | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | 0.000 | | 0.000 | |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Two-Stage Process Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 559 | | | | | 1235 | | 507 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | | | | | 507 | 728 | | |
| s | | | | | | 1500 | | |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | | 507 |
| Potential Capacity | | 570 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | | 570 |
| Probability of Queue free St. | 1.00 | 0.83 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | | 559 |
| Potential Capacity | | 1022 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | | 1022 |
| Probability of Queue free St. | 1.00 | 0.93 |
| Maj L-Shared Prob Q free St. | | |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | | |
| Potential Capacity | | |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.93 | 0.93 |
| Movement Capacity | | |
| Probability of Queue free St. | 1.00 | 1.00 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | | 1235 |
| Potential Capacity | | 197 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.93 | |
| Maj. L, Min T Adj. Imp Factor. | 0.95 | |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.93 |
| Movement Capacity | | 183 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | | |
| Potential Capacity | 432 | 543 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.93 | 1.00 |
| Movement Capacity | 401 | 543 |
| Probability of Queue free St. | 1.00 | 1.00 |
| Part 2 - Second Stage | | |
| Conflicting Flows | | |
| Potential Capacity | 514 | 432 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.93 |
| Movement Capacity | 514 | 401 |
| Part 3 - Single Stage | | |
| Conflicting Flows | | |
| Potential Capacity | | |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.93 | 0.93 |
| Movement Capacity | | |
| Result for 2 stage process: | | |
| a | 0.91 | 0.91 |
| y | | |
| C t | | |
| Probability of Queue free St. | 1.00 | 1.00 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | | 507 |
| Potential Capacity | 482 | 609 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.93 | 1.00 |
| Movement Capacity | 448 | 609 |
| Part 2 - Second Stage | | |
| Conflicting Flows | | 728 |
| Potential Capacity | 563 | 482 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.83 | 0.93 |
| Movement Capacity | 466 | 448 |
| Part 3 - Single Stage | | |
| Conflicting Flows | | 1235 |
| Potential Capacity | | 197 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.93 | |
| Maj. L, Min T Adj. Imp Factor. | 0.95 | |
| Cap. Adj. factor due to Impeding mvmnt | 0.78 | 0.93 |
| Movement Capacity | | 183 |
| Results for Two-stage process: | | |
| a | 0.91 | 0.91 |
| y | | 1.61 |
| C t | | 316 |

Worksheet 8-Shared Lane Calculations

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| Volume (vph) | | | | 76 | | 98 |
| Movement Capacity (vph) | | | | 316 | | 570 |
| Shared Lane Capacity (vph) | | | | | | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|
| C sep | | | | 316 | | 570 |
| Volume | | | | 76 | | 98 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | | | | | | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | L | | | | | L | | R |
| v (vph) | 73 | | | | | 76 | | 98 |
| C(m) (vph) | 1022 | | | | | 316 | | 570 |
| v/c | 0.07 | | | | | 0.24 | | 0.17 |
| 95% queue length | 0.23 | | | | | 0.92 | | 0.62 |
| Control Delay | 8.8 | | | | | 20.0 | | 12.6 |
| LOS | A | | | | | C | | B |
| Approach Delay | | | | | | | 15.8 | |
| Approach LOS | | | | | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.93 | 1.00 |
| v(il), Volume for stream 2 or 5 | | |
| v(i2), Volume for stream 3 or 6 | | |
| s(il), Saturation flow rate for stream 2 or 5 | | |
| s(i2), Saturation flow rate for stream 3 or 6 | | |
| P*(oj) | | |
| d(M,LT), Delay for stream 1 or 4 | 8.8 | |
| N, Number of major street through lanes | | |
| d(rank,1) Delay for stream 2 or 5 | | |

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
MITIGATED FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
WEEKDAY (2:00-4:00) PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.899 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 99 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Ovl | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 0 1 0 | | | 1 0 1 0 0 | | | 0 0 0 0 0 | | | 1 0 0 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 242 | 197 | 342 | 262 | 0 | 0 | 0 | 0 | 208 | 0 | 278 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 242 | 197 | 342 | 262 | 0 | 0 | 0 | 0 | 208 | 0 | 278 |
| Added Vol: | 0 | 13 | 81 | 0 | 8 | 0 | 0 | 0 | 0 | 51 | 0 | 0 |
| Cumulative: | 0 | 1 | 14 | 14 | 3 | 0 | 0 | 0 | 0 | 13 | 0 | 13 |
| Initial Fut: | 0 | 256 | 292 | 356 | 273 | 0 | 0 | 0 | 0 | 272 | 0 | 291 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 278 | 317 | 387 | 297 | 0 | 0 | 0 | 0 | 296 | 0 | 316 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 278 | 317 | 387 | 297 | 0 | 0 | 0 | 0 | 296 | 0 | 316 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 278 | 317 | 387 | 297 | 0 | 0 | 0 | 0 | 296 | 0 | 316 |
| OvlAdjVol: | | | | | | | | | | | | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 0.47 | 0.53 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 747 | 853 | 1600 | 1600 | 0 | 0 | 0 | 0 | 1600 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.37 | 0.37 | 0.24 | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.18 | 0.00 | 0.20 |
| OvlAdjV/S: | | | | | | | | | | | | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |

```
                 HCS+: Unsignalized Intersections Release 5.21

_______________________TWO-WAY STOP CONTROL SUMMARY___________________________

Analyst:              PM
Agency/Co.:           RBF
Date Performed:       11-18-2009
Analysis Time Period: AFTERNOON 2-4PM PEAK HOUR
Intersection:         PV Dr East/PV Dr South
Jurisdiction:         RPV
Units: U. S. Customary
Analysis Year:        2012 With Project
Project ID:  Marymount
East/West Street:     Palos Verdes Dr South
North/South Street:   Palos Verdes Drive East
Intersection Orientation: EW                Study period (hrs):  0.25

_____________________Vehicle Volumes and Adjustments__________________________
Major Street:  Approach        Eastbound             Westbound
               Movement     1      2      3     |  4      5      6
                            L      T      R     |  L      T      R
______________________________________________________________________________
Volume                      210    683                    557    64
Peak-Hour Factor, PHF       0.92   0.92                   0.92   0.92
Hourly Flow Rate, HFR       228    742                    605    69
Percent Heavy Vehicles      0      --     --              --     --
Median Type/Storage         Raised curb          / 1
RT Channelized?                                               No
Lanes                          1   1                      1    1
Configuration                   L  T                      T   R
Upstream Signal?                   No                     No
______________________________________________________________________________
Minor Street:  Approach        Northbound            Southbound
               Movement     7      8      9     |  10     11     12
                            L      T      R     |  L      T      R
______________________________________________________________________________
Volume                                             73            145
Peak Hour Factor, PHF                              0.92          0.92
Hourly Flow Rate, HFR                              79            157
Percent Heavy Vehicles                             0             0
Percent Grade (%)                  0                      0
Flared Approach:  Exists?/Storage               /                     /
Lanes                                                 1        1
Configuration                                          L      R
______________________________________________________________________________

_________________Delay, Queue Length, and Level of Service_____________________
Approach           EB     WB         Northbound           Southbound
Movement           1      4   |  7      8      9    |  10     11     12
Lane Config        L          |                     |  L             R
______________________________________________________________________________
v (vph)            228                                 79            157
C(m) (vph)         927                                 166           501
v/c                0.25                                0.48          0.31
95% queue length   0.97                                2.26          1.33
Control Delay      10.1                                45.0          15.4
LOS                 B                                   E             C
Approach Delay                                               25.3
Approach LOS                                                  D
______________________________________________________________________________
```

```
                 HCS+: Unsignalized Intersections Release 5.21
Phone:                                          Fax:
E-Mail:

______________________TWO-WAY STOP CONTROL(TWSC) ANALYSIS_____________________

Analyst:              PM
Agency/Co.:           RBF
Date Performed:       11-18-2009
Analysis Time Period: AFTERNOON 2-4PM PEAK HOUR
Intersection:         PV Dr East/PV Dr South
Jurisdiction:         RPV
Units: U. S. Customary
Analysis Year:        2012 With Project
Project ID:  Marymount
East/West Street:     Palos Verdes Dr South
North/South Street:   Palos Verdes Drive East
Intersection Orientation: EW                Study period (hrs):  0.25

________________________Vehicle Volumes and Adjustments_______________________
Major Street Movements      1      2      3      4      5      6
                            L      T      R      L      T      R
______________________________________________________________________________
Volume                     210    683                  557    64
Peak-Hour Factor, PHF      0.92   0.92                 0.92   0.92
Peak-15 Minute Volume      57     186                  151    17
Hourly Flow Rate, HFR      228    742                  605    69
Percent Heavy Vehicles     0      --     --            --     --
Median Type/Storage         Raised curb          / 1
RT Channelized?                                               No
Lanes                         1   1                    1    1
Configuration                  L  T                    T   R
Upstream Signal?                  No                   No
______________________________________________________________________________
Minor Street Movements      7      8      9      10     11     12
                            L      T      R      L      T      R
______________________________________________________________________________
Volume                                           73            145
Peak Hour Factor, PHF                            0.92          0.92
Peak-15 Minute Volume                            20            39
Hourly Flow Rate, HFR                            79            157
Percent Heavy Vehicles                           0             0
Percent Grade (%)                 0                     0
Flared Approach:  Exists?/Storage             /                     /
RT Channelized?                                                No
Lanes                                               1        1
Configuration                                        L      R
______________________________________________________________________________

______________________Pedestrian Volumes and Adjustments_______________________
Movements                     13     14     15     16
______________________________________________________________________________
Flow (ped/hr)                 0      0      0      0
Lane Width (ft)               12.0   12.0   12.0   12.0
Walking Speed (ft/sec)        4.0    4.0    4.0    4.0
Percent Blockage              0      0      0      0
______________________________________________________________________________
```

Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | | |
| Shared ln volume, major rt vehicles: | | |
| Sat flow rate, major th vehicles: | | |
| Sat flow rate, major rt vehicles: | | |
| Number of major street through lanes: | | |

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | | | | | 7.1 | | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | | | | | 0 | | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | | | | | 0.70 | | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | | | | | 6.4 | | 6.2 |
| | 2-stage | 4.1 | | | | | 5.4 | | 6.2 |

Follow-Up Time Calculations

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | | | | | 3.50 | | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | | | | | 0 | | 0 |
| t(f) | 2.2 | | | | | 3.5 | | 3.3 |

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2 V(t) | Movement 2 V(l,prot) | Movement 5 V(t) | Movement 5 V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | 0.000 | | 0.000 | |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1) Single-stage Process | (2) Two-Stage Process Stage I | (3) Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5
Single-Stage Process

| Movement | 1 L | 4 L | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 674 | | | | | 1803 | | 605 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7 Stage1 | 7 Stage2 | 8 Stage1 | 8 Stage2 | 10 Stage1 | 10 Stage2 | 11 Stage1 | 11 Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | | | | | 605 | 1198 | | |
| s | | | | | | 1500 | | |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | | 605 |
| Potential Capacity | | 501 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | | 501 |
| Probability of Queue free St. | 1.00 | 0.69 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | | 674 |
| Potential Capacity | | 927 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | | 927 |
| Probability of Queue free St. | 1.00 | 0.75 |
| Maj L-Shared Prob Q free St. | | |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | | |
| Potential Capacity | | |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 0.75 |
| Movement Capacity | | |
| Probability of Queue free St. | 1.00 | 1.00 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | | 1803 |
| Potential Capacity | | 88 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.75 | |
| Maj. L, Min T Adj. Imp Factor. | 0.81 | |
| Cap. Adj. factor due to Impeding mvmnt | 0.56 | 0.75 |
| Movement Capacity | | 66 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | | |
| Potential Capacity | 261 | 491 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 1.00 |
| Movement Capacity | 197 | 491 |
| Probability of Queue free St. | 1.00 | 1.00 |
| Part 2 - Second Stage | | |
| Conflicting Flows | | |
| Potential Capacity | 457 | 261 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.75 |
| Movement Capacity | 457 | 197 |
| Part 3 - Single Stage | | |
| Conflicting Flows | | |
| Potential Capacity | | |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 0.75 |
| Movement Capacity | | |
| Result for 2 stage process: | | |
| a | 0.91 | 0.91 |
| y | | |
| C t | | |
| Probability of Queue free St. | 1.00 | 1.00 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | | 605 |
| Potential Capacity | 289 | 549 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.75 | 1.00 |
| Movement Capacity | 218 | 549 |
| Part 2 - Second Stage | | |
| Conflicting Flows | | 1198 |
| Potential Capacity | 487 | 289 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.69 | 0.75 |
| Movement Capacity | 334 | 218 |
| Part 3 - Single Stage | | |
| Conflicting Flows | | 1803 |
| Potential Capacity | | 88 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.75 | |
| Maj. L, Min T Adj. Imp Factor. | 0.81 | |
| Cap. Adj. factor due to Impeding mvmnt | 0.56 | 0.75 |
| Movement Capacity | | 66 |
| Results for Two-stage process: | | |
| a | 0.91 | 0.91 |
| y | | 3.18 |
| C t | | 166 |

Worksheet 8-Shared Lane Calculations

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume (vph) | | | | 79 | | 157 |
| Movement Capacity (vph) | | | | 166 | | 501 |
| Shared Lane Capacity (vph) | | | | | | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| C sep | | | | 166 | | 501 |
| Volume | | | | 79 | | 157 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | | | | | | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | L | | | | | L | | R |
| v (vph) | 228 | | | | | 79 | | 157 |
| C(m) (vph) | 927 | | | | | 166 | | 501 |
| v/c | 0.25 | | | | | 0.48 | | 0.31 |
| 95% queue length | 0.97 | | | | | 2.26 | | 1.33 |
| Control Delay | 10.1 | | | | | 45.0 | | 15.4 |
| LOS | B | | | | | E | | C |
| Approach Delay | | | | | | | 25.3 | |
| Approach LOS | | | | | | | D | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.75 | 1.00 |
| v(il), Volume for stream 2 or 5 | | |
| v(i2), Volume for stream 3 or 6 | | |
| s(il), Saturation flow rate for stream 2 or 5 | | |
| s(i2), Saturation flow rate for stream 3 or 6 | | |
| P*(oj) | | |
| d(M,LT), Delay for stream 1 or 4 | 10.1 | |
| N, Number of major street through lanes | | |
| d(rank,1) Delay for stream 2 or 5 | | |

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
      MITIGATED FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF RPV
                       SATURDAY (11:00-1:00) PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 PALOS VERDES DRIVE EAST/MIRALESTE DRIVE
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.670
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        47                Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  161   123   296  158     0     0    0     0   127    0   259
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  161   123   296  158     0     0    0     0   127    0   259
Added Vol:      0    5    31     0    7     0     0    0     0    42    0     0
Cumulative:     0    3    17    17    1     0     0    0     0    17    0    17
Initial Fut:    0  169   171   313  166     0     0    0     0   186    0   276
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  184   186   340  180     0     0    0     0   202    0   300
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  184   186   340  180     0     0    0     0   202    0   300
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0  184   186   340  180     0     0    0     0   202    0   300
OvlAdjVol:                                                                    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.50  0.50  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Final Sat.:     0  795   805  1600 1600     0     0    0     0  1600    0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.23  0.23  0.21 0.11  0.00  0.00 0.00  0.00  0.13 0.00  0.19
OvlAdjV/S:                                                                 0.00
Crit Moves:       ****        ****                               ****
********************************************************************************
```

HCS+: Unsignalized Intersections Release 5.21

## TWO-WAY STOP CONTROL SUMMARY

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: Saturday Peak Hour
Intersection: PV Dr East/PV Dr South
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 With Project
Project ID: Marymount
East/West Street: Palos Verdes Dr South
North/South Street: Palos Verdes Drive East
Intersection Orientation: EW Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street: Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume | 92 | 695 | | | 736 | 71 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | | | 0.92 | 0.92 |
| Hourly Flow Rate, HFR | 99 | 755 | | | 799 | 77 |
| Percent Heavy Vehicles | 0 | -- | -- | | -- | -- |
| Median Type/Storage | Raised curb | | | / 1 | | |
| RT Channelized? | | | | | | No |
| Lanes | 1 | 1 | | | 1 | 1 |
| Configuration | L | T | | | T | R |
| Upstream Signal? | | No | | | No | |

| Minor Street: Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume | | | | 40 | | 84 |
| Peak Hour Factor, PHF | | | | 0.92 | | 0.92 |
| Hourly Flow Rate, HFR | | | | 43 | | 91 |
| Percent Heavy Vehicles | | | | 0 | | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | | / | | / |
| Lanes | | | | 1 | | 1 |
| Configuration | | | | L | | R |

### Delay, Queue Length, and Level of Service

| Approach | EB | WB | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | L | | | | | L | | R |
| v (vph) | 99 | | | | | 43 | | 91 |
| C(m) (vph) | 779 | | | | | 210 | | 389 |
| v/c | 0.13 | | | | | 0.20 | | 0.23 |
| 95% queue length | 0.43 | | | | | 0.75 | | 0.89 |
| Control Delay | 10.3 | | | | | 26.5 | | 17.1 |
| LOS | B | | | | | D | | C |
| Approach Delay | | | | | | | 20.1 | |
| Approach LOS | | | | | | | C | |

HCS+: Unsignalized Intersections Release 5.21

Phone: Fax:
E-Mail:

## TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: PM
Agency/Co.: RBF
Date Performed: 11-18-2009
Analysis Time Period: Saturday Peak Hour
Intersection: PV Dr East/PV Dr South
Jurisdiction: RPV
Units: U. S. Customary
Analysis Year: 2012 With Project
Project ID: Marymount
East/West Street: Palos Verdes Dr South
North/South Street: Palos Verdes Drive East
Intersection Orientation: EW Study period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street Movements | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | 92 | 695 | | | 736 | 71 |
| Peak-Hour Factor, PHF | 0.92 | 0.92 | | | 0.92 | 0.92 |
| Peak-15 Minute Volume | 25 | 189 | | | 200 | 19 |
| Hourly Flow Rate, HFR | 99 | 755 | | | 799 | 77 |
| Percent Heavy Vehicles | 0 | -- | -- | | -- | -- |
| Median Type/Storage | Raised curb | | | / 1 | | |
| RT Channelized? | | | | | | No |
| Lanes | 1 | 1 | | | 1 | 1 |
| Configuration | L | T | | | T | R |
| Upstream Signal? | | No | | | No | |

| Minor Street Movements | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| | L | T | R | L | T | R |
| Volume | | | | 40 | | 84 |
| Peak Hour Factor, PHF | | | | 0.92 | | 0.92 |
| Peak-15 Minute Volume | | | | 11 | | 23 |
| Hourly Flow Rate, HFR | | | | 43 | | 91 |
| Percent Heavy Vehicles | | | | 0 | | 0 |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach: Exists?/Storage | | | | / | | / |
| RT Channelized? | | | | | | No |
| Lanes | | | | 1 | | 1 |
| Configuration | | | | L | | R |

### Pedestrian Volumes and Adjustments

| Movements | 13 | 14 | 15 | 16 |
|---|---|---|---|---|
| Flow (ped/hr) | 0 | 0 | 0 | 0 |
| Lane Width (ft) | 12.0 | 12.0 | 12.0 | 12.0 |
| Walking Speed (ft/sec) | 4.0 | 4.0 | 4.0 | 4.0 |
| Percent Blockage | 0 | 0 | 0 | 0 |

## Upstream Signal Data

| | | Prog. Flow vph | Sat Flow vph | Arrival Type | Green Time sec | Cycle Length sec | Prog. Speed mph | Distance to Signal feet |
|---|---|---|---|---|---|---|---|---|
| S2 | Left-Turn | | | | | | | |
| | Through | | | | | | | |
| S5 | Left-Turn | | | | | | | |
| | Through | | | | | | | |

## Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

| | Movement 2 | Movement 5 |
|---|---|---|
| Shared ln volume, major th vehicles: | | |
| Shared ln volume, major rt vehicles: | | |
| Sat flow rate, major th vehicles: | | |
| Sat flow rate, major rt vehicles: | | |
| Number of major street through lanes: | | |

## Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

| Movement | | 1<br>L | 4<br>L | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|---|---|---|
| t(c,base) | | 4.1 | | | | | 7.1 | | 6.2 |
| t(c,hv) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| P(hv) | | 0 | | | | | 0 | | 0 |
| t(c,g) | | | | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 | 0.10 |
| Grade/100 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| t(3,lt) | | 0.00 | | | | | 0.70 | | 0.00 |
| t(c,T): | 1-stage | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 2-stage | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| t(c) | 1-stage | 4.1 | | | | | 6.4 | | 6.2 |
| | 2-stage | 4.1 | | | | | 5.4 | | 6.2 |

Follow-Up Time Calculations

| Movement | 1<br>L | 4<br>L | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|---|---|
| t(f,base) | 2.20 | | | | | 3.50 | | 3.30 |
| t(f,HV) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| P(HV) | 0 | | | | | 0 | | 0 |
| t(f) | 2.2 | | | | | 3.5 | | 3.3 |

## Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

| | Movement 2<br>V(t) | <br>V(l,prot) | Movement 5<br>V(t) | <br>V(l,prot) |
|---|---|---|---|---|
| V prog | | | | |
| Total Saturation Flow Rate, s (vph) | | | | |
| Arrival Type | | | | |
| Effective Green, g (sec) | | | | |
| Cycle Length, C (sec) | | | | |
| Rp (from Exhibit 16-11) | | | | |
| Proportion vehicles arriving on green P | | | | |
| g(q1) | | | | |
| g(q2) | | | | |
| g(q) | | | | |

Computation 2-Proportion of TWSC Intersection Time blocked

| | Movement 2<br>V(t) | <br>V(l,prot) | Movement 5<br>V(t) | <br>V(l,prot) |
|---|---|---|---|---|
| alpha | | | | |
| beta | | | | |
| Travel time, t(a) (sec) | | | | |
| Smoothing Factor, F | | | | |
| Proportion of conflicting flow, f | | | | |
| Max platooned flow, V(c,max) | | | | |
| Min platooned flow, V(c,min) | | | | |
| Duration of blocked period, t(p) | | | | |
| Proportion time blocked, p | | 0.000 | | 0.000 |

| Computation 3-Platoon Event Periods | Result |
|---|---|
| p(2) | 0.000 |
| p(5) | 0.000 |
| p(dom) | |
| p(subo) | |
| Constrained or unconstrained? | |

| Proportion unblocked for minor movements, p(x) | (1)<br>Single-stage Process | (2)<br>Two-Stage Process<br>Stage I | (3)<br><br>Stage II |
|---|---|---|---|
| p(1) | | | |
| p(4) | | | |
| p(7) | | | |
| p(8) | | | |
| p(9) | | | |
| p(10) | | | |
| p(11) | | | |
| p(12) | | | |

Computation 4 and 5

Single-Stage Process

| Movement | 1<br>L | 4<br>L | 7<br>L | 8<br>T | 9<br>R | 10<br>L | 11<br>T | 12<br>R |
|---|---|---|---|---|---|---|---|---|
| V c,x | 876 | | | | | 1752 | | 799 |
| s | | | | | | | | |
| Px | | | | | | | | |
| V c,u,x | | | | | | | | |
| C r,x | | | | | | | | |
| C plat,x | | | | | | | | |

Two-Stage Process

| | 7<br>Stage1 | <br>Stage2 | 8<br>Stage1 | <br>Stage2 | 10<br>Stage1 | <br>Stage2 | 11<br>Stage1 | <br>Stage2 |
|---|---|---|---|---|---|---|---|---|
| V(c,x) | | | | | 799 | 953 | | |
| s | | | | | | 1500 | | |
| P(x) | | | | | | | | |
| V(c,u,x) | | | | | | | | |
| C(r,x) | | | | | | | | |
| C(plat,x) | | | | | | | | |

## Worksheet 6-Impedance and Capacity Equations

| Step 1: RT from Minor St. | 9 | 12 |
|---|---|---|
| Conflicting Flows | | 799 |
| Potential Capacity | | 389 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | | 389 |
| Probability of Queue free St. | 1.00 | 0.77 |

| Step 2: LT from Major St. | 4 | 1 |
|---|---|---|
| Conflicting Flows | | 876 |
| Potential Capacity | | 779 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Movement Capacity | | 779 |
| Probability of Queue free St. | 1.00 | 0.87 |
| Maj L-Shared Prob Q free St. | | |

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Conflicting Flows | | |
| Potential Capacity | | |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.87 | 0.87 |
| Movement Capacity | | |
| Probability of Queue free St. | 1.00 | 1.00 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Conflicting Flows | | 1752 |
| Potential Capacity | | 95 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.87 | |
| Maj. L, Min T Adj. Imp Factor. | 0.90 | |
| Cap. Adj. factor due to Impeding mvmnt | 0.69 | 0.87 |
| Movement Capacity | | 83 |

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

| Step 3: TH from Minor St. | 8 | 11 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | | |
| Potential Capacity | 340 | 401 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.87 | 1.00 |
| Movement Capacity | 297 | 401 |
| Probability of Queue free St. | 1.00 | 1.00 |
| Part 2 - Second Stage | | |
| Conflicting Flows | | |
| Potential Capacity | 369 | 340 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 1.00 | 0.87 |
| Movement Capacity | 369 | 297 |
| Part 3 - Single Stage | | |
| Conflicting Flows | | |
| Potential Capacity | | |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.87 | 0.87 |
| Movement Capacity | | |
| Result for 2 stage process: | | |
| a | 0.91 | 0.91 |
| y | | |
| C t | | |
| Probability of Queue free St. | 1.00 | 1.00 |

| Step 4: LT from Minor St. | 7 | 10 |
|---|---|---|
| Part 1 - First Stage | | |
| Conflicting Flows | | 799 |
| Potential Capacity | 378 | 446 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.87 | 1.00 |
| Movement Capacity | 330 | 446 |
| Part 2 - Second Stage | | |
| Conflicting Flows | | 953 |
| Potential Capacity | 408 | 378 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Cap. Adj. factor due to Impeding mvmnt | 0.77 | 0.87 |
| Movement Capacity | 313 | 330 |
| Part 3 - Single Stage | | |
| Conflicting Flows | | 1752 |
| Potential Capacity | | 95 |
| Pedestrian Impedance Factor | 1.00 | 1.00 |
| Maj. L, Min T Impedance factor | 0.87 | |
| Maj. L, Min T Adj. Imp Factor. | 0.90 | |
| Cap. Adj. factor due to Impeding mvmnt | 0.69 | 0.87 |
| Movement Capacity | | 83 |
| Results for Two-stage process: | | |
| a | 0.91 | 0.91 |
| y | | 1.47 |
| C t | | 210 |

Worksheet 8-Shared Lane Calculations

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| Volume (vph) | | | | 43 | | 91 |
| Movement Capacity (vph) | | | | 210 | | 389 |
| Shared Lane Capacity (vph) | | | | | | |

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

| Movement | 7 L | 8 T | 9 R | 10 L | 11 T | 12 R |
|---|---|---|---|---|---|---|
| C sep | | | | 210 | | 389 |
| Volume | | | | 43 | | 91 |
| Delay | | | | | | |
| Q sep | | | | | | |
| Q sep +1 | | | | | | |
| round (Qsep +1) | | | | | | |
| n max | | | | | | |
| C sh | | | | | | |
| SUM C sep | | | | | | |
| n | | | | | | |
| C act | | | | | | |

Worksheet 10-Delay, Queue Length, and Level of Service

| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|
| Lane Config | L | | | | | L | | R |
| v (vph) | 99 | | | | | 43 | | 91 |
| C(m) (vph) | 779 | | | | | 210 | | 389 |
| v/c | 0.13 | | | | | 0.20 | | 0.23 |
| 95% queue length | 0.43 | | | | | 0.75 | | 0.89 |
| Control Delay | 10.3 | | | | | 26.5 | | 17.1 |
| LOS | B | | | | | D | | C |
| Approach Delay | | | | | | | 20.1 | |
| Approach LOS | | | | | | | C | |

Worksheet 11-Shared Major LT Impedance and Delay

| | Movement 2 | Movement 5 |
|---|---|---|
| p(oj) | 0.87 | 1.00 |
| v(il), Volume for stream 2 or 5 | | |
| v(i2), Volume for stream 3 or 6 | | |
| s(il), Saturation flow rate for stream 2 or 5 | | |
| s(i2), Saturation flow rate for stream 3 or 6 | | |
| P*(oj) | | |
| d(M,LT), Delay for stream 1 or 4 | 10.3 | |
| N, Number of major street through lanes | | |
| d(rank,1) Delay for stream 2 or 5 | | |

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
  MITIGATED FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
                                 AM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):          1.013
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       180              Level Of Service:                   F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      13 1332   208   132  907    85   132   74    44   190   53   165
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   14 1391   217   138  947    89   138   77    46   198   55   172
Added Vol:      0    5     3     0   16    49    16    5     0     8   16     0
Cumulative:     1   96    39    52  113     2     3    9     0    48    7    63
Initial Fut:   15 1492   259   190 1076   140   157   91    46   254   78   235
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    16 1621   282   206 1169   152   170   99    50   276   85   256
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   16 1621   282   206 1169   152   170   99    50   276   85   256
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   16 1621   282   206 1169   152   170   99    50   276   85   256
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.67  0.33  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425  948   477  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.57  0.20  0.14 0.41  0.11  0.12 0.10  0.10  0.19 0.06  0.18
Crit Volume:       811         206               170                         256
Crit Moves:       ****        ****              ****                        ****
********************************************************************************
```

```
-------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
  MITIGATED FORECAST YEAR 2012 WITH PROJECT CONDITIONS - CITY OF LOS ANGELES
                               PM PEAK HOUR
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):        1.023
Loss Time (sec):      10 (Y+R=4.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       180              Level Of Service:                 F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      75 1098    86   185 1294    50    76   65    30   153  104   162
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   78 1146    90   193 1351    52    79   68    31   160  109   169
Added Vol:      0   10     5     0    9    28    29   10     0     5    9     0
Cumulative:     4  155    75    97   82     1     1   22     0    99   20    63
Initial Fut:   82 1311   170   290 1442    81   109  100    31   264  138   232
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    89 1425   185   315 1567    88   119  109    34   287  150   252
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   89 1425   185   315 1567    88   119  109    34   287  150   252
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   89 1425   185   315 1567    88   119  109    34   287  150   252
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.76  0.24  1.00 1.00  1.00
Final Sat.:  1425 2850  1425  1425 2850  1425  1425 1085   340  1425 1425  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.50  0.13  0.22 0.55  0.06  0.08 0.10  0.10  0.20 0.10  0.18
Crit Volume:       713         315                     143         287
Crit Moves:       ****        ****                    ****        ****
*******************************************************************************
```

MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
MITIGATED FORECAST YEAR 2012 WITH PROJECT CONDITIONS - Caltrans
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 WESTERN AVENUE/CAPITOL DRIVE

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.904 |
| Loss Time (sec): | 10 (Y+R=4.0 sec) | Average Delay (sec/veh): | 28.0 |
| Optimal Cycle: | 107 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 2 0 1 | | | 1 0 2 0 1 | | | 1 0 0 1 0 | | | 1 0 1 0 1 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 13 | 1332 | 208 | 132 | 907 | 85 | 132 | 74 | 44 | 190 | 53 | 165 |
| Growth Adj: | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Initial Bse: | 14 | 1391 | 217 | 138 | 947 | 89 | 138 | 77 | 46 | 198 | 55 | 172 |
| Added Vol: | 0 | 5 | 3 | 0 | 16 | 49 | 16 | 5 | 0 | 8 | 16 | 0 |
| Cumulative: | 1 | 96 | 39 | 52 | 113 | 2 | 3 | 9 | 0 | 48 | 7 | 63 |
| Initial Fut: | 15 | 1492 | 259 | 190 | 1076 | 140 | 157 | 91 | 46 | 254 | 78 | 235 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 16 | 1621 | 282 | 206 | 1169 | 152 | 170 | 99 | 50 | 276 | 85 | 256 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1621 | 282 | 206 | 1169 | 152 | 170 | 99 | 50 | 276 | 85 | 256 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 16 | 1621 | 282 | 206 | 1169 | 152 | 170 | 99 | 50 | 276 | 85 | 256 |
| **Saturation Flow Module:** | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.69 | 0.95 | 0.95 | 0.58 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 0.67 | 0.33 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1319 | 1201 | 604 | 1104 | 1900 | 1615 |
| **Capacity Analysis Module:** | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.45 | 0.17 | 0.11 | 0.32 | 0.09 | 0.13 | 0.08 | 0.08 | 0.25 | 0.04 | 0.16 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.02 | 0.50 | 0.50 | 0.13 | 0.61 | 0.61 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| Volume/Cap: | 0.53 | 0.90 | 0.35 | 0.90 | 0.53 | 0.16 | 0.47 | 0.30 | 0.30 | 0.90 | 0.16 | 0.57 |
| Delay/Veh: | 66.4 | 29.9 | 15.6 | 78.0 | 11.7 | 8.6 | 31.0 | 28.8 | 28.8 | 63.3 | 27.5 | 32.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 66.4 | 29.9 | 15.6 | 78.0 | 11.7 | 8.6 | 31.0 | 28.8 | 28.8 | 63.3 | 27.5 | 32.8 |
| LOS by Move: | E | C | B | E | B | A | C | C | C | E | C | C |
| HCM2kAvgQ: | 1 | 28 | 5 | 10 | 11 | 2 | 5 | 4 | 4 | 12 | 2 | 7 |

Note: Queue reported is the number of cars per lane.

```
--------------------------------------------------------------------------------
 MARYMOUNT COLLEGE FACILITIES EXPANSION TRAFFIC IMPACT ANALYSIS (JN 10104089)
        MITIGATED FORECAST YEAR 2012 WITH PROJECT CONDITIONS - Caltrans
                                  PM PEAK HOUR
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #7 WESTERN AVENUE/CAPITOL DRIVE
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):        0.916
Loss Time (sec):     10 (Y+R=4.0 sec)  Average Delay (sec/veh):       32.9
Optimal Cycle:      114               Level Of Service:                 C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      75 1098    86   185 1294    50    76   65    30   153  104   162
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   78 1146    90   193 1351    52    79   68    31   160  109   169
Added Vol:      0   10     5     0    9    28    29   10     0     5    9     0
Cumulative:     4  155    75    97   82     1     1   22     0    99   20    63
Initial Fut:   82 1311   170   290 1442    81   109  100    31   264  138   232
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    89 1425   185   315 1567    88   119  109    34   287  150   252
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   89 1425   185   315 1567    88   119  109    34   287  150   252
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   89 1425   185   315 1567    88   119  109    34   287  150   252
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.95  0.85  0.95 0.95  0.85  0.58 0.96  0.96  0.59 1.00  0.85
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 0.76  0.24  1.00 1.00  1.00
Final Sat.:  1805 3610  1615  1805 3610  1615  1102 1394   437  1125 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.39  0.11  0.17 0.43  0.05  0.11 0.08  0.08  0.25 0.08  0.16
Crit Moves:       ****        ****                              ****
Green/Cycle: 0.06 0.43  0.43  0.19 0.56  0.56  0.28 0.28  0.28  0.28 0.28  0.28
Volume/Cap:  0.78 0.92  0.27  0.92 0.78  0.10  0.39 0.28  0.28  0.92 0.28  0.56
Delay/Veh:   74.0 35.6  18.5  67.9 19.3  10.4  30.0 28.5  28.5  65.1 28.6  32.5
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  74.0 35.6  18.5  67.9 19.3  10.4  30.0 28.5  28.5  65.1 28.6  32.5
LOS by Move:    E    D     B     E    B     B     C    C     C     E    C     C
HCM2kAvgQ:      5   26     4    13   21     1     3    3     3    12    4     7
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

# Appendix D-2
# Air Quality Data

**Parenthetical URBEMIS 2007 Assumptions**
**For: Marymount College Facilities Expansion EIR**
**Date: December 2009**

## LAND USES

### BA Program

| Amount | Land Use Type | Unit Type | Trip Rate |
|---|---|---|---|
| 59.482 | Junior/Community College | Thousand Square Feet | 27.49 |
| 250 | Junior College | Students | 1.18 |
| Note: The Junior College amount was adjusted to reflect net trips generated by the project. The total daily trip rate is consistent with the Marymount College Project Traffic & Parking Analysis, dated December 10, 2009. | | | |

## YEAR 2007 AREA SOURCES

### Natural Gas Fuel Combustion:

(URBEMIS 2007 default all phases)

### Wood Stoves Fuel Combustion:

Off

### Fireplaces:

Off

### Landscape Maintenance Equipment:

| Year of Completion | Summer Days |
|---|---|
| 2012 | 180 |

### Consumer Products:

(URBEMIS 2007 default all phases)

### Area Source Mitigation:

Refer to URBEMIS 2007 file output.

## YEAR 2010 OPERATIONAL SOURCES

### Vehicle Fleet %:

(URBEMIS 2007 default all phases)

**Year:**

Year of Completion – 2012*

(*Year 2012 was used for area source completion year to be consistent with the Traffic Impact Analysis. It should be noted that this represents a conservative analysis as emissions rates decline in future years.)

**Trip Characteristics:**

(URBEMIS 2007 Default all phases)

**Temperature Data:**

50 to 95 degrees Fahrenheit

**Variable Starts:**

(URBEMIS 2007 default all phases)

**Road Dust:**

Paved – 100%
Unpaved – 0%

**Pass By Trips (On/Off):**

On

**Double-Counting(On/Off):**

Off

**Operational Mitigation Measures:**

Refer to URBEMIS 2007 file output.

**12/15/2009 4:59:54 PM**

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\Marymount Scenario1.urb924

Project Name: Marymount Scenario 1

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 0.78 | 0.66 | 3.73 | 0.00 | 0.01 | 0.01 | 748.22 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 11.71 | 14.71 | 131.24 | 0.18 | 29.99 | 5.84 | 17,890.14 |

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 12.49 | 15.37 | 134.97 | 0.18 | 30.00 | 5.85 | 18,638.36 |

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

| Source | ROG | NOX | CO | SO2 | PM10 | PM25 | CO2 |
|---|---|---|---|---|---|---|---|
| Junior college (2 yrs) | 3.05 | 2.27 | 20.30 | 0.03 | 4.63 | 0.90 | 2,763.17 |
| Junior College | 8.66 | 12.44 | 110.94 | 0.15 | 25.36 | 4.94 | 15,126.97 |
| TOTALS (lbs/day, unmitigated) | 11.71 | 14.71 | 131.24 | 0.18 | 29.99 | 5.84 | 17,890.14 |

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2014  Temperature (F): 80  Season: Summer

Emfac: Version  : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

| Land Use Type | Acreage | Trip Rate | Unit Type | No. Units | Total Trips | Total VMT |
|---|---|---|---|---|---|---|
| Junior college (2 yrs) | | 1.18 | students | 250.00 | 295.00 | 2,679.34 |
| Junior College | | 27.49 | 1000 sq ft | 59.49 | 1,635.38 | 14,674.27 |
| | | | | | 1,930.38 | 17,353.61 |

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 51.1 | 0.4 | 99.4 | 0.2 |
| Light Truck < 3750 lbs | 7.3 | 1.4 | 95.9 | 2.7 |
| Light Truck 3751-5750 lbs | 23.1 | 0.4 | 99.6 | 0.0 |
| Med Truck 5751-8500 lbs | 10.8 | 0.9 | 99.1 | 0.0 |

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Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Lite-Heavy Truck 8501-10,000 lbs | 1.7 | 0.0 | 82.4 | 17.6 |
| Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 0.0 | 60.0 | 40.0 |
| Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 0.0 | 22.2 | 77.8 |
| Heavy-Heavy Truck 33,001-60,000 lbs | 0.6 | 0.0 | 0.0 | 100.0 |
| Other Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Urban Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motorcycle | 2.8 | 50.0 | 50.0 | 0.0 |
| School Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motor Home | 0.9 | 0.0 | 88.9 | 11.1 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 12.7 | 7.0 | 9.5 | 13.3 | 7.4 | 8.9 |
| Rural Trip Length (miles) | 17.6 | 12.1 | 14.9 | 15.4 | 9.6 | 12.6 |
| Trip speeds (mph) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |
| % of Trips - Commercial (by land use) | | | | | | |
| Junior college (2 yrs) | | | | 5.0 | 2.5 | 92.5 |
| Junior College | | | | 2.0 | 1.0 | 97.0 |

**12/15/2009 5:00:01 PM**

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\Marymount Scenario1.urb924

Project Name: Marymount Scenario 1

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 0.52 | 0.62 | 0.52 | 0.00 | 0.00 | 0.00 | 742.72 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 12.11 | 17.69 | 125.69 | 0.15 | 29.99 | 5.84 | 16,190.40 |

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 12.63 | 18.31 | 126.21 | 0.15 | 29.99 | 5.84 | 16,933.12 |

**12/15/2009 5:00:01 PM**

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

| Source | ROG | NOX | CO | SO2 | PM10 | PM25 | CO2 |
|---|---|---|---|---|---|---|---|
| Junior college (2 yrs) | 2.45 | 2.73 | 19.42 | 0.02 | 4.63 | 0.90 | 2,500.74 |
| Junior College | 9.66 | 14.96 | 106.27 | 0.13 | 25.36 | 4.94 | 13,689.66 |
| TOTALS (lbs/day, unmitigated) | 12.11 | 17.69 | 125.69 | 0.15 | 29.99 | 5.84 | 16,190.40 |

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2014  Temperature (F): 60  Season: Winter

Emfac: Version  : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

| Land Use Type | Acreage | Trip Rate | Unit Type | No. Units | Total Trips | Total VMT |
|---|---|---|---|---|---|---|
| Junior college (2 yrs) | | 1.18 | students | 250.00 | 295.00 | 2,679.34 |
| Junior College | | 27.49 | 1000 sq ft | 59.49 | 1,635.38 | 14,674.27 |
| | | | | | 1,930.38 | 17,353.61 |

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 51.1 | 0.4 | 99.4 | 0.2 |
| Light Truck < 3750 lbs | 7.3 | 1.4 | 95.9 | 2.7 |
| Light Truck 3751-5750 lbs | 23.1 | 0.4 | 99.6 | 0.0 |
| Med Truck 5751-8500 lbs | 10.8 | 0.9 | 99.1 | 0.0 |

**12/15/2009 5:00:01 PM**

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Lite-Heavy Truck 8501-10,000 lbs | 1.7 | 0.0 | 82.4 | 17.6 |
| Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 0.0 | 60.0 | 40.0 |
| Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 0.0 | 22.2 | 77.8 |
| Heavy-Heavy Truck 33,001-60,000 lbs | 0.6 | 0.0 | 0.0 | 100.0 |
| Other Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Urban Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motorcycle | 2.8 | 50.0 | 50.0 | 0.0 |
| School Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motor Home | 0.9 | 0.0 | 88.9 | 11.1 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 12.7 | 7.0 | 9.5 | 13.3 | 7.4 | 8.9 |
| Rural Trip Length (miles) | 17.6 | 12.1 | 14.9 | 15.4 | 9.6 | 12.6 |
| Trip speeds (mph) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |
| % of Trips - Commercial (by land use) | | | | | | |
| Junior college (2 yrs) | | | | 5.0 | 2.5 | 92.5 |
| Junior College | | | | 2.0 | 1.0 | 97.0 |

**12/15/2009 5:00:08 PM**

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\Marymount Scenario1.urb924

Project Name: Marymount Scenario 1

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version  : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (tons/year, unmitigated) | 0.15 | 0.12 | 0.68 | 0.00 | 0.00 | 0.00 | 136.55 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (tons/year, unmitigated) | 2.16 | 2.86 | 23.61 | 0.03 | 5.48 | 1.06 | 3,161.55 |

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (tons/year, unmitigated) | 2.31 | 2.98 | 24.29 | 0.03 | 5.48 | 1.06 | 3,298.10 |

**12/15/2009 5:00:08 PM**

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

| Source | ROG | NOX | CO | SO2 | PM10 | PM25 | CO2 |
|---|---|---|---|---|---|---|---|
| Junior college (2 yrs) | 0.52 | 0.44 | 3.65 | 0.00 | 0.85 | 0.16 | 488.31 |
| Junior College | 1.64 | 2.42 | 19.96 | 0.03 | 4.63 | 0.90 | 2,673.24 |
| TOTALS (tons/year, unmitigated) | 2.16 | 2.86 | 23.61 | 0.03 | 5.48 | 1.06 | 3,161.55 |

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2014  Season: Annual

Emfac: Version  : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

| Land Use Type | Acreage | Trip Rate | Unit Type | No. Units | Total Trips | Total VMT |
|---|---|---|---|---|---|---|
| Junior college (2 yrs) | | 1.18 | students | 250.00 | 295.00 | 2,679.34 |
| Junior College | | 27.49 | 1000 sq ft | 59.49 | 1,635.38 | 14,674.27 |
| | | | | | 1,930.38 | 17,353.61 |

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 51.1 | 0.4 | 99.4 | 0.2 |
| Light Truck < 3750 lbs | 7.3 | 1.4 | 95.9 | 2.7 |
| Light Truck 3751-5750 lbs | 23.1 | 0.4 | 99.6 | 0.0 |
| Med Truck 5751-8500 lbs | 10.8 | 0.9 | 99.1 | 0.0 |

**12/15/2009 5:00:08 PM**

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Lite-Heavy Truck 8501-10,000 lbs | 1.7 | 0.0 | 82.4 | 17.6 |
| Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 0.0 | 60.0 | 40.0 |
| Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 0.0 | 22.2 | 77.8 |
| Heavy-Heavy Truck 33,001-60,000 lbs | 0.6 | 0.0 | 0.0 | 100.0 |
| Other Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Urban Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motorcycle | 2.8 | 50.0 | 50.0 | 0.0 |
| School Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motor Home | 0.9 | 0.0 | 88.9 | 11.1 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 12.7 | 7.0 | 9.5 | 13.3 | 7.4 | 8.9 |
| Rural Trip Length (miles) | 17.6 | 12.1 | 14.9 | 15.4 | 9.6 | 12.6 |
| Trip speeds (mph) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |
| % of Trips - Commercial (by land use) | | | | | | |
| Junior college (2 yrs) | | | | 5.0 | 2.5 | 92.5 |
| Junior College | | | | 2.0 | 1.0 | 97.0 |

# Construction Emissions

**Demolition**
***Duration (days):*** 66

| Equipment | Emission Factors (pounds/hour) | | | Hours/day | Quantity | Emissions (pounds/hour) | | | Emissions (tons/year) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | $CO_2$ | $CH_4$ | $N_2O$ | | | $CO_2$ | $CH_4$ | $N_2O$ | $CO_2$ | $CH_4$ | $N_2O$ |
| Concrete/Industrial Saws | 58.5 | 0.0114 | 0.0015 | 8 | 1 | 58.5 | 0.0114 | 0.0015 | 15.4440 | 0.0030 | 0.0004 |
| Rubber Tired Dozers | 239.1 | 0.0305 | 0.0062 | 8 | 1 | 239.1 | 0.0305 | 0.0062 | 63.1224 | 0.0081 | 0.0016 |
| Tractors/Loaders/Backhoes | 66.8 | 0.0092 | 0.0017 | 8 | 1 | 66.8 | 0.0092 | 0.0017 | 17.6352 | 0.0024 | 0.0004 |
| Crushing/Proc. Equipment | 132.3 | 0.0194 | 0.0035 | 8 | 1 | 132.3 | 0.0194 | 0.0035 | 34.9272 | 0.0051 | 0.0009 |
| Off-Highway Tractors | 151.4 | 0.0213 | 0.0040 | 8 | 1 | 151.4 | 0.0213 | 0.0040 | 39.9696 | 0.0056 | 0.0011 |
| | | | | | | | | ***Total Emissions for Mass Grading*** | 171.0984 | 0.0242 | 0.0045 |

**Mass Grading**
***Duration (days):*** 66

| Equipment | Emission Factors (pounds/hour) | | | Hours/day | Quantity | Emissions (pounds/hour) | | | Emissions (tons/year) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | $CO_2$ | $CH_4$ | $N_2O$ | | | $CO_2$ | $CH_4$ | $N_2O$ | $CO_2$ | $CH_4$ | $N_2O$ |
| Graders | 132.7 | 0.0155 | 0.0035 | 8 | 1 | 132.7 | 0.0155 | 0.0035 | 35.0328 | 0.0041 | 0.0009 |
| Rubber Tired Dozers | 239.1 | 0.0305 | 0.0062 | 8 | 1 | 239.1 | 0.0305 | 0.0062 | 63.1224 | 0.0081 | 0.0016 |
| Tractors/Loaders/Backhoes | 66.8 | 0.0092 | 0.0017 | 8 | 1 | 66.8 | 0.0092 | 0.0017 | 17.6352 | 0.0024 | 0.0004 |
| Scrapers | 262.5 | 0.0289 | 0.0068 | 8 | 1 | 262.5 | 0.0289 | 0.0068 | 69.3000 | 0.0076 | 0.0018 |
| Other Construction Equipment | 122.8 | 0.0095 | 0.0032 | 8 | 1 | 122.8 | 0.0095 | 0.0032 | 32.4192 | 0.0025 | 0.0008 |
| Off-Highway Trucks | 260.1 | 0.0224 | 0.0067 | 8 | 1 | 260.1 | 0.0224 | 0.0067 | 68.6664 | 0.0059 | 0.0018 |
| | | | | | | | | ***Total Emissions for Mass Grading*** | 286.1760 | 0.0306 | 0.0074 |

**Paving**
***Duration (days):*** 22

| Equipment | Emission Factors | | | Hours/day | Quantity | Emissions (pounds/hour) | | | Emissions (tons/year) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | $CO_2$ | $CH_4$ | $N_2O$ | | | $CO_2$ | $CH_4$ | $N_2O$ | $CO_2$ | $CH_4$ | $N_2O$ |
| Cement and Mortar Mixers | 7.2 | 0.0009 | 0.0002 | 8 | 4 | 28.8 | 0.0036 | 0.0008 | 2.5344 | 0.0003 | 0.0001 |
| Pavers | 77.9 | 0.016 | 0.002 | 8 | 1 | 77.9 | 0.0160 | 0.0020 | 6.8552 | 0.0014 | 0.0002 |
| Paving Equipment | 68.9 | 0.012 | 0.0018 | 8 | 1 | 68.9 | 0.0120 | 0.0018 | 6.0632 | 0.0011 | 0.0002 |
| Rollers | 67.1 | 0.0106 | 0.0018 | 8 | 1 | 67.1 | 0.0106 | 0.0018 | 5.9048 | 0.0009 | 0.0002 |
| Tractors/Loaders/Backhoes | 66.8 | 0.0092 | 0.0017 | 8 | 1 | 66.8 | 0.0092 | 0.0017 | 5.8784 | 0.0008 | 0.0001 |
| | | | | | | | | ***Total Emissions for Paving*** | 27.2360 | 0.0045 | 0.0007 |

**Building Construction**
***Duration (days):*** 572

| Equipment | Emission Factors | | | Hours/day | Quantity | Emissions (pounds/hour) | | | Emissions (tons/year) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | $CO_2$ | $CH_4$ | $N_2O$ | | | $CO_2$ | $CH_4$ | $N_2O$ | $CO_2$ | $CH_4$ | $N_2O$ |
| Welders | 25.6 | 0.0073 | 0.0007 | 6 | 1 | 25.6 | 0.0073 | 0.0007 | 43.9296 | 0.0125 | 0.0012 |
| Forklifts | 54.4 | 0.0062 | 0.0014 | 6 | 1 | 54.4 | 0.0062 | 0.0014 | 93.3504 | 0.0106 | 0.0024 |
| Cranes | 128.7 | 0.0144 | 0.0033 | 6 | 1 | 128.7 | 0.0144 | 0.0033 | 220.8492 | 0.0247 | 0.0057 |
| Generator Sets | 61 | 0.0087 | 0.0016 | 8 | 1 | 61 | 0.0087 | 0.0016 | 139.5680 | 0.0199 | 0.0037 |
| Trenchers | 58.7 | 0.0151 | 0.0015 | 8 | 1 | 58.7 | 0.0151 | 0.0015 | 134.3056 | 0.0345 | 0.0034 |
| Off-Highway Trucks | 260.1 | 0.0224 | 0.0067 | 8 | 1 | 260.1 | 0.0224 | 0.0067 | 595.1088 | 0.0513 | 0.0153 |
| Tractors/Loaders/Backhoes | 66.8 | 0.0092 | 0.0017 | 8 | 1 | 66.8 | 0.0092 | 0.0017 | 152.8384 | 0.0210 | 0.0039 |
| | | | | | | | | ***Total Emissions for Building Construction*** | 1379.9500 | 0.1621 | 0.0344 |

**Total Construction Emissions**

| | | | |
|---|---|---|---|
| ***tons/year*** | 1864.46 | 0.22 | 0.05 |
| ***metric tons/year*** | 1,691.41 | 0.20 | 0.04 |
| ***metric tons $CO_2$ eq/year*** | 1,691.41 | 62.29 | 0.89 |

Notes:
Construction Equipment Emission Factor Source: Provided by SCAQMD.
Refer to the URBEMIS 2007 assumptions and model output for construction equipment assumptions

## Emissions From Natural Gas Consumed By Land Uses

| *Land Use* | *Amount* | Cubic feet per unit/square feet/customer per month | *CO* 2.00E+01 | *ROG* 5.30E+00 | *$NO_X$* *Residential* 8.00E+01 | *$NO_X$* *Non-Residential* 1.20E+02 | *$SO_X$* negligible | *$PM_{10}$* 2.00E-01 | *$CO_2$* 0.12 | *$N_2O$* 2.20E-06 | *$CH_4$* 2.30E-06 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Residential** | | | | | | | | | | | |
| Single Family Units | | 6,665 | 0.00 | 0.00 | 0.00 | 0.00 | -- | 0.00 | 0.00 | 0.00 | 0.00 |
| Multi-Family Units | | 4,011.5 | 0.00 | 0.00 | 0.00 | 0.00 | -- | 0.00 | 0.00 | 0.00 | 0.00 |
| **NonResidential** | | | | | | | | | | | |
| Indutsrial | | 241,611 | 0.00 | 0.00 | 0.00 | 0.00 | -- | 0.00 | 0.00 | 0.00 | 0.00 |
| Hotel/Motel | | 4.8 | 0.00 | 0.00 | 0.00 | 0.00 | -- | 0.00 | 0.00 | 0.00 | 0.00 |
| Retail/Shopping Center | | 2.9 | 0.00 | 0.00 | 0.00 | 0.00 | -- | 0.00 | 0.00 | 0.00 | 0.00 |
| Office | | 2.0 | 0.00 | 0.00 | 0.00 | 0.00 | -- | 0.00 | 0.00 | 0.00 | 0.00 |
| Blank | 77,504 | 5.0 | 21,233.97 | 5,627.00 | 84,935.89 | | -- | 212.34 | 1,529.68 | 0.03 | 0.03 |
| **TOTAL - pounds per day** | **--** | **--** | **2.12E+04** | **5.63E+03** | **8.49E+04** | **0.00E+00** | **--** | **2.12E+02** | **1,529.68** | **0.03** | **0.03** |
| **TOTAL - tons per year** | **--** | **--** | **3.88E+03** | **1.03E+03** | **1.55E+04** | **0.00E+00** | **--** | **3.88E+01** | **279.1674** | **0.0051** | **0.0054** |
| **TOTAL - metric tons per year** | **--** | **--** | **3.52E+03** | **9.32E+02** | **1.41E+04** | **0.00E+00** | **--** | **3.52E+01** | **2.53E+02** | **4.64E-03** | **4.85E-03** |

| | $CO_2$ | $N_2O$ | $CH_4$ |
|---|---|---|---|
| **metric tons per year** | 253.26 | 0.00 | 0.00 |
| **metric tons $CO_2$eq per year** | 253.26 | 1.44 | 0.10 |

Notes:

1. Usage rate; average for SCE and LADWP.

Source:

South Coast Air Quality Management District, *CEQA Air Quality Handbook* , November 1993, Table A9-12.

## Emissions From Electricity Consumed By Land Uses

| *Land Use* | *Amount* | kilowatt-hours per year[1] | *CO* 2.00E-04 | *ROG* 1.00E-05 | *$NO_X$* 1.15E-03 | *$SO_X$* 1.20E-04 | *$PM_{10}$* 4.00E-05 | *$CO_2$* 0.772 | *$N_2O$* 6.59E-06 | *$CH_4$* 4.04E-05 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential (Dwelling Units) | | 5626.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Food Store (SF) | | 53.3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Restaurant (SF) | | 47.45 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hospitals (SF) | | 21.7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Retail (SF) | | 13.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| College/University (SF) | 77,504 | 11.55 | 0.49 | 0.02 | 2.82 | 0.29 | 0.10 | 1,893.35 | 0.02 | 0.10 |
| High School (SF) | | 10.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Elementary School (SF) | | 5.9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Office (SF) | | 12.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hotel/Motel (SF) | | 9.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Warehouse (SF) | | 4.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Miscellaneous (SF) | | 10.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Blank | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL - pounds per day** | **--** | **--** | **4.91E-04** | **2.45E-02** | **2.82E+00** | **2.94E-01** | **9.81E-02** | **1,893.35** | **0.02** | **0.10** |
| **TOTAL - tons per year** | **--** | **--** | **8.95E-05** | **4.48E-03** | **5.15E-01** | **5.37E-02** | **1.79E-02** | **345.54** | **0.00** | **0.02** |
| **TOTAL - metric tons per year** | **--** | **--** | **8.12E-05** | **4.06E-03** | **4.67E-01** | **4.87E-02** | **1.62E-02** | **313.47** | **0.00** | **0.02** |

| | $CO_2$ | $N_2O$ | $CH_4$ |
|---|---|---|---|
| **metric tons per year** | 313.47 | 0.00 | 0.02 |
| **metric tons $CO_2$eq per year** | 313.47 | 0.83 | 0.34 |

Notes:

1. Usage rate; average for SCE and LADWP.

Source:

South Coast Air Quality Management District, *CEQA Air Quality Handbook* , November 1993, Table A9-11.

Source for greenhouse gas emissions rates:

U.S. Energy Information Administration, *Domestic Electricity Emissions Factors 1999-2002* , October 2007. http://www.eia.doe.gov/oiaf/1605/techassist.html

## Mobile Source Emissions Calculations

| | Total | Breakdown | | Emission Factor | | Total Emis Passenger | Total Emis Delivery | Passnger | Delivery | Total Emissions | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | VMT | Passnger | Delivery | Passnger | Delivery | pounds/day | | tons/year | tons/year | tons/year | metric tons/year |
| CO | 17,353 | 16485.35 | 867.65 | 0.00709228 | 0.01407778 | 116.92 | 12.21 | 21.34 | 2.23 | 23.57 | 21.38 |
| $NO_X$ | 17,353 | 16485.35 | 867.65 | 0.00071158 | 0.01577311 | 11.73 | 13.69 | 2.14 | 2.50 | 4.64 | 4.21 |
| $N_2O$[1] | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.23 | 0.21 |
| ROG | 17,353 | 16485.35 | 867.65 | 0.00074567 | 0.00206295 | 12.29 | 1.79 | 2.24 | 0.33 | 2.57 | 2.33 |
| $SO_X$ | 17,353 | 16485.35 | 867.65 | 0.00001072 | 0.00002682 | 0.18 | 0.02 | 0.03 | 0.00 | 0.04 | 0.03 |
| $PM_{10}$ | 17,353 | 16485.35 | 867.65 | 0.00009067 | 0.00059956 | 1.49 | 0.52 | 0.27 | 0.09 | 0.37 | 0.33 |
| $PM_{2.5}$ | 17,353 | 16485.35 | 867.65 | 0.00005834 | 0.00050174 | 0.96 | 0.44 | 0.18 | 0.08 | 0.25 | 0.23 |
| $CH_4$ | 17,353 | 16485.35 | 867.65 | 0.00006707 | 0.00009703 | 1.11 | 0.08 | 0.20 | 0.02 | 0.22 | 0.20 |
| $CO_2$ | 17,353 | 16485.35 | 867.65 | 1.10087435 | 2.78163459 | 18148.30 | 2413.49 | 3312.06 | 440.46 | 3752.53 | 3,404.23 |

| | $CO_2$ | $N_2O$ | $CH_4$ |
|---|---|---|---|
| **metric tons per year** | 3,404.23 | 0.21 | 0.20 |
| **metric tons $CO_2$eq per year** | 3,404.23 | 63.57 | 4.14 |

Notes:

1. VMT based upon URBEMIS 2007 model output.
2. Emission Factor based upon EMFAC 2007 (version 2.3), *Highest (Most Conservative) Emission Factors fo On-Road Passenger Vehicles and Delivery Trucks* .
3. Breakdown of Passenger and Delivery Trucks assumes 95% auto and 5% truck.
4. Emission Factor for $N_2O$ based upon a conversion ratio of 0.04873 from $NO_X$ to $N_2O$. Based upon California Air Resources Board: *Estimates of Nitrous Oxide*

## Water Consumption Indirect Emissions

| | Acre Feet per year | Electricity Usage kWh/year | Units | CO<br>2.00E-04 | ROG<br>1.00E-05 | $NO_X$<br>1.15E-03 | $SO_X$<br>1.20E-04 | $PM_{10}$<br>4.00E-05 | $CO_2$<br>0.772 | $N_2O$<br>6.59E-06 | $CH_4$<br>4.04E-05 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Project Demand | 39.9 | 66,473 | pounds/yr | 1.33E+01 | 6.65E-01 | 7.64E+01 | 7.98E+00 | 2.66E+00 | 5.13E+04 | 4.38E-01 | 2.68E+00 |
| | | | tons/yr | 6.65E-03 | 3.32E-04 | 3.82E-02 | 3.99E-03 | 1.33E-03 | 2.57E+01 | 2.19E-04 | 1.34E-03 |
| | | | mt/yr | 6.03E-03 | 3.02E-04 | 3.47E-02 | 3.62E-03 | 1.21E-03 | 2.33E+01 | 1.99E-04 | 1.22E-03 |
| | | | | | | | | $MTCO_2EQ$ | 23.28 | 0.07 | 0.03 |

Energy Factor 1,666 kWh/acre-foot

Based on energy usage factors for water conveyance from the California Energy Commission, Water Energy Use in California, Accessed May 2009.
http://www.energy.ca.gov/research/iaw/industry/water.html

Title : South Coast Air Basin Avg Winter CYr 2012 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/06/07 10:28:55
Scen Year: 2012 -- All model years in the range 1968 to 2012 selected
Season : Winter
Area : South Coast
*****************************************************************************************

Year: 2012 -- Model Years 1968 to 2012 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Reactive Org Gases Temperature: 50F Relative Humidity: 0%

| Speed MPH | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.271 | 0.373 | 0.636 | 5.918 | 3.731 | 5.450 | 0.644 |
| 35 | 0.048 | 0.069 | 0.108 | 0.542 | 0.690 | 2.343 | 0.100 |

Pollutant Name: Carbon Monoxide Temperature: 50F Relative Humidity: 0%

| Speed MPH | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 3.701 | 5.191 | 7.264 | 19.121 | 30.284 | 35.087 | 5.599 |
| 35 | 1.938 | 2.633 | 2.915 | 4.157 | 5.455 | 23.034 | 2.532 |

Pollutant Name: Oxides of Nitrogen Temperature: 50F Relative Humidity: 0%

| Speed MPH | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.387 | 0.717 | 1.199 | 22.409 | 33.003 | 1.438 | 1.649 |
| 35 | 0.227 | 0.406 | 0.761 | 9.475 | 14.966 | 1.520 | 0.804 |

Pollutant Name: Carbon Dioxide Temperature: 50F Relative Humidity: 0%

| Speed MPH | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 951.901 | 1183.288 | 1702.692 | 2861.803 | 2684.771 | 250.084 | 1212.968 |
| 35 | 309.937 | 386.449 | 522.956 | 1522.170 | 2101.808 | 128.635 | 419.713 |

Pollutant Name: Sulfur Dioxide Temperature: 50F Relative Humidity: 0%

| Speed MPH | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.009 | 0.011 | 0.016 | 0.027 | 0.026 | 0.003 | 0.012 |
| 35 | 0.003 | 0.004 | 0.005 | 0.015 | 0.020 | 0.002 | 0.004 |

Pollutant Name: PM2.5 Temperature: 50F Relative Humidity: 0%

| Speed MPH | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.049 | 0.101 | 0.102 | 1.144 | 0.666 | 0.035 | 0.123 |
| 35 | 0.008 | 0.017 | 0.018 | 0.260 | 0.162 | 0.016 | 0.024 |

Pollutant Name: PM2.5 - Tire Wear Temperature: 50F Relative Humidity: 0%

| Speed MPH | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.002 | 0.002 | 0.002 | 0.006 | 0.002 | 0.001 | 0.002 |
| 35 | 0.002 | 0.002 | 0.002 | 0.006 | 0.002 | 0.001 | 0.002 |

Pollutant Name: PM2.5 - Break Wear Temperature: 50F Relative Humidity: 0%

| Speed MPH | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.005 | 0.005 | 0.005 | 0.009 | 0.005 | 0.003 | 0.006 |
| 35 | 0.005 | 0.005 | 0.005 | 0.009 | 0.005 | 0.003 | 0.006 |

Pollutant Name: Gasoline - mi/gal Temperature: 50F Relative Humidity: 0%

| Speed MPH | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 9.245 | 7.399 | 5.110 | 3.403 | 3.371 | 27.495 | 8.140 |
| 35 | 28.325 | 22.666 | 16.782 | 17.214 | 17.072 | 51.438 | 24.928 |

Pollutant Name: Diesel - mi/gal Temperature: 50F Relative Humidity: 0%

| Speed MPH | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 27.949 | 29.002 | 19.645 | 4.229 | 3.659 | 0.000 | 7.793 |
| 35 | 27.949 | 29.002 | 19.645 | 5.981 | 3.659 | 0.000 | 9.148 |

Title    : South Coast Air Basin Avg Winter CYr 2012 Default Title
Version  : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/06/07 10:28:55
Scen Year: 2012 -- All model years in the range 1968 to 2012 selected
Season   : Winter
Area     : South Coast
************************************************************************************
Year: 2012 -- Model Years 1968 to 2012 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast                    Basin Average                 Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases        Temperature: 50F  Relative Humidity: ALL

| Time min | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.090 | 0.100 | 0.233 | 0.588 | 0.365 | 1.826 | 0.161 |
| 10 | 0.155 | 0.171 | 0.415 | 0.825 | 0.593 | 1.986 | 0.259 |
| 20 | 0.276 | 0.305 | 0.754 | 1.271 | 1.017 | 2.321 | 0.443 |
| 30 | 0.387 | 0.427 | 1.061 | 1.677 | 1.396 | 2.678 | 0.611 |
| 40 | 0.486 | 0.537 | 1.336 | 2.043 | 1.730 | 3.056 | 0.763 |
| 50 | 0.575 | 0.637 | 1.578 | 2.370 | 2.019 | 3.455 | 0.899 |
| 60 | 0.651 | 0.722 | 1.784 | 2.623 | 2.251 | 3.707 | 1.012 |
| 120 | 0.800 | 0.873 | 1.772 | 1.896 | 1.641 | 2.743 | 1.076 |
| 180 | 0.511 | 0.576 | 1.490 | 2.020 | 1.744 | 2.543 | 0.809 |
| 240 | 0.542 | 0.610 | 1.577 | 2.140 | 1.844 | 2.723 | 0.857 |
| 300 | 0.572 | 0.644 | 1.663 | 2.258 | 1.941 | 2.902 | 0.905 |
| 360 | 0.601 | 0.677 | 1.747 | 2.372 | 2.035 | 3.078 | 0.951 |
| 420 | 0.630 | 0.710 | 1.829 | 2.483 | 2.126 | 3.253 | 0.996 |
| 480 | 0.658 | 0.742 | 1.910 | 2.591 | 2.215 | 3.426 | 1.041 |
| 540 | 0.686 | 0.774 | 1.988 | 2.695 | 2.300 | 3.597 | 1.084 |
| 600 | 0.713 | 0.805 | 2.064 | 2.797 | 2.382 | 3.766 | 1.127 |
| 660 | 0.739 | 0.835 | 2.139 | 2.896 | 2.461 | 3.933 | 1.168 |
| 720 | 0.765 | 0.864 | 2.211 | 2.991 | 2.537 | 4.098 | 1.208 |

Pollutant Name: Carbon Monoxide        Temperature: 50F  Relative Humidity: ALL

| Time min | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.906 | 1.092 | 2.864 | 6.967 | 4.448 | 5.067 | 1.681 |
| 10 | 1.682 | 2.033 | 5.384 | 11.403 | 8.174 | 5.860 | 3.023 |
| 20 | 3.157 | 3.822 | 10.142 | 19.739 | 15.158 | 7.393 | 5.565 |
| 30 | 4.529 | 5.488 | 14.522 | 27.358 | 21.520 | 8.855 | 7.914 |
| 40 | 5.799 | 7.031 | 18.527 | 34.260 | 27.259 | 10.245 | 10.072 |
| 50 | 6.966 | 8.450 | 22.154 | 40.445 | 32.374 | 11.563 | 12.037 |
| 60 | 8.030 | 9.745 | 25.405 | 45.914 | 36.868 | 12.810 | 13.810 |
| 120 | 10.941 | 12.941 | 22.409 | 27.256 | 21.021 | 14.275 | 14.533 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 180 | 6.560 | 7.981 | 16.833 | 29.027 | 21.870 | 11.077 | 10.108 |
| 240 | 6.994 | 8.514 | 17.742 | 30.713 | 22.713 | 12.913 | 10.736 |
| 300 | 7.388 | 8.999 | 18.591 | 32.315 | 23.550 | 14.558 | 11.315 |
| 360 | 7.744 | 9.435 | 19.380 | 33.833 | 24.380 | 16.012 | 11.845 |
| 420 | 8.062 | 9.823 | 20.109 | 35.267 | 25.204 | 17.275 | 12.326 |
| 480 | 8.340 | 10.162 | 20.778 | 36.617 | 26.022 | 18.346 | 12.758 |
| 540 | 8.580 | 10.453 | 21.388 | 37.883 | 26.833 | 19.227 | 13.141 |
| 600 | 8.781 | 10.696 | 21.937 | 39.065 | 27.638 | 19.917 | 13.475 |
| 660 | 8.943 | 10.890 | 22.426 | 40.162 | 28.436 | 20.415 | 13.760 |
| 720 | 9.067 | 11.037 | 22.855 | 41.176 | 29.228 | 20.723 | 13.996 |

Pollutant Name: Oxides of Nitrogen Temperature: 50F Relative Humidity: ALL

| Time min | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.219 | 0.359 | 0.939 | 0.670 | 0.725 | 0.224 | 0.416 |
| 10 | 0.248 | 0.401 | 1.115 | 0.997 | 1.090 | 0.259 | 0.492 |
| 20 | 0.301 | 0.476 | 1.426 | 1.570 | 1.729 | 0.322 | 0.627 |
| 30 | 0.345 | 0.538 | 1.682 | 2.038 | 2.250 | 0.376 | 0.739 |
| 40 | 0.379 | 0.589 | 1.884 | 2.399 | 2.653 | 0.418 | 0.827 |
| 50 | 0.405 | 0.626 | 2.032 | 2.655 | 2.937 | 0.451 | 0.891 |
| 60 | 0.422 | 0.651 | 2.125 | 2.805 | 3.103 | 0.474 | 0.931 |
| 120 | 0.447 | 0.697 | 2.238 | 2.870 | 3.175 | 0.486 | 0.981 |
| 180 | 0.479 | 0.744 | 2.277 | 2.858 | 3.163 | 0.481 | 1.016 |
| 240 | 0.476 | 0.739 | 2.261 | 2.841 | 3.144 | 0.470 | 1.008 |
| 300 | 0.471 | 0.730 | 2.239 | 2.817 | 3.120 | 0.456 | 0.998 |
| 360 | 0.463 | 0.719 | 2.208 | 2.788 | 3.089 | 0.439 | 0.984 |
| 420 | 0.455 | 0.705 | 2.170 | 2.753 | 3.052 | 0.420 | 0.967 |
| 480 | 0.444 | 0.687 | 2.125 | 2.712 | 3.009 | 0.397 | 0.946 |
| 540 | 0.431 | 0.667 | 2.072 | 2.665 | 2.960 | 0.372 | 0.922 |
| 600 | 0.417 | 0.644 | 2.012 | 2.612 | 2.904 | 0.344 | 0.894 |
| 660 | 0.400 | 0.618 | 1.944 | 2.553 | 2.842 | 0.313 | 0.863 |
| 720 | 0.382 | 0.588 | 1.868 | 2.489 | 2.774 | 0.280 | 0.828 |

Pollutant Name: Carbon Dioxide Temperature: 50F Relative Humidity: ALL

| Time min | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 11.327 | 14.221 | 18.469 | 6.576 | 3.875 | 21.496 | 13.292 |
| 10 | 13.402 | 16.684 | 22.867 | 9.879 | 6.635 | 23.984 | 15.976 |
| 20 | 17.948 | 22.122 | 32.238 | 16.418 | 12.105 | 28.845 | 21.779 |
| 30 | 23.025 | 28.243 | 42.379 | 22.866 | 17.509 | 33.549 | 28.160 |
| 40 | 28.633 | 35.045 | 53.289 | 29.224 | 22.845 | 38.099 | 35.119 |
| 50 | 34.772 | 42.529 | 64.968 | 35.490 | 28.113 | 42.493 | 42.656 |
| 60 | 41.441 | 50.696 | 77.416 | 41.667 | 33.315 | 46.731 | 50.772 |
| 120 | 89.902 | 111.069 | 160.786 | 68.586 | 55.892 | 66.163 | 107.659 |
| 180 | 102.641 | 126.687 | 184.512 | 79.425 | 65.491 | 68.802 | 123.060 |
| 240 | 115.193 | 142.105 | 207.688 | 89.624 | 74.523 | 71.287 | 138.180 |
| 300 | 127.559 | 157.325 | 230.316 | 99.184 | 82.989 | 73.619 | 153.019 |
| 360 | 139.740 | 172.345 | 252.394 | 108.105 | 90.888 | 75.798 | 167.576 |
| 420 | 151.734 | 187.165 | 273.923 | 116.387 | 98.221 | 77.823 | 181.852 |
| 480 | 163.542 | 201.787 | 294.903 | 124.029 | 104.987 | 79.695 | 195.847 |
| 540 | 175.163 | 216.209 | 315.333 | 131.032 | 111.188 | 81.414 | 209.560 |
| 600 | 186.599 | 230.432 | 335.214 | 137.395 | 116.821 | 82.979 | 222.992 |
| 660 | 197.848 | 244.456 | 354.547 | 143.120 | 121.889 | 84.391 | 236.142 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 720 | 208.911 | 258.281 | 373.329 | 148.205 | 126.390 | 85.650 | 249.011 |

Pollutant Name: Sulfur Dioxide Temperature: 50F Relative Humidity: ALL

| Time min | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 20 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 30 | 0.000 | 0.000 | 0.001 | 0.001 | 0.001 | 0.001 | 0.000 |
| 40 | 0.000 | 0.000 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 50 | 0.000 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 60 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 120 | 0.001 | 0.001 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 |
| 180 | 0.001 | 0.001 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 |
| 240 | 0.001 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.002 |
| 300 | 0.001 | 0.002 | 0.003 | 0.002 | 0.001 | 0.001 | 0.002 |
| 360 | 0.001 | 0.002 | 0.003 | 0.002 | 0.001 | 0.001 | 0.002 |
| 420 | 0.002 | 0.002 | 0.003 | 0.002 | 0.001 | 0.001 | 0.002 |
| 480 | 0.002 | 0.002 | 0.003 | 0.002 | 0.001 | 0.001 | 0.002 |
| 540 | 0.002 | 0.002 | 0.003 | 0.002 | 0.002 | 0.001 | 0.002 |
| 600 | 0.002 | 0.002 | 0.004 | 0.002 | 0.002 | 0.001 | 0.002 |
| 660 | 0.002 | 0.003 | 0.004 | 0.002 | 0.002 | 0.001 | 0.003 |
| 720 | 0.002 | 0.003 | 0.004 | 0.002 | 0.002 | 0.001 | 0.003 |

Pollutant Name: PM2.5 Temperature: 50F Relative Humidity: ALL

| Time min | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.001 | 0.001 | 0.001 | 0.001 | 0.000 | 0.009 | 0.001 |
| 10 | 0.001 | 0.002 | 0.002 | 0.001 | 0.001 | 0.008 | 0.002 |
| 20 | 0.002 | 0.004 | 0.004 | 0.002 | 0.002 | 0.006 | 0.003 |
| 30 | 0.003 | 0.006 | 0.006 | 0.002 | 0.002 | 0.005 | 0.005 |
| 40 | 0.004 | 0.008 | 0.008 | 0.003 | 0.003 | 0.004 | 0.006 |
| 50 | 0.005 | 0.010 | 0.009 | 0.003 | 0.003 | 0.003 | 0.007 |
| 60 | 0.006 | 0.011 | 0.010 | 0.004 | 0.004 | 0.003 | 0.008 |
| 120 | 0.009 | 0.018 | 0.016 | 0.005 | 0.005 | 0.007 | 0.012 |
| 180 | 0.010 | 0.019 | 0.017 | 0.005 | 0.005 | 0.010 | 0.013 |
| 240 | 0.010 | 0.020 | 0.018 | 0.005 | 0.005 | 0.013 | 0.014 |
| 300 | 0.011 | 0.022 | 0.019 | 0.006 | 0.006 | 0.015 | 0.015 |
| 360 | 0.011 | 0.023 | 0.020 | 0.006 | 0.006 | 0.018 | 0.016 |
| 420 | 0.012 | 0.024 | 0.020 | 0.006 | 0.006 | 0.020 | 0.016 |
| 480 | 0.012 | 0.024 | 0.021 | 0.006 | 0.006 | 0.021 | 0.017 |
| 540 | 0.013 | 0.025 | 0.022 | 0.006 | 0.006 | 0.022 | 0.017 |
| 600 | 0.013 | 0.026 | 0.022 | 0.007 | 0.007 | 0.023 | 0.018 |
| 660 | 0.013 | 0.026 | 0.022 | 0.007 | 0.007 | 0.024 | 0.018 |
| 720 | 0.013 | 0.026 | 0.023 | 0.007 | 0.007 | 0.024 | 0.018 |

Version  : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/06/07 10:28:55
Scen Year: 2012 -- All model years in the range 1968 to 2012 selected
Season   : Winter
Area     : South Coast
**************************************************************************************

Year: 2012 -- Model Years 1968 to 2012 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast                    Basin Average                    Basin Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases        Temperature:  50F  Relative Humidity: ALL

| Time min | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 5 | 0.050 | 0.048 | 0.033 | 0.009 | 0.045 | 0.093 | 0.044 |
| 10 | 0.092 | 0.089 | 0.061 | 0.017 | 0.082 | 0.172 | 0.082 |
| 20 | 0.157 | 0.152 | 0.105 | 0.029 | 0.140 | 0.296 | 0.140 |
| 30 | 0.202 | 0.195 | 0.136 | 0.037 | 0.180 | 0.384 | 0.180 |
| 40 | 0.219 | 0.212 | 0.148 | 0.040 | 0.195 | 0.418 | 0.196 |

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title    : South Coast Air Basin Avg Winter CYr 2012 Default Title
Version  : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/06/07 10:28:55
Scen Year: 2012 -- All model years in the range 1968 to 2012 selected
Season   : Winter
Area     : South Coast
**************************************************************************************

Year: 2012 -- Model Years 1968 to 2012 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast                    Basin Average                    Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases        Temperature: ALL   Relative Humidity: ALL

| Temp degF | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 50 | 0.012 | 0.012 | 0.010 | 0.001 | 0.000 | 0.012 | 0.011 |

Title    : South Coast Air Basin Avg Winter CYr 2012 Default Title
Version  : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/06/07 10:28:55
Scen Year: 2012 -- All model years in the range 1968 to 2012 selected
Season   : Winter
Area     : South Coast
*************************************************************************************

Year: 2012 -- Model Years 1968 to 2012 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast    Basin Average    Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases    Temperature: ALL    Relative Humidity: ALL

| Temp degF | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 50 | 0.001 | 0.001 | 0.001 | 0.000 | 0.000 | 0.001 | 0.001 |

Title    : South Coast Air Basin Avg Winter CYr 2012 Default Title
Version  : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/06/07 10:28:55
Scen Year: 2012 -- All model years in the range 1968 to 2012 selected
Season   : Winter
Area     : South Coast
*************************************************************************************

Year: 2012 -- Model Years 1968 to 2012 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast    Basin Average    Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases    Temperature: ALL    Relative Humidity: ALL

| Temp degF | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 50 | 0.009 | 0.009 | 0.008 | 0.001 | 0.000 | 0.009 | 0.009 |

Title : South Coast Air Basin Avg Winter CYr 2012 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/06/07 10:28:55
Scen Year: 2012 -- All model years in the range 1968 to 2012 selected
Season : Winter
Area : South Coast
*****************************************************************************************

Year: 2012 -- Model Years 1968 to 2012 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

| Temp degF | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 50 | 0.001 | 0.001 | 0.001 | 0.000 | 0.000 | 0.001 | 0.001 |

Title : South Coast Air Basin Avg Winter CYr 2012 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/06/07 10:28:55
Scen Year: 2012 -- All model years in the range 1968 to 2012 selected
Season : Winter
Area : South Coast
*****************************************************************************************

Year: 2012 -- Model Years 1968 to 2012 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

| | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| %VMT | 0.493 | 0.316 | 0.139 | 0.044 | 0.002 | 0.006 | 1.000 |
| %TRIP | 0.473 | 0.279 | 0.186 | 0.053 | 0.000 | 0.008 | 1.000 |
| %VEH | 0.515 | 0.304 | 0.128 | 0.024 | 0.001 | 0.028 | 1.000 |

Title    : South Coast Air Basin Avg Winter CYr 2012 Default Title
Version  : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/06/07 10:28:55
Scen Year: 2012 -- All model years in the range 1968 to 2012 selected
Season   : Winter
Area     : South Coast
*************************************************************************************

Year: 2012 -- Model Years 1968 to 2012 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast                    Basin Average                    Basin Average

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Reactive Org Gases        Temperature: 50F  Relative Humidity: ALL

| Time min | LDA | LDT | MDT | HDT | UBUS | MCY | ALL |
|---|---|---|---|---|---|---|---|
| 1 | 0.019 | 0.353 | 0.321 | 0.154 | 0.452 | 0.036 | 0.173 |
| 2 | 0.021 | 0.185 | 0.169 | 0.083 | 0.240 | 0.075 | 0.097 |
| 3 | 0.024 | 0.131 | 0.120 | 0.059 | 0.170 | 0.095 | 0.074 |
| 4 | 0.027 | 0.106 | 0.097 | 0.048 | 0.136 | 0.108 | 0.063 |
| 5 | 0.029 | 0.091 | 0.084 | 0.041 | 0.116 | 0.117 | 0.057 |
| 10 | 0.035 | 0.064 | 0.060 | 0.028 | 0.076 | 0.141 | 0.048 |
| 15 | 0.037 | 0.059 | 0.055 | 0.024 | 0.064 | 0.155 | 0.047 |
| 20 | 0.040 | 0.059 | 0.055 | 0.023 | 0.060 | 0.166 | 0.048 |
| 25 | 0.041 | 0.061 | 0.057 | 0.023 | 0.058 | 0.176 | 0.050 |
| 30 | 0.042 | 0.063 | 0.059 | 0.023 | 0.059 | 0.182 | 0.051 |
| 35 | 0.043 | 0.065 | 0.061 | 0.024 | 0.061 | 0.188 | 0.053 |
| 40 | 0.044 | 0.067 | 0.062 | 0.024 | 0.062 | 0.193 | 0.054 |
| 45 | 0.045 | 0.068 | 0.064 | 0.025 | 0.064 | 0.198 | 0.055 |
| 50 | 0.046 | 0.070 | 0.065 | 0.025 | 0.065 | 0.201 | 0.056 |
| 55 | 0.046 | 0.072 | 0.067 | 0.026 | 0.066 | 0.204 | 0.057 |
| 60 | 0.047 | 0.073 | 0.068 | 0.026 | 0.067 | 0.207 | 0.058 |

1 CALINE4 - (DATED CALINE4x)

3.0.0 PC (32 BIT) VERSION
(C) COPYRIGHT 2000, TRINITY CONSULTANTS

Run Began on 12/08/2009 at 11:54:17

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Western and Crestwood
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

```
     U=   0.5 M/S            Z0= 100. CM            ALT=     0. (M)
   BRG= WORST CASE           VD=  0.0 CM/S
  CLAS=     7 (G)            VS=  0.0 CM/S
  MIXH= 1000. M             AMB=  2.5 PPM
 SIGTH=   20. DEGREES      TEMP= 15.0 DEGREE (C)
```

II. LINK VARIABLES

| LINK DESCRIPTION | X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| 1. Y SB1 | 684 | 1256 | 711 | 1201 | AG | 1652 | 2.5 | 0.0 | 16.7 |
| 2. Y SB2 | 711 | 1201 | 745 | 1133 | AG | 1561 | 5.6 | 0.0 | 16.7 |
| 3. Y SB3 | 745 | 1133 | 800 | 1025 | AG | 1804 | 2.5 | 0.0 | 16.7 |
| 4. Y SB4 | 800 | 1025 | 858 | 906 | AG | 1804 | 2.5 | 0.0 | 16.7 |
| 5. Y NB1 | 868 | 911 | 813 | 1024 | AG | 1827 | 2.5 | 0.0 | 16.7 |
| 6. Y NB2 | 814 | 1024 | 761 | 1138 | AG | 1747 | 5.6 | 0.0 | 16.7 |
| 7. Y NB3 | 761 | 1138 | 728 | 1205 | AG | 1871 | 2.5 | 0.0 | 16.7 |
| 8. Y NB4 | 728 | 1205 | 700 | 1263 | AG | 1871 | 2.5 | 0.0 | 16.7 |
| 9. Y LT1 | 720 | 1198 | 753 | 1134 | AG | 91 | 5.6 | 0.0 | 16.7 |
| 10. Y LT2 | 753 | 1134 | 802 | 1038 | AG | 80 | 5.6 | 0.0 | 16.7 |
| 11. X EB1 | 596 | 1103 | 682 | 1125 | AG | 271 | 2.5 | 0.0 | 23.9 |
| 12. X EB2 | 682 | 1125 | 750 | 1141 | AG | 147 | 5.6 | 0.0 | 23.9 |
| 13. X EB3 | 750 | 1141 | 826 | 1158 | AG | 238 | 2.5 | 0.0 | 23.9 |
| 14. X EB4 | 826 | 1158 | 923 | 1182 | AG | 238 | 2.5 | 0.0 | 23.9 |
| 15. X WB1 | 924 | 1170 | 832 | 1147 | AG | 453 | 2.5 | 0.0 | 23.9 |
| 16. X WB2 | 832 | 1147 | 757 | 1128 | AG | 210 | 5.6 | 0.0 | 23.9 |
| 17. X WB3 | 757 | 1128 | 687 | 1111 | AG | 290 | 2.5 | 0.0 | 23.9 |
| 18. X WB4 | 687 | 1111 | 599 | 1090 | AG | 290 | 2.5 | 0.0 | 23.9 |
| 19. X LT1 | 674 | 1115 | 753 | 1134 | AG | 124 | 5.6 | 0.0 | 23.9 |
| 20. X LT2 | 753 | 1134 | 841 | 1157 | AG | 243 | 5.6 | 0.0 | 23.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | X | Y | Z |
|---|---|---|---|
| 1. Recpt 1 | 805 | 1099 | 1.8 |
| 2. Recpt 2 | 691 | 1157 | 1.8 |
| 3. Recpt 3 | 729 | 1093 | 1.8 |
| 4. Recpt 4 | 778 | 1179 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Recpt 1 | 303. | 3.2 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 |
| 2. Recpt 2 | 110. | 3.1 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| 3. Recpt 3 | 8. | 3.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| 4. Recpt 4 | 180. | 3.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |

| RECEPTOR | CONC/LINK (PPM) 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|
| 1. Recpt 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Recpt 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Recpt 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Recpt 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| RECEPTOR | CONC/LINK (PPM) 17 | 18 | 19 | 20 |
|---|---|---|---|---|
| 1. Recpt 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Recpt 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Recpt 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Recpt 4 | 0.0 | 0.0 | 0.0 | 0.0 |

1

Run Ended on 12/08/2009 at 11:54:17

1 CALINE4 - (DATED CALINE4x)

3.0.0 PC (32 BIT) VERSION
(C) COPYRIGHT 2000, TRINITY CONSULTANTS

Run Began on 12/08/2009 at 11:51:43

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Western and Toscanini
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

| | | |
|---|---|---|
| U= 0.5 M/S | Z0= 100. CM | ALT= 0. (M) |
| BRG= WORST CASE | VD= 0.0 CM/S | |
| CLAS= 7 (G) | VS= 0.0 CM/S | |
| MIXH= 1000. M | AMB= 2.5 PPM | |
| SIGTH= 20. DEGREES | TEMP= 15.0 DEGREE (C) | |

II. LINK VARIABLES

| LINK DESCRIPTION | X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| 1. Y SB1 | 684 | 1256 | 711 | 1201 | AG | 1719 | 2.5 | 0.0 | 16.7 |
| 2. Y SB2 | 711 | 1201 | 745 | 1133 | AG | 1667 | 5.6 | 0.0 | 16.7 |
| 3. Y SB3 | 745 | 1133 | 800 | 1025 | AG | 1722 | 2.5 | 0.0 | 16.7 |
| 4. Y SB4 | 800 | 1025 | 858 | 906 | AG | 1722 | 2.5 | 0.0 | 16.7 |
| 5. Y NB1 | 868 | 911 | 813 | 1024 | AG | 1688 | 2.5 | 0.0 | 16.7 |
| 6. Y NB2 | 814 | 1024 | 761 | 1138 | AG | 1623 | 5.6 | 0.0 | 16.7 |
| 7. Y NB3 | 761 | 1138 | 728 | 1205 | AG | 1656 | 2.5 | 0.0 | 16.7 |
| 8. Y NB4 | 728 | 1205 | 700 | 1263 | AG | 1656 | 2.5 | 0.0 | 16.7 |
| 9. Y LT1 | 720 | 1198 | 753 | 1134 | AG | 52 | 5.6 | 0.0 | 16.7 |
| 10. Y LT2 | 753 | 1134 | 802 | 1038 | AG | 65 | 5.6 | 0.0 | 16.7 |
| 11. X EB1 | 596 | 1103 | 682 | 1125 | AG | 122 | 2.5 | 0.0 | 23.9 |
| 12. X EB2 | 682 | 1125 | 750 | 1141 | AG | 89 | 5.6 | 0.0 | 23.9 |
| 13. X EB3 | 750 | 1141 | 826 | 1158 | AG | 141 | 2.5 | 0.0 | 23.9 |
| 14. X EB4 | 826 | 1158 | 923 | 1182 | AG | 141 | 2.5 | 0.0 | 23.9 |
| 15. X WB1 | 924 | 1170 | 832 | 1147 | AG | 80 | 2.5 | 0.0 | 23.9 |
| 16. X WB2 | 832 | 1147 | 757 | 1128 | AG | 25 | 5.6 | 0.0 | 23.9 |
| 17. X WB3 | 757 | 1128 | 687 | 1111 | AG | 90 | 2.5 | 0.0 | 23.9 |
| 18. X WB4 | 687 | 1111 | 599 | 1090 | AG | 90 | 2.5 | 0.0 | 23.9 |
| 19. X LT1 | 674 | 1115 | 753 | 1134 | AG | 33 | 5.6 | 0.0 | 23.9 |
| 20. X LT2 | 753 | 1134 | 841 | 1157 | AG | 55 | 5.6 | 0.0 | 23.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | X | Y | Z |
|---|---|---|---|
| 1. Recpt 1 | 805 | 1099 | 1.8 |
| 2. Recpt 2 | 691 | 1157 | 1.8 |
| 3. Recpt 3 | 729 | 1093 | 1.8 |
| 4. Recpt 4 | 778 | 1179 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Recpt 1 | 302. | 3.1 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| 2. Recpt 2 | 118. | 3.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| 3. Recpt 3 | 5. | 2.9 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| 4. Recpt 4 | 180. | 3.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |

| RECEPTOR | CONC/LINK (PPM) 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|
| 1. Recpt 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Recpt 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Recpt 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Recpt 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| RECEPTOR | CONC/LINK (PPM) 17 | 18 | 19 | 20 |
|---|---|---|---|---|
| 1. Recpt 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Recpt 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Recpt 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Recpt 4 | 0.0 | 0.0 | 0.0 | 0.0 |

1

Run Ended on 12/08/2009 at 11:51:43

1 CALINE4 - (DATED CALINE4x)

3.0.0 PC (32 BIT) VERSION

(C) COPYRIGHT 2000, TRINITY CONSULTANTS

Run Began on 12/08/2009 at 11:42:31

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Miraleste and Via Colina
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

```
   U=   0.5 M/S            Z0= 100. CM            ALT=     0. (M)
 BRG= WORST CASE           VD=  0.0 CM/S
CLAS=     7 (G)            VS=  0.0 CM/S
MIXH= 1000. M             AMB=  2.5 PPM
SIGTH=   20. DEGREES      TEMP= 15.0 DEGREE (C)
```

II. LINK VARIABLES

| LINK DESCRIPTION | X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| 1. Y SB1 | 684 | 1256 | 711 | 1201 | AG | 761 | 2.5 | 0.0 | 16.7 |
| 2. Y SB2 | 711 | 1201 | 745 | 1133 | AG | 447 | 5.6 | 0.0 | 16.7 |
| 3. Y SB3 | 745 | 1133 | 800 | 1025 | AG | 499 | 2.5 | 0.0 | 16.7 |
| 4. Y SB4 | 800 | 1025 | 858 | 906 | AG | 499 | 2.5 | 0.0 | 16.7 |
| 5. Y NB1 | 868 | 911 | 813 | 1024 | AG | 364 | 2.5 | 0.0 | 16.7 |
| 6. Y NB2 | 814 | 1024 | 761 | 1138 | AG | 353 | 5.6 | 0.0 | 16.7 |
| 7. Y NB3 | 761 | 1138 | 728 | 1205 | AG | 354 | 2.5 | 0.0 | 16.7 |
| 8. Y NB4 | 728 | 1205 | 700 | 1263 | AG | 354 | 2.5 | 0.0 | 16.7 |
| 9. Y LT1 | 720 | 1198 | 753 | 1134 | AG | 314 | 5.6 | 0.0 | 16.7 |
| 10. Y LT2 | 753 | 1134 | 802 | 1038 | AG | 11 | 5.6 | 0.0 | 16.7 |
| 11. X EB1 | 596 | 1103 | 682 | 1125 | AG | 17 | 2.5 | 0.0 | 23.9 |
| 12. X EB2 | 682 | 1125 | 750 | 1141 | AG | 16 | 5.6 | 0.0 | 23.9 |
| 13. X EB3 | 750 | 1141 | 826 | 1158 | AG | 330 | 2.5 | 0.0 | 23.9 |
| 14. X EB4 | 826 | 1158 | 923 | 1182 | AG | 330 | 2.5 | 0.0 | 23.9 |
| 15. X WB1 | 924 | 1170 | 832 | 1147 | AG | 311 | 2.5 | 0.0 | 23.9 |
| 16. X WB2 | 832 | 1147 | 757 | 1128 | AG | 259 | 5.6 | 0.0 | 23.9 |
| 17. X WB3 | 757 | 1128 | 687 | 1111 | AG | 270 | 2.5 | 0.0 | 23.9 |
| 18. X WB4 | 687 | 1111 | 599 | 1090 | AG | 270 | 2.5 | 0.0 | 23.9 |
| 19. X LT1 | 674 | 1115 | 753 | 1134 | AG | 1 | 5.6 | 0.0 | 23.9 |
| 20. X LT2 | 753 | 1134 | 841 | 1157 | AG | 52 | 5.6 | 0.0 | 23.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | X | Y | Z |
|---|---|---|---|
| 1. Recpt 1 | 805 | 1099 | 1.8 |
| 2. Recpt 2 | 691 | 1157 | 1.8 |
| 3. Recpt 3 | 729 | 1093 | 1.8 |
| 4. Recpt 4 | 778 | 1179 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Recpt 1 | 309. | 2.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| 2. Recpt 2 | 97. | 2.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Recpt 3 | 8. | 2.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Recpt 4 | 179. | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |

| RECEPTOR | CONC/LINK (PPM) 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|
| 1. Recpt 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Recpt 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Recpt 3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Recpt 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| RECEPTOR | CONC/LINK (PPM) 17 | 18 | 19 | 20 |
|---|---|---|---|---|
| 1. Recpt 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Recpt 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Recpt 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Recpt 4 | 0.0 | 0.0 | 0.0 | 0.0 |

1

Run Ended on 12/08/2009 at 11:42:31

# Appendix D-3
# Noise Data

**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Via Colinita And Crest Drive | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 7699 |
| Peak Hour Traffic: | **769.9** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

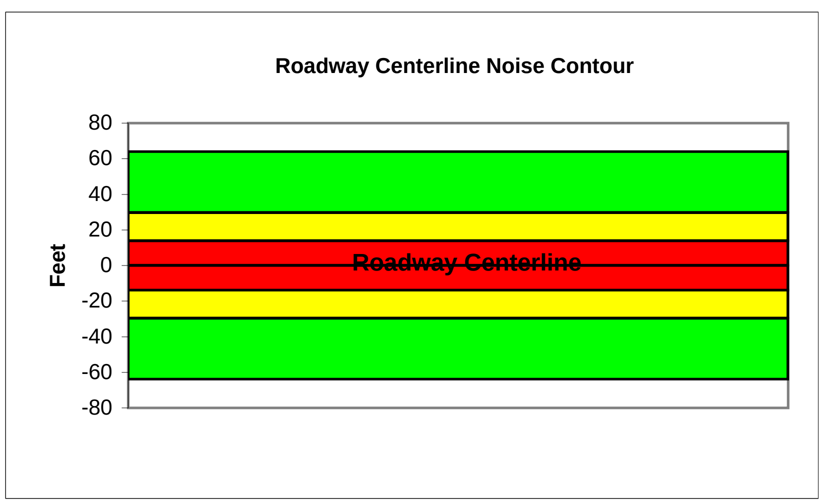
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 44.3 | 53.1 | 51.3 | 45.2 | 53.9 | 54.5 |
| Medium Trucks: | 54.9 | 46.9 | 40.5 | 38.9 | 47.4 | 47.6 |
| Heavy Trucks: | 60.6 | 48.6 | 39.6 | 40.8 | 50.9 | 51.1 |
| **Vehicle Noise:** | **63.1** | **55.6** | **52.1** | **47.7** | **56.3** | **56.7** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 64 |
| 65 dBA | 30 |
| 70 dBA | 14 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Crest Drive and Palos Verdes Drive South | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 3873 |
| Peak Hour Traffic: | **387.3** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

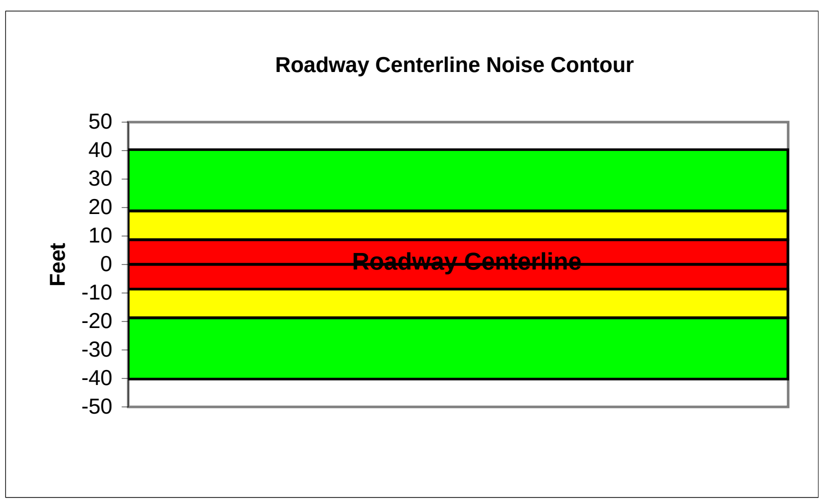
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 41.4 | 50.1 | 48.3 | 42.3 | 50.9 | 51.5 |
| Medium Trucks: | 52.0 | 43.9 | 37.5 | 35.9 | 44.4 | 44.7 |
| Heavy Trucks: | 57.6 | 45.7 | 36.6 | 37.8 | 48.0 | 48.1 |
| **Vehicle Noise:** | **60.1** | **52.6** | **49.1** | **44.7** | **53.3** | **53.7** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 40 |
| 65 dBA | 19 |
| 70 dBA | 9 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Palos Verdes Drive East and Via Colinita | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 12635 |
| Peak Hour Traffic: | **1263.5** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

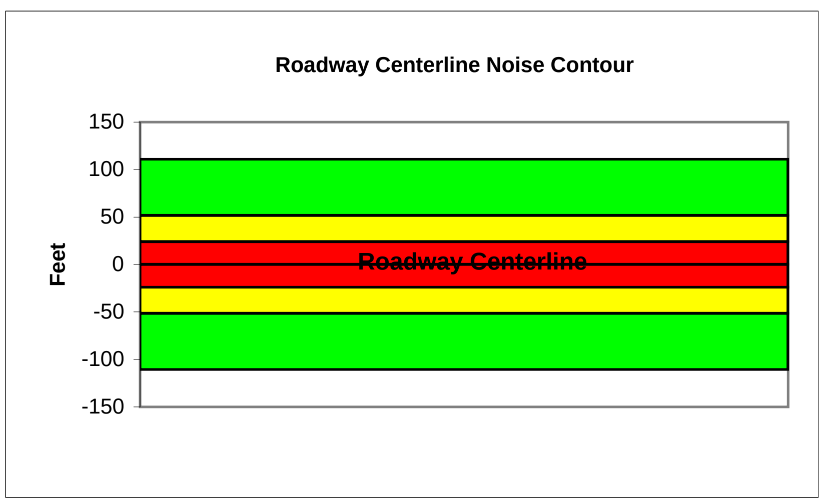
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 46.6 | 55.4 | 53.6 | 47.6 | 56.2 | 56.8 |
| Medium Trucks: | 56.4 | 48.3 | 41.9 | 40.3 | 48.8 | 49.1 |
| Heavy Trucks: | 61.6 | 49.6 | 40.6 | 41.8 | 51.7 | 51.8 |
| **Vehicle Noise:** | **64.0** | **57.4** | **54.2** | **49.5** | **58.1** | **58.5** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 111 |
| 65 dBA | 52 |
| 70 dBA | 24 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Via Colinita and First Street | | |

| PROJECT DATA | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

| NOISE SOURCE ELEVATIONS (Feet) | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

| SITE DATA | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 9805 |
| Peak Hour Traffic: | **980.5** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

| FLEET MIX | | | | |
|---|---|---|---|---|
| Type | Day | Evening | Night | Daily |
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

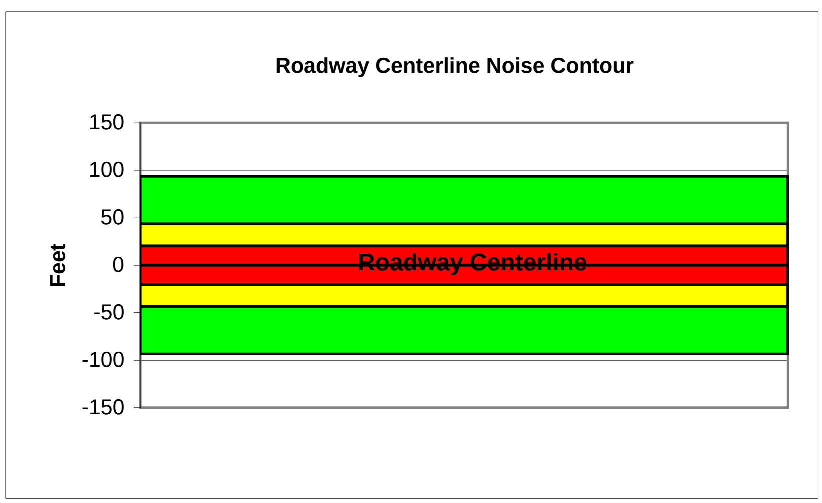
**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 45.5 | 54.3 | 52.5 | 46.4 | 55.1 | 55.7 |
| Medium Trucks: | 55.3 | 47.2 | 40.8 | 39.2 | 47.7 | 48.0 |
| Heavy Trucks: | 60.5 | 48.5 | 39.5 | 40.7 | 50.6 | 50.7 |
| **Vehicle Noise:** | **62.9** | **56.3** | **53.1** | **48.4** | **57.0** | **57.4** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

| CENTERLINE NOISE CONTOUR | |
|---|---|
| Unmitigated | |
| 60 dBA | 94 |
| 65 dBA | 44 |
| 70 dBA | 20 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between First Street and Western Avenue | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 7446 |
| Peak Hour Traffic: | **744.6** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 28 |

**NOISE INPUTS**

Site conditions: **SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

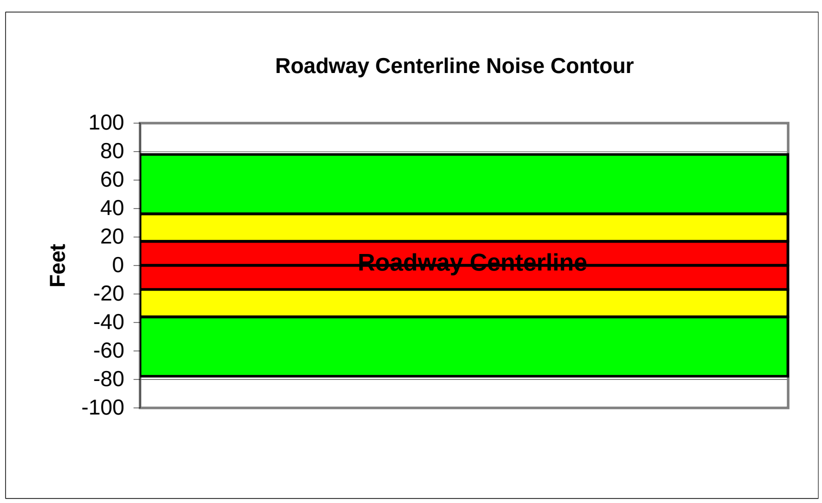
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 45.7 | 54.5 | 52.7 | 46.6 | 55.3 | 55.9 |
| Medium Trucks: | 55.4 | 47.4 | 41.0 | 39.4 | 47.9 | 48.1 |
| Heavy Trucks: | 60.6 | 48.7 | 39.6 | 40.9 | 50.8 | 50.9 |
| **Vehicle Noise:** | **63.1** | **56.4** | **53.3** | **48.6** | **57.1** | **57.6** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 78 |
| 65 dBA | 36 |
| 70 dBA | 17 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Toscanini Drive and Capitol Drive | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **0** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 34,768 |
| Peak Hour Traffic: | **3476.8** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

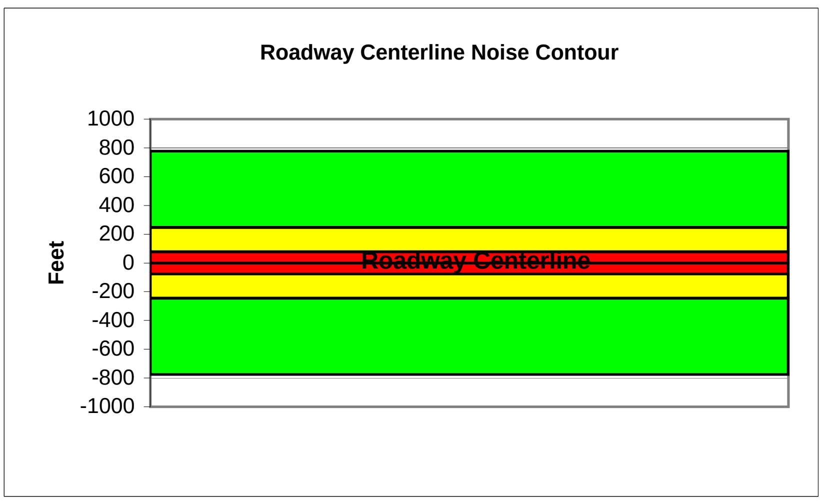
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 56.7 | 64.8 | 63.5 | 57.4 | 65.8 | 66.5 |
| Medium Trucks: | 65.7 | 42.0 | 34.2 | 43.4 | 49.6 | 49.6 |
| Heavy Trucks: | 70.5 | 61.3 | 43.5 | 52.7 | 62.7 | 62.7 |
| **Vehicle Noise:** | **72.9** | **66.9** | **63.5** | **59.1** | **67.6** | **68.1** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 778 |
| 65 dBA | 246 |
| 70 dBA | 78 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Capitol Drive and Crestwood Street | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **0** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 36,211 |
| Peak Hour Traffic: | **3621.1** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

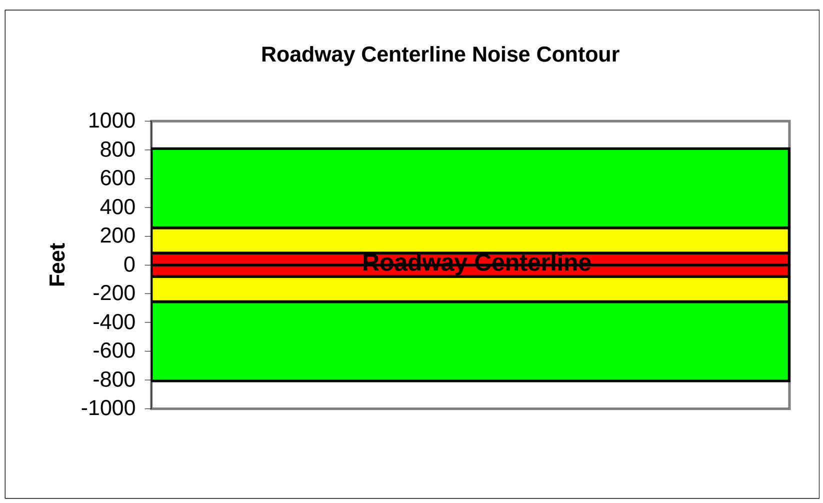
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 56.9 | 64.9 | 63.6 | 57.6 | 66.0 | 66.6 |
| Medium Trucks: | 65.8 | 42.2 | 34.4 | 43.6 | 49.7 | 49.8 |
| Heavy Trucks: | 70.7 | 61.5 | 43.7 | 52.9 | 62.9 | 62.9 |
| **Vehicle Noise:** | **73.1** | **67.0** | **63.7** | **59.3** | **67.8** | **68.2** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 809 |
| 65 dBA | 256 |
| 70 dBA | 81 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Crestwood Street and First Street | | |

### PROJECT DATA

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

### NOISE SOURCE ELEVATIONS (Feet)

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

### SITE DATA

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 30913 |
| Peak Hour Traffic: | **3091.3** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

### NOISE INPUTS

Site conditions:**SOFT SITE**

### FLEET MIX

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

### UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)

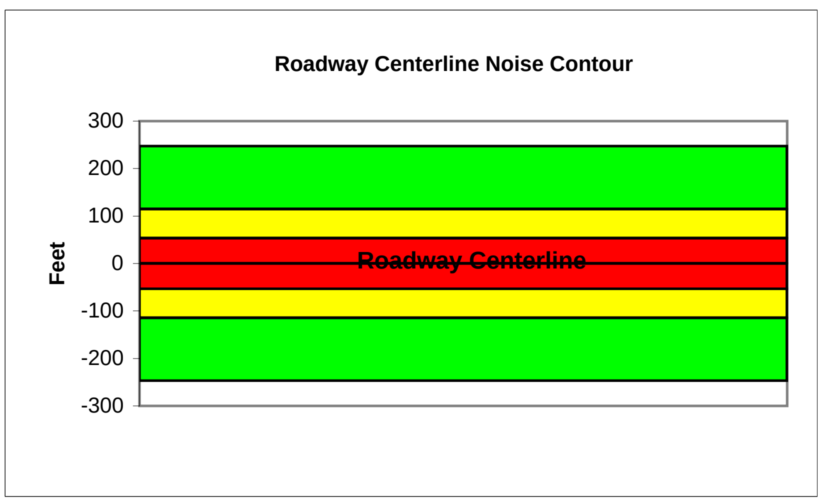
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 53.1 | 61.9 | 60.1 | 54.0 | 62.6 | 63.2 |
| Medium Trucks: | 62.0 | 54.0 | 47.6 | 46.0 | 54.5 | 54.7 |
| Heavy Trucks: | 66.9 | 54.9 | 45.9 | 47.1 | 56.8 | 56.9 |
| **Vehicle Noise:** | **69.3** | **63.4** | **60.5** | **55.6** | **64.1** | **64.6** |

### MITIGATED NOISE LEVELS (With topographic or barrier attenuation)

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

### CENTERLINE NOISE CONTOUR

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 247 |
| 65 dBA | 115 |
| 70 dBA | 53 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between First Street and Ninth Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 25362 |
| Peak Hour Traffic: | **2536.2** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

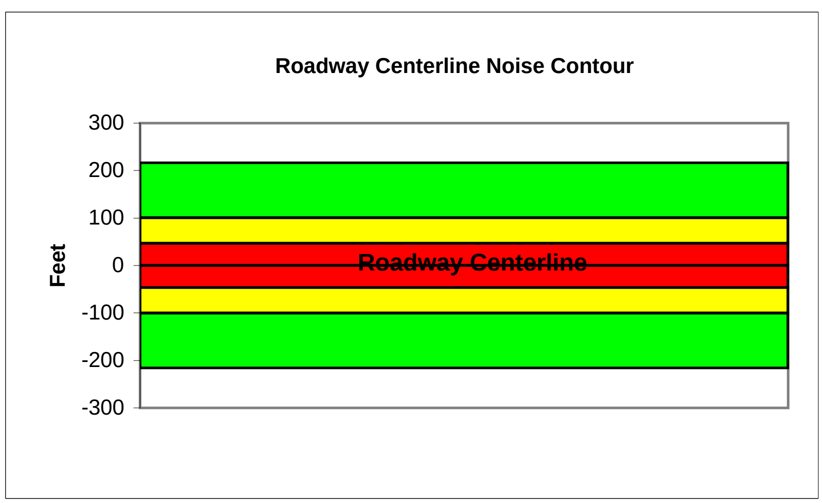
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.2 | 61.0 | 59.2 | 53.1 | 61.8 | 62.4 |
| Medium Trucks: | 61.2 | 53.1 | 46.7 | 45.1 | 53.6 | 53.9 |
| Heavy Trucks: | 66.0 | 54.1 | 45.0 | 46.2 | 56.0 | 56.1 |
| **Vehicle Noise:** | **68.4** | **62.6** | **59.7** | **54.7** | **63.3** | **63.8** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 217 |
| 65 dBA | 101 |
| 70 dBA | 47 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Ninth Street and West 25th Street | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 27331 |
| Peak Hour Traffic: | **2733.1** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 43 |

**NOISE INPUTS**

Site conditions: **SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

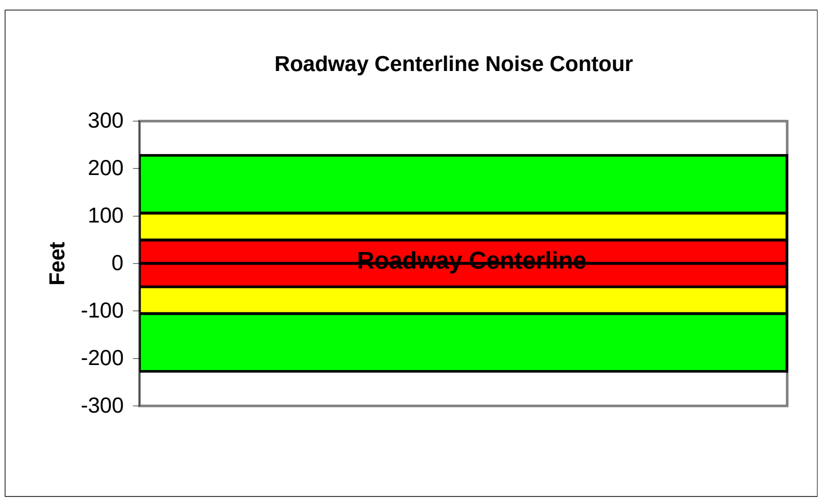
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.7 | 61.4 | 59.6 | 53.6 | 62.2 | 62.8 |
| Medium Trucks: | 61.6 | 53.5 | 47.2 | 45.6 | 54.1 | 54.3 |
| Heavy Trucks: | 66.5 | 54.5 | 45.5 | 46.7 | 56.4 | 56.5 |
| **Vehicle Noise:** | **68.8** | **63.0** | **60.1** | **55.1** | **63.7** | **64.2** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 228 |
| 65 dBA | 106 |
| 70 dBA | 49 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | First Street | | |
| Road Segment: | Between Miraleste Drive and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 5547 |
| Peak Hour Traffic: | **554.7** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 14 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

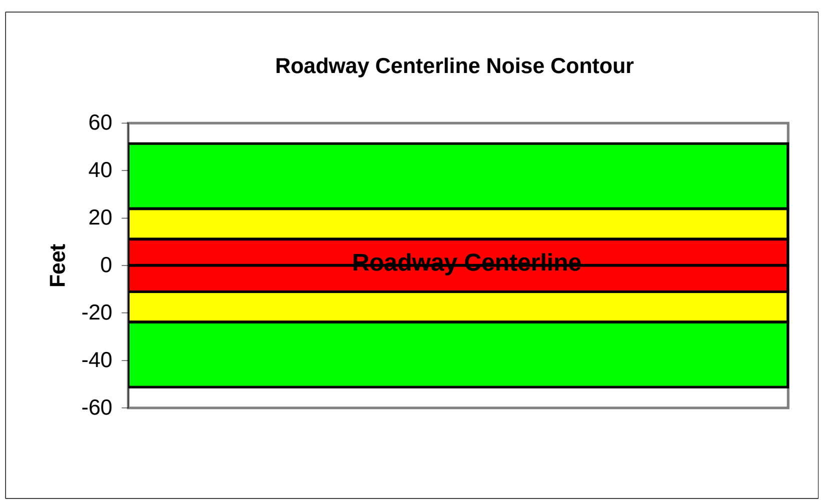
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 42.9 | 51.6 | 49.9 | 43.8 | 52.4 | 53.0 |
| Medium Trucks: | 53.5 | 45.4 | 39.0 | 37.4 | 45.9 | 46.2 |
| Heavy Trucks: | 59.1 | 47.2 | 38.1 | 39.3 | 49.5 | 49.6 |
| **Vehicle Noise:** | **61.6** | **54.1** | **50.6** | **46.3** | **54.8** | **55.2** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 51 |
| 65 dBA | 24 |
| 70 dBA | 11 |
| **Mitigated** | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



| Federal Highway Administration RD-77-108<br>Traffic Noise Prediction Model (CALVENO) | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive South | | |
| Road Segment: | Between Palos Verdes Drive East and Western Avenue | | |

| PROJECT DATA | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

| NOISE SOURCE ELEVATIONS (Feet) | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

| SITE DATA | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 10895 |
| Peak Hour Traffic: | **1089.5** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 32 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

| FLEET MIX | | | | |
|---|---|---|---|---|
| Type | Day | Evening | Night | Daily |
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

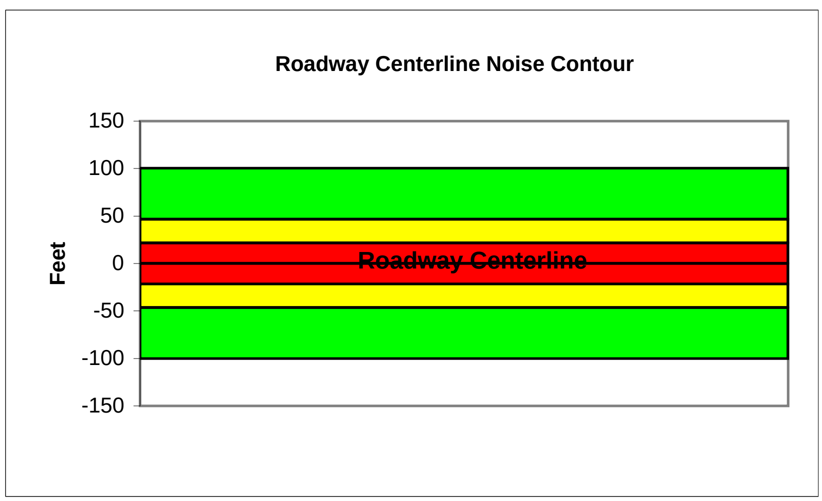
**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 47.3 | 56.0 | 54.2 | 48.2 | 56.8 | 57.4 |
| Medium Trucks: | 57.0 | 48.9 | 42.5 | 40.9 | 49.4 | 49.7 |
| Heavy Trucks: | 62.2 | 50.3 | 41.2 | 42.4 | 52.3 | 52.4 |
| **Vehicle Noise:** | **64.6** | **58.0** | **54.8** | **50.1** | **58.7** | **59.1** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

| CENTERLINE NOISE CONTOUR | |
|---|---|
| Unmitigated | |
| 60 dBA | 101 |
| 65 dBA | 47 |
| 70 dBA | 22 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Via Colinita And Crest Drive | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 9147 |
| Peak Hour Traffic: | **914.7** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

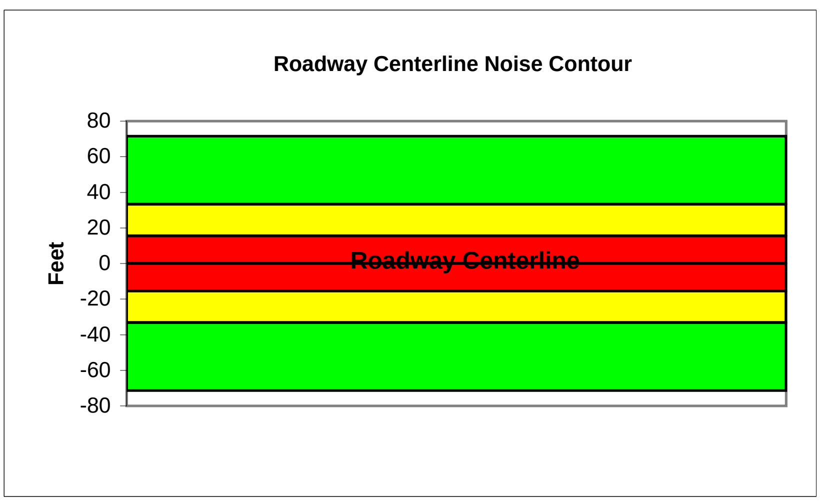
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 45.1 | 53.9 | 52.1 | 46.0 | 54.6 | 55.3 |
| Medium Trucks: | 55.7 | 47.6 | 41.2 | 39.7 | 48.2 | 48.4 |
| Heavy Trucks: | 61.3 | 49.4 | 40.3 | 41.6 | 51.7 | 51.8 |
| **Vehicle Noise:** | **63.9** | **56.3** | **52.8** | **48.5** | **57.0** | **57.4** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 72 |
| 65 dBA | 33 |
| 70 dBA | 15 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Crest Drive and Palos Verdes Drive South | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 4356 |
| Peak Hour Traffic: | **435.6** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

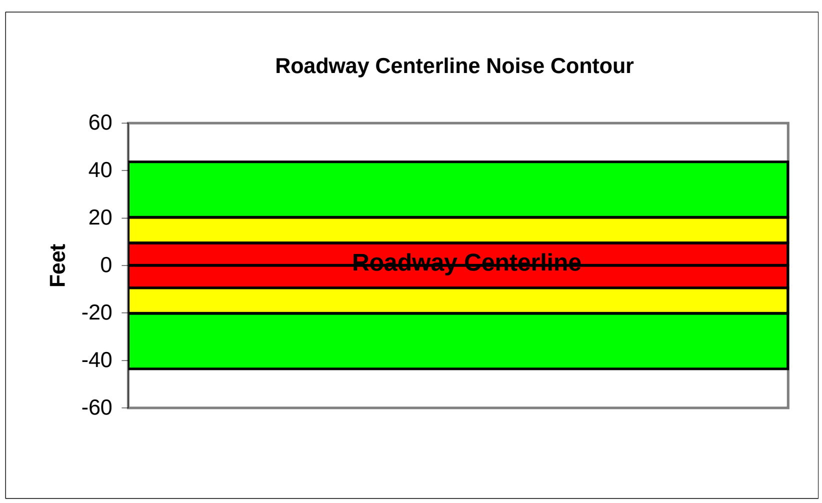
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 41.9 | 50.6 | 48.9 | 42.8 | 51.4 | 52.0 |
| Medium Trucks: | 52.5 | 44.4 | 38.0 | 36.4 | 44.9 | 45.2 |
| Heavy Trucks: | 58.1 | 46.2 | 37.1 | 38.3 | 48.5 | 48.6 |
| **Vehicle Noise:** | **60.6** | **53.1** | **49.6** | **45.3** | **53.8** | **54.2** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 44 |
| 65 dBA | 20 |
| 70 dBA | 9 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Palos Verdes Drive East and Via Colinita | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 13890 |
| Peak Hour Traffic: | **1389** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions: **SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

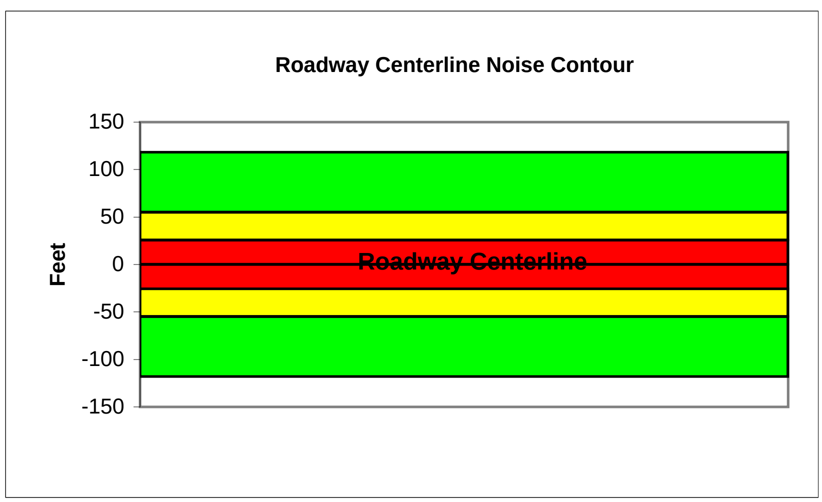
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 47.1 | 55.8 | 54.0 | 48.0 | 56.6 | 57.2 |
| Medium Trucks: | 56.8 | 48.7 | 42.3 | 40.7 | 49.2 | 49.5 |
| Heavy Trucks: | 62.0 | 50.1 | 41.0 | 42.2 | 52.1 | 52.2 |
| **Vehicle Noise:** | **64.4** | **57.8** | **54.6** | **49.9** | **58.5** | **58.9** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| **Unmitigated** | |
| 60 dBA | 118 |
| 65 dBA | 55 |
| 70 dBA | 25 |
| **Mitigated** | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Via Colinita and First Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 10288 |
| Peak Hour Traffic: | **1028.8** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

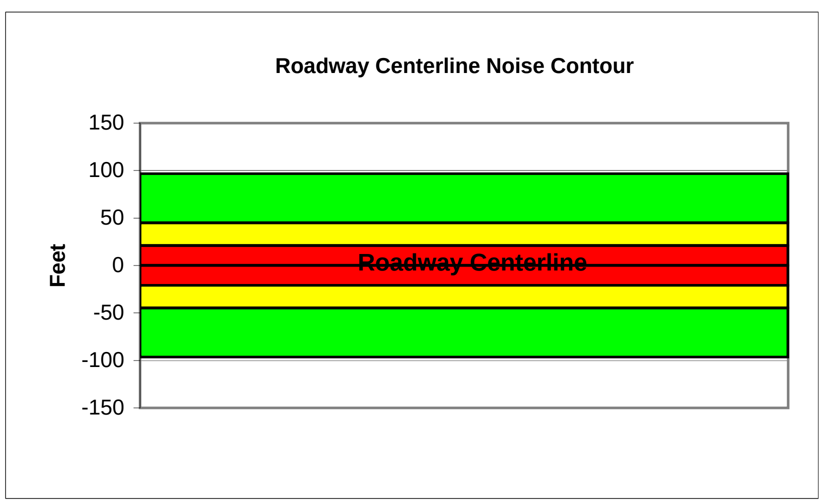
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 45.7 | 54.5 | 52.7 | 46.7 | 55.3 | 55.9 |
| Medium Trucks: | 55.5 | 47.4 | 41.0 | 39.4 | 47.9 | 48.2 |
| Heavy Trucks: | 60.7 | 48.7 | 39.7 | 40.9 | 50.8 | 50.9 |
| **Vehicle Noise:** | **63.1** | **56.5** | **53.3** | **48.6** | **57.2** | **57.6** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 97 |
| 65 dBA | 45 |
| 70 dBA | 21 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between First Street and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 7543 |
| Peak Hour Traffic: | **754.3** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 28 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

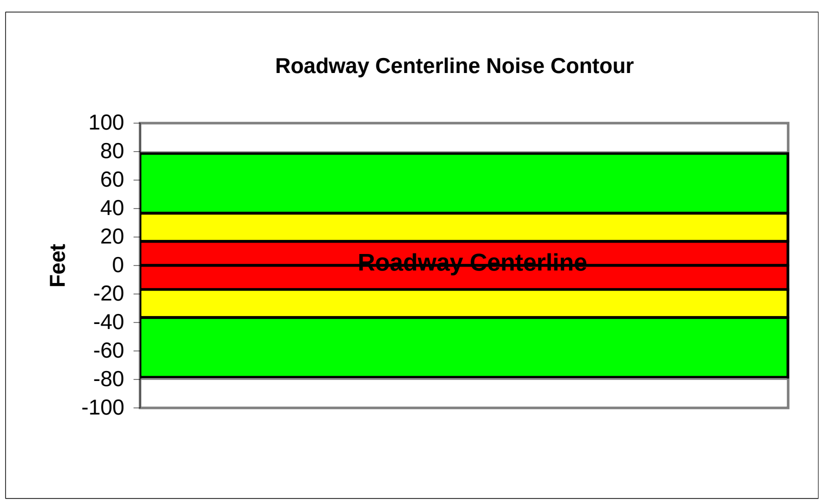
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 45.8 | 54.5 | 52.7 | 46.7 | 55.3 | 55.9 |
| Medium Trucks: | 55.5 | 47.4 | 41.0 | 39.5 | 47.9 | 48.2 |
| Heavy Trucks: | 60.7 | 48.8 | 39.7 | 40.9 | 50.8 | 51.0 |
| **Vehicle Noise:** | **63.1** | **56.5** | **53.3** | **48.6** | **57.2** | **57.6** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 79 |
| 65 dBA | 37 |
| 70 dBA | 17 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Toscanini Drive and Capitol Drive | | |

### PROJECT DATA

| | |
|---|---|
| Centerline Dist to Barrier | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **0** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

### NOISE SOURCE ELEVATIONS (Feet)

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

### SITE DATA

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 35,540 |
| Peak Hour Traffic: | **3554** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

### NOISE INPUTS

Site conditions **HARD SITE**

### FLEET MIX

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

### UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)

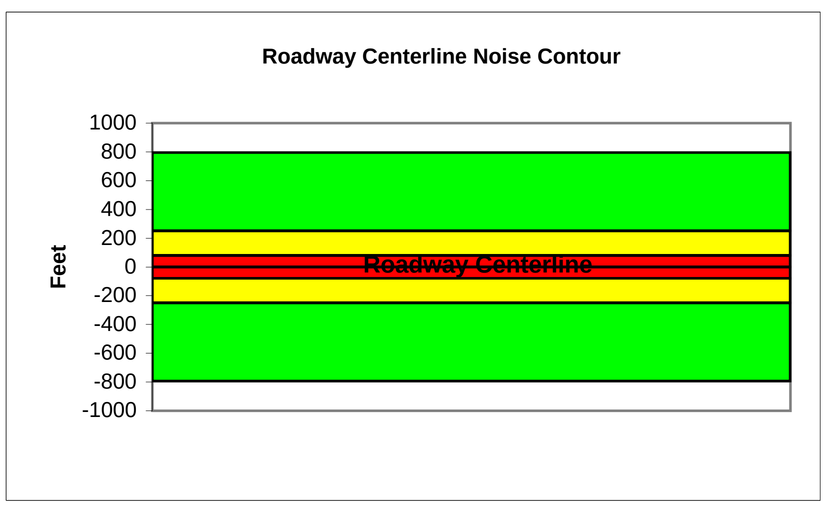
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 56.8 | 64.9 | 63.6 | 57.5 | 65.9 | 66.6 |
| Medium Trucks: | 65.8 | 42.1 | 34.3 | 43.5 | 49.7 | 49.7 |
| Heavy Trucks: | 70.6 | 61.4 | 43.6 | 52.8 | 62.8 | 62.8 |
| **Vehicle Noise:** | **73.0** | **67.0** | **63.6** | **59.2** | **67.7** | **68.2** |

### MITIGATED NOISE LEVELS (With topographic or barrier attenuation)

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

### CENTERLINE NOISE CONTOUR

| Unmitigated | |
|---|---|
| 60 dBA | 795 |
| 65 dBA | 251 |
| 70 dBA | 79 |
| **Mitigated** | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Capitol Drive and Crestwood Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier | | **0** | |
| Barrier (0=wall, 1= berm): | | **0** | |
| Receiver Barrier Dist: | | **0** | |
| Centerline Dist. To Observer: | | **100** | |
| Barrier Near Lane CL Dist: | | **0** | |
| Barrier Far lane CL Dist: | | **0** | |
| Pad Elevation: | | **0.5** | |
| Road Elevation: | | **0** | |
| Observer Height (above grade): | | **0** | |
| Barrier Height: | | **0** | |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 36,501 |
| Peak Hour Traffic: | **3650.1** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

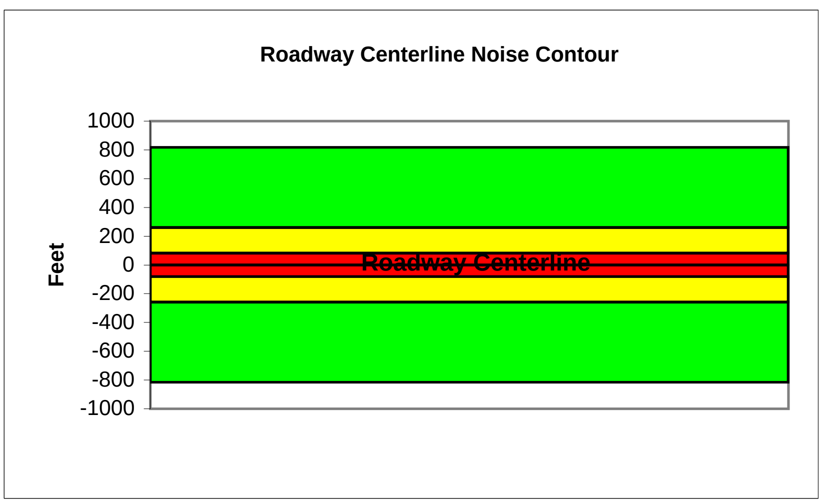
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 56.9 | 65.0 | 63.7 | 57.6 | 66.0 | 66.7 |
| Medium Trucks: | 65.9 | 42.2 | 34.4 | 43.6 | 49.8 | 49.8 |
| Heavy Trucks: | 70.7 | 61.5 | 43.7 | 52.9 | 62.9 | 62.9 |
| **Vehicle Noise:** | **73.1** | **67.1** | **63.7** | **59.4** | **67.8** | **68.3** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 817 |
| 65 dBA | 258 |
| 70 dBA | 82 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Crestwood Street and First Street | | |

### PROJECT DATA

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

### NOISE SOURCE ELEVATIONS (Feet)

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

### SITE DATA

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 31203 |
| Peak Hour Traffic: | **3120.3** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

### NOISE INPUTS

Site conditions:**SOFT SITE**

### FLEET MIX

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

### UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)

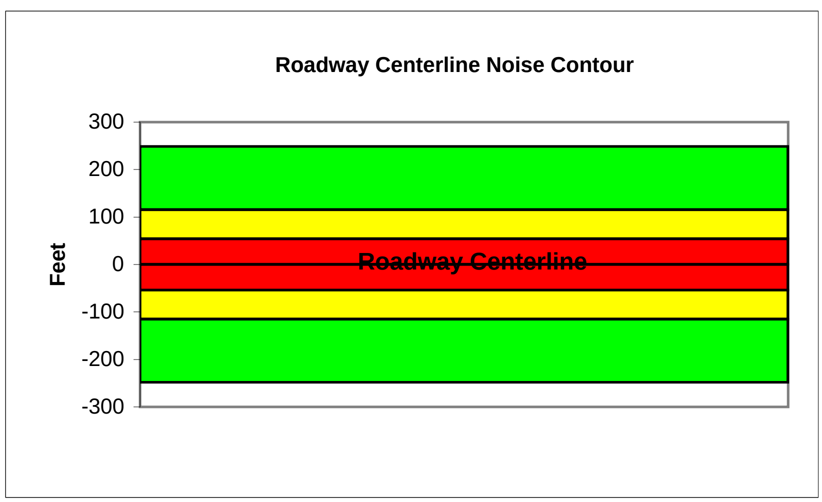
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 53.1 | 61.9 | 60.1 | 54.0 | 62.7 | 63.3 |
| Medium Trucks: | 62.1 | 54.0 | 47.6 | 46.0 | 54.5 | 54.8 |
| Heavy Trucks: | 66.9 | 55.0 | 45.9 | 47.1 | 56.9 | 57.0 |
| **Vehicle Noise:** | **69.3** | **63.5** | **60.6** | **55.6** | **64.2** | **64.7** |

### MITIGATED NOISE LEVELS (With topographic or barrier attenuation)

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

### CENTERLINE NOISE CONTOUR

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 249 |
| 65 dBA | 115 |
| 70 dBA | 54 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between First Street and Ninth Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 25362 |
| Peak Hour Traffic: | **2536.2** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

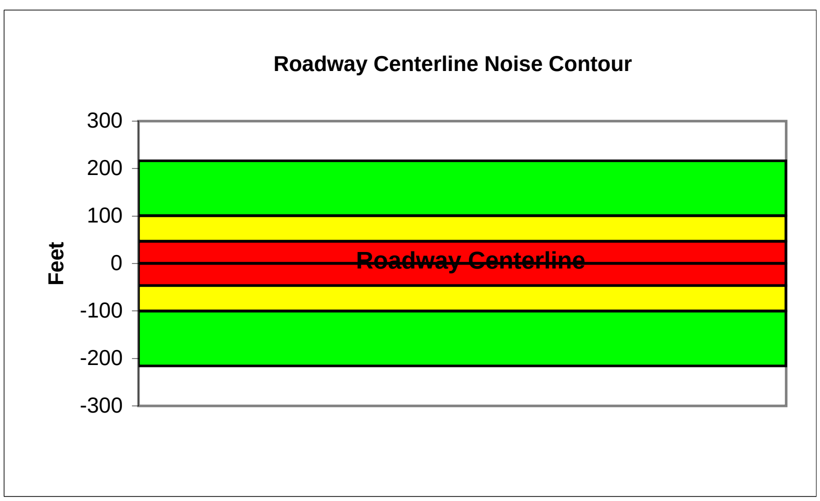
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.2 | 61.0 | 59.2 | 53.1 | 61.8 | 62.4 |
| Medium Trucks: | 61.2 | 53.1 | 46.7 | 45.1 | 53.6 | 53.9 |
| Heavy Trucks: | 66.0 | 54.1 | 45.0 | 46.2 | 56.0 | 56.1 |
| **Vehicle Noise:** | **68.4** | **62.6** | **59.7** | **54.7** | **63.3** | **63.8** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 217 |
| 65 dBA | 101 |
| 70 dBA | 47 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Ninth Street and West 25th Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 27331 |
| Peak Hour Traffic: | **2733.1** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 43 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

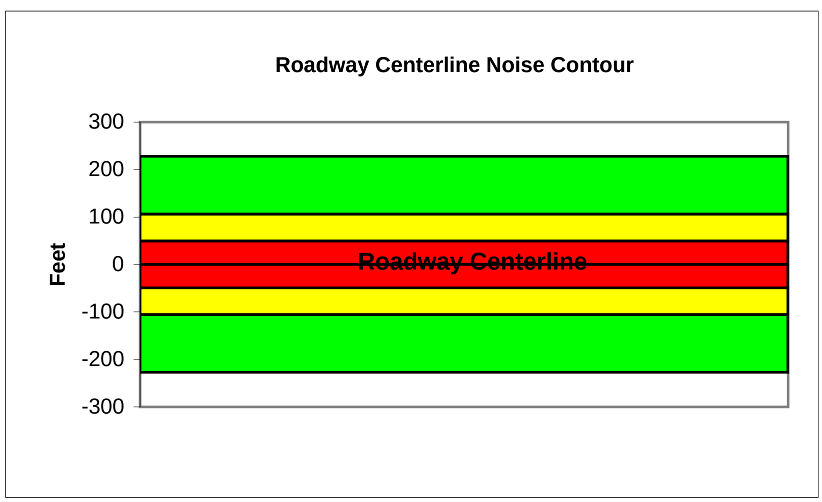
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.7 | 61.4 | 59.6 | 53.6 | 62.2 | 62.8 |
| Medium Trucks: | 61.6 | 53.5 | 47.2 | 45.6 | 54.1 | 54.3 |
| Heavy Trucks: | 66.5 | 54.5 | 45.5 | 46.7 | 56.4 | 56.5 |
| **Vehicle Noise:** | **68.8** | **63.0** | **60.1** | **55.1** | **63.7** | **64.2** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 228 |
| 65 dBA | 106 |
| 70 dBA | 49 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | First Street | | |
| Road Segment: | Between Miraleste Drive and Western Avenue | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 5933 |
| Peak Hour Traffic: | **593.3** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 14 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

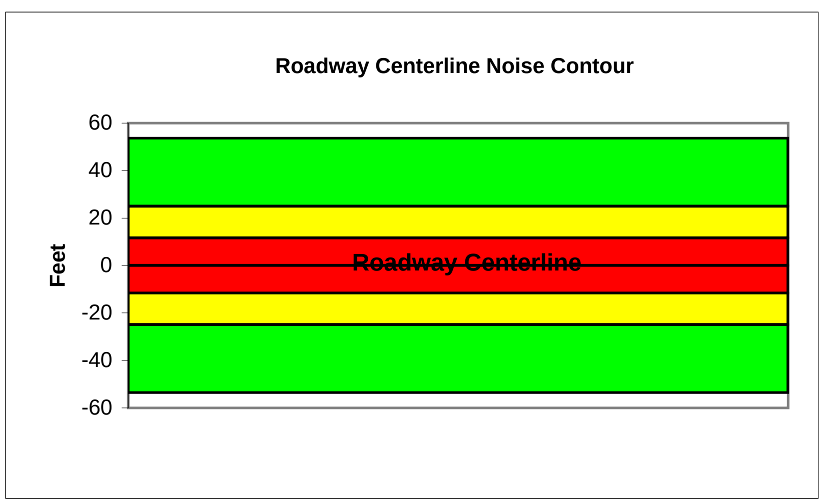
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 43.2 | 51.9 | 50.2 | 44.1 | 52.7 | 53.3 |
| Medium Trucks: | 53.8 | 45.7 | 39.3 | 37.7 | 46.2 | 46.5 |
| Heavy Trucks: | 59.4 | 47.5 | 38.4 | 39.6 | 49.8 | 49.9 |
| **Vehicle Noise:** | **61.9** | **54.4** | **50.9** | **46.6** | **55.1** | **55.5** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 54 |
| 65 dBA | 25 |
| 70 dBA | 12 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive South | | |
| Road Segment: | Between Palos Verdes Drive East and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 11281 |
| Peak Hour Traffic: | **1128.1** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 32 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

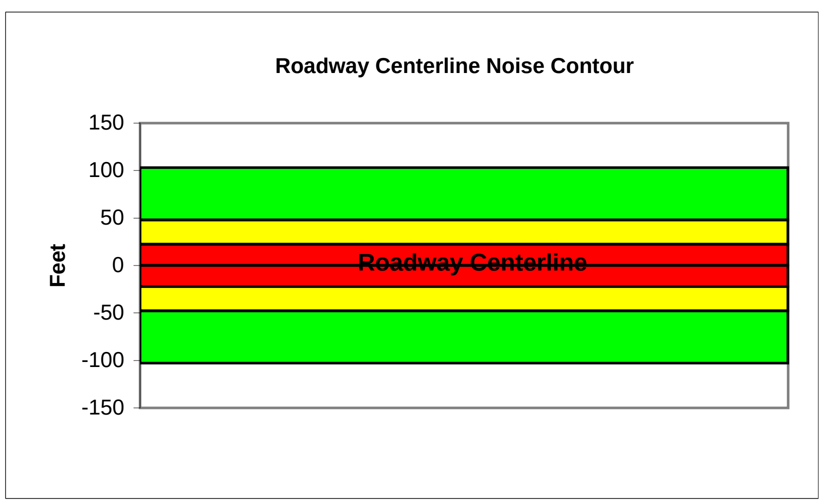
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 47.4 | 56.2 | 54.4 | 48.3 | 57.0 | 57.6 |
| Medium Trucks: | 57.1 | 49.1 | 42.7 | 41.1 | 49.6 | 49.8 |
| Heavy Trucks: | 62.3 | 50.4 | 41.3 | 42.6 | 52.5 | 52.6 |
| **Vehicle Noise:** | **64.8** | **58.1** | **55.0** | **50.3** | **58.8** | **59.3** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 103 |
| 65 dBA | 48 |
| 70 dBA | 22 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Via Colinita And Crest Drive | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 8063 |
| Peak Hour Traffic: | **806.3** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

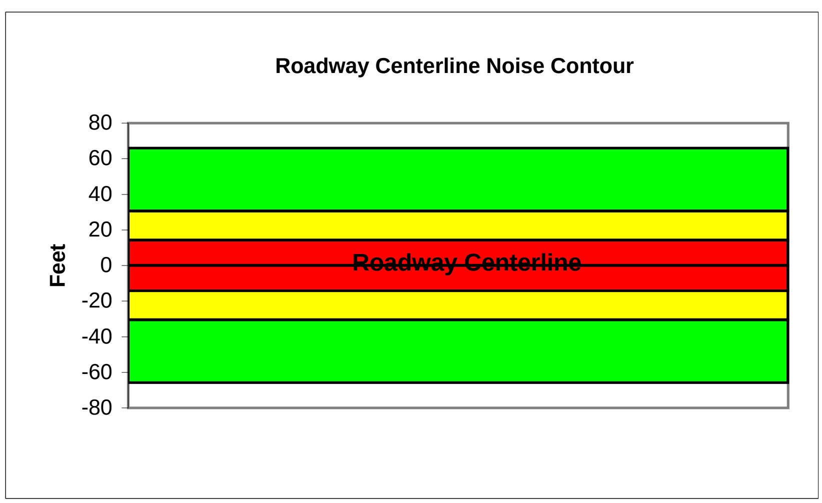
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 44.5 | 53.3 | 51.5 | 45.4 | 54.1 | 54.7 |
| Medium Trucks: | 55.1 | 47.1 | 40.7 | 39.1 | 47.6 | 47.8 |
| Heavy Trucks: | 60.8 | 48.8 | 39.8 | 41.0 | 51.1 | 51.3 |
| **Vehicle Noise:** | **63.3** | **55.8** | **52.3** | **47.9** | **56.5** | **56.9** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 66 |
| 65 dBA | 31 |
| 70 dBA | 14 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Crest Drive and Palos Verdes Drive South | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 4041 |
| Peak Hour Traffic: | **404.1** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

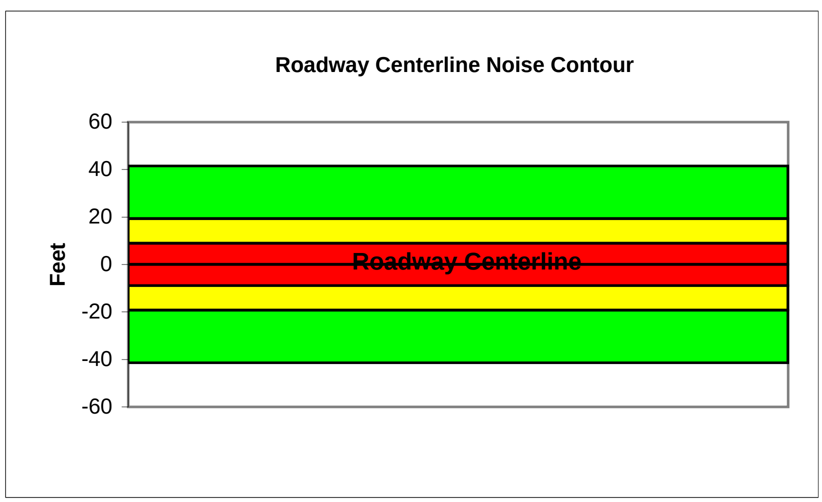
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 41.5 | 50.3 | 48.5 | 42.4 | 51.1 | 51.7 |
| Medium Trucks: | 52.1 | 44.1 | 37.7 | 36.1 | 44.6 | 44.8 |
| Heavy Trucks: | 57.8 | 45.8 | 36.8 | 38.0 | 48.1 | 48.3 |
| **Vehicle Noise:** | **60.3** | **52.8** | **49.3** | **44.9** | **53.5** | **53.9** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 42 |
| 65 dBA | 19 |
| 70 dBA | 9 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Palos Verdes Drive East and Via Colinita | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 13195 |
| Peak Hour Traffic: | **1319.5** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

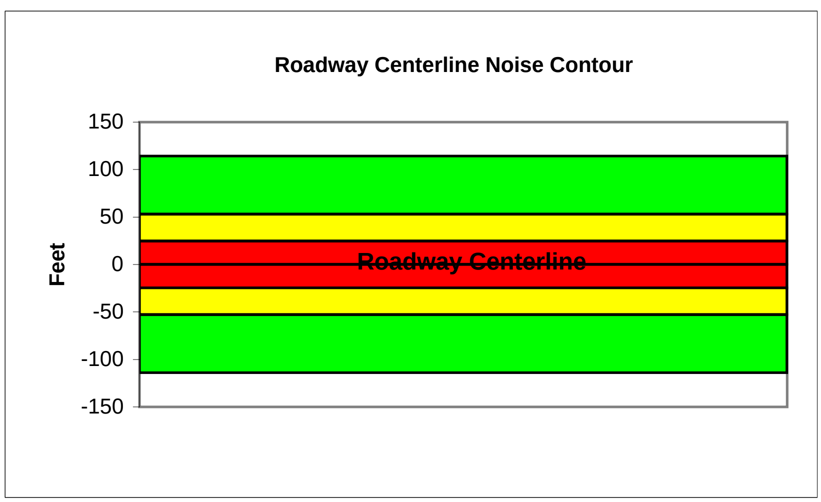
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 46.8 | 55.6 | 53.8 | 47.7 | 56.4 | 57.0 |
| Medium Trucks: | 56.5 | 48.5 | 42.1 | 40.5 | 49.0 | 49.2 |
| Heavy Trucks: | 61.8 | 49.8 | 40.8 | 42.0 | 51.9 | 52.0 |
| **Vehicle Noise:** | **64.2** | **57.6** | **54.4** | **49.7** | **58.3** | **58.7** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 114 |
| 65 dBA | 53 |
| 70 dBA | 25 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Via Colinita and First Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 10085 |
| Peak Hour Traffic: | **1008.5** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

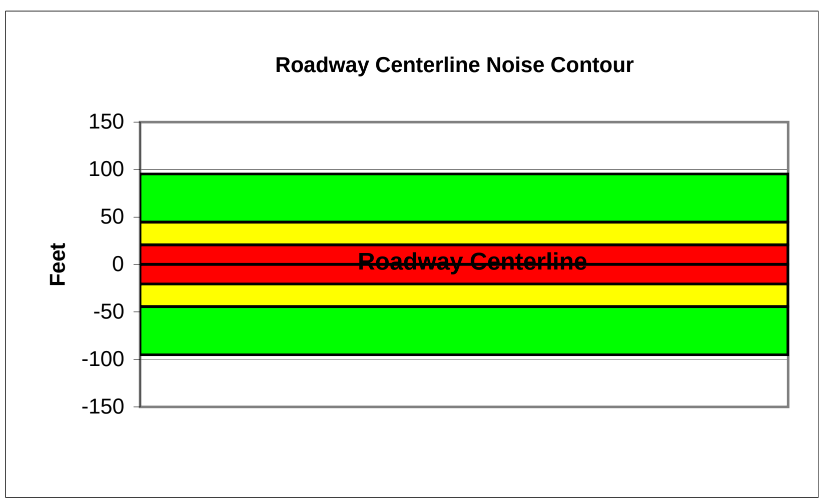
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 45.7 | 54.4 | 52.7 | 46.6 | 55.2 | 55.8 |
| Medium Trucks: | 55.4 | 47.3 | 40.9 | 39.4 | 47.8 | 48.1 |
| Heavy Trucks: | 60.6 | 48.7 | 39.6 | 40.8 | 50.7 | 50.9 |
| **Vehicle Noise:** | **63.0** | **56.4** | **53.2** | **48.5** | **57.1** | **57.5** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 95 |
| 65 dBA | 44 |
| 70 dBA | 21 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between First Street and Western Avenue | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 7586 |
| Peak Hour Traffic: | **758.6** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 28 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

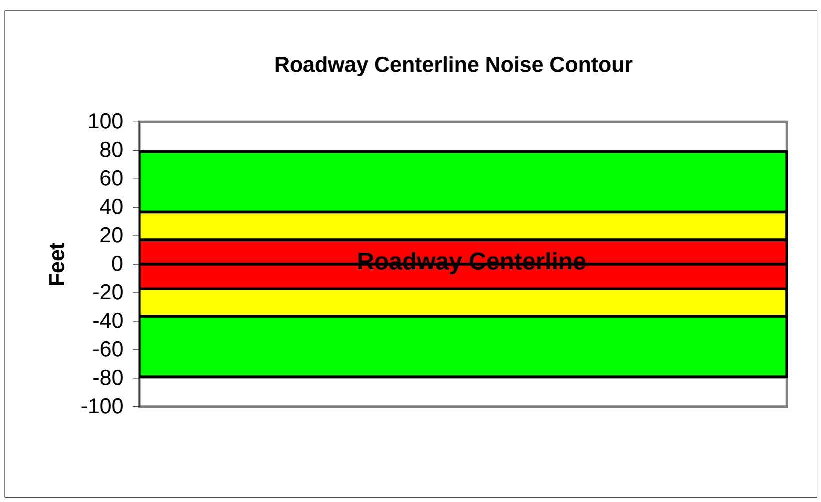
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 45.8 | 54.6 | 52.8 | 46.7 | 55.3 | 55.9 |
| Medium Trucks: | 55.5 | 47.4 | 41.0 | 39.5 | 48.0 | 48.2 |
| Heavy Trucks: | 60.7 | 48.8 | 39.7 | 40.9 | 50.8 | 51.0 |
| **Vehicle Noise:** | **63.2** | **56.5** | **53.3** | **48.6** | **57.2** | **57.7** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 79 |
| 65 dBA | 37 |
| 70 dBA | 17 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Toscanini Drive and Capitol Drive | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **0** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 41,170 |
| Peak Hour Traffic: | **4117** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

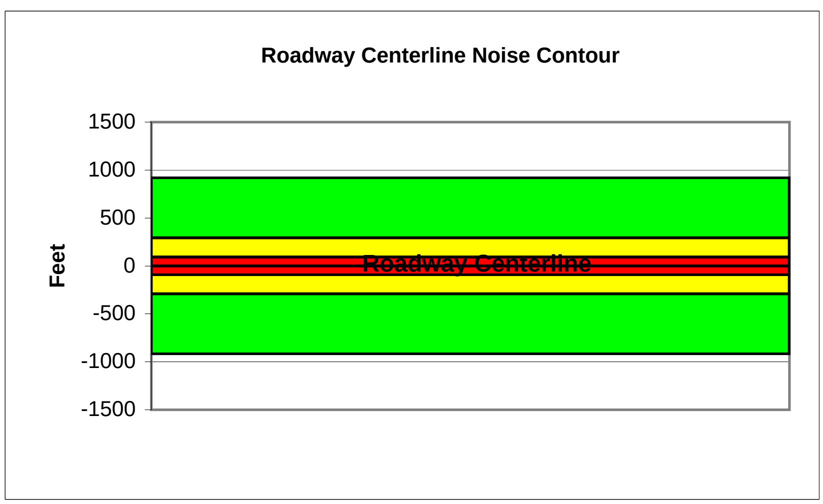
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 57.4 | 65.5 | 64.2 | 58.1 | 66.6 | 67.2 |
| Medium Trucks: | 66.4 | 42.8 | 35.0 | 44.1 | 50.3 | 50.3 |
| Heavy Trucks: | 71.2 | 62.0 | 44.2 | 53.4 | 63.5 | 63.5 |
| **Vehicle Noise:** | **73.6** | **67.6** | **64.3** | **59.9** | **68.4** | **68.8** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 921 |
| 65 dBA | 291 |
| 70 dBA | 92 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Capitol Drive and Crestwood Street | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **0** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 42,941 |
| Peak Hour Traffic: | **4294.1** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

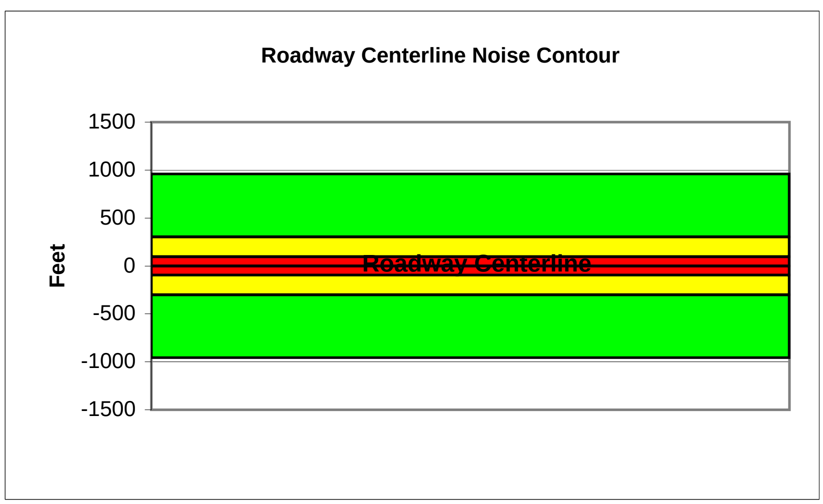
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 57.6 | 65.7 | 64.4 | 58.3 | 66.8 | 67.4 |
| Medium Trucks: | 66.6 | 42.9 | 35.1 | 44.3 | 50.5 | 50.5 |
| Heavy Trucks: | 71.4 | 62.2 | 44.4 | 53.6 | 63.6 | 63.7 |
| **Vehicle Noise:** | **73.8** | **67.8** | **64.4** | **60.1** | **68.5** | **69.0** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 960 |
| 65 dBA | 303 |
| 70 dBA | 96 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Crestwood Street and First Street | | |

### PROJECT DATA

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

### NOISE SOURCE ELEVATIONS (Feet)

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

### SITE DATA

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 36763 |
| Peak Hour Traffic: | **3676.3** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

### NOISE INPUTS

Site conditions:**SOFT SITE**

### FLEET MIX

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

### UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)

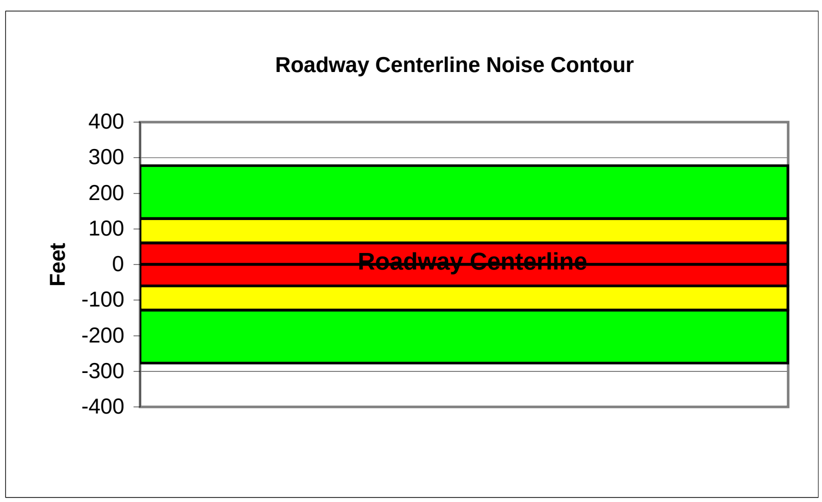
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 53.8 | 62.6 | 60.8 | 54.7 | 63.4 | 64.0 |
| Medium Trucks: | 62.8 | 54.7 | 48.3 | 46.8 | 55.2 | 55.5 |
| Heavy Trucks: | 67.6 | 55.7 | 46.6 | 47.9 | 57.6 | 57.7 |
| **Vehicle Noise:** | **70.0** | **64.2** | **61.3** | **56.3** | **64.9** | **65.4** |

### MITIGATED NOISE LEVELS (With topographic or barrier attenuation)

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

### CENTERLINE NOISE CONTOUR

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 278 |
| 65 dBA | 129 |
| 70 dBA | 60 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between First Street and Ninth Street | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 29360 |
| Peak Hour Traffic: | **2936** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

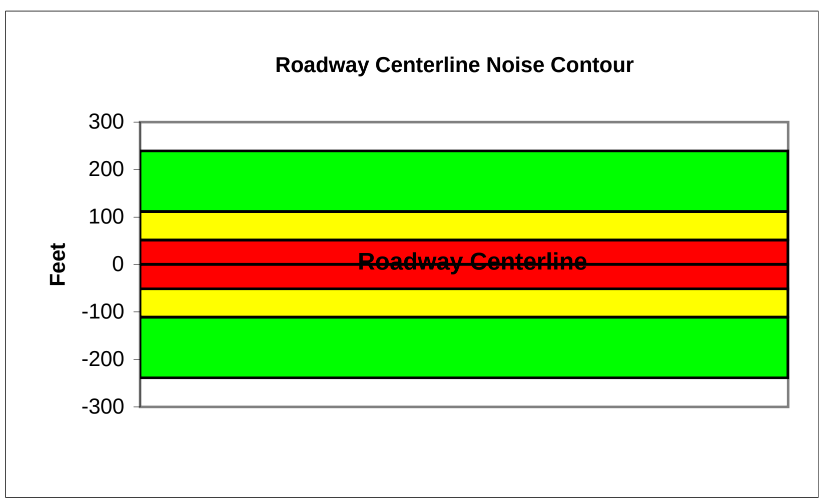
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.9 | 61.6 | 59.8 | 53.8 | 62.4 | 63.0 |
| Medium Trucks: | 61.8 | 53.7 | 47.4 | 45.8 | 54.3 | 54.5 |
| Heavy Trucks: | 66.7 | 54.7 | 45.7 | 46.9 | 56.6 | 56.7 |
| **Vehicle Noise:** | **69.0** | **63.2** | **60.3** | **55.3** | **63.9** | **64.4** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 239 |
| 65 dBA | 111 |
| 70 dBA | 52 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Ninth Street and West 25th Street | | |

| PROJECT DATA | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

| NOISE SOURCE ELEVATIONS (Feet) | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

| SITE DATA | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 30488 |
| Peak Hour Traffic: | **3048.8** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 43 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

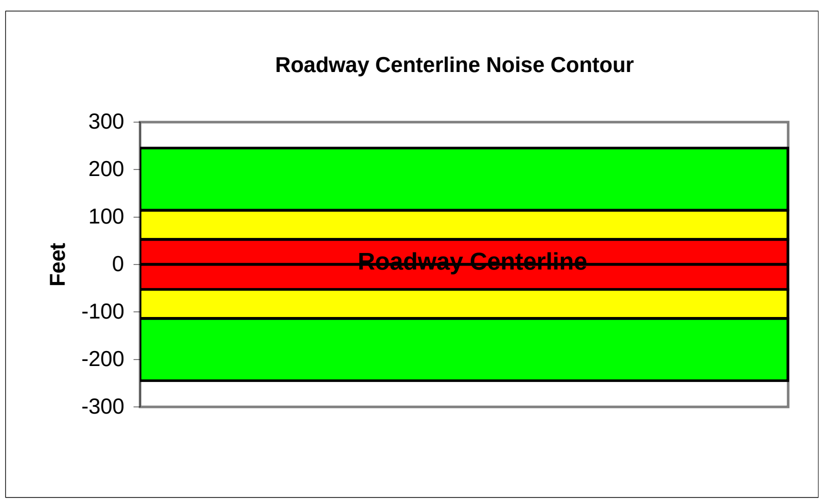
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 53.1 | 61.9 | 60.1 | 54.0 | 62.7 | 63.3 |
| Medium Trucks: | 62.1 | 54.0 | 47.6 | 46.1 | 54.5 | 54.8 |
| Heavy Trucks: | 66.9 | 55.0 | 45.9 | 47.2 | 56.9 | 57.0 |
| **Vehicle Noise:** | **69.3** | **63.5** | **60.6** | **55.6** | **64.2** | **64.7** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 245 |
| 65 dBA | 114 |
| 70 dBA | 53 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | First Street | | |
| Road Segment: | Between Miraleste Drive and Western Avenue | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 6021 |
| Peak Hour Traffic: | **602.1** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 14 |

**NOISE INPUTS**

Site conditions: **SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

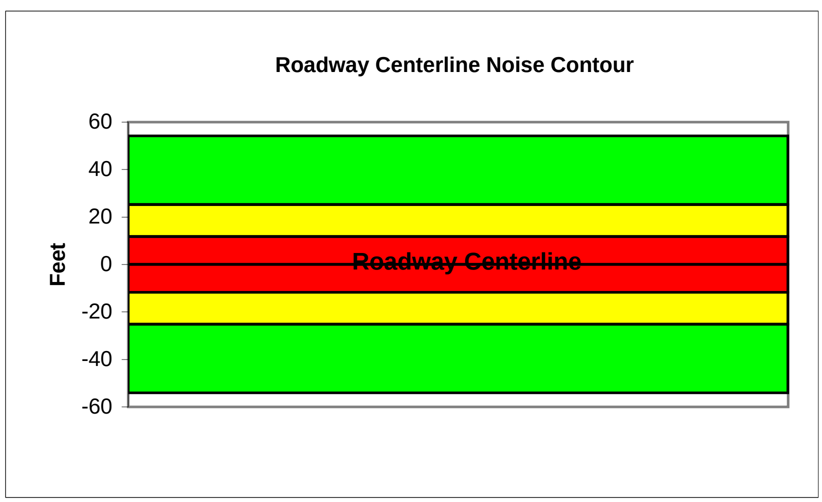
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 43.2 | 52.0 | 50.2 | 44.1 | 52.8 | 53.4 |
| Medium Trucks: | 53.8 | 45.8 | 39.4 | 37.8 | 46.3 | 46.5 |
| Heavy Trucks: | 59.5 | 47.5 | 38.5 | 39.7 | 49.8 | 50.0 |
| **Vehicle Noise:** | **62.0** | **54.5** | **50.9** | **46.6** | **55.2** | **55.6** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 54 |
| 65 dBA | 25 |
| 70 dBA | 12 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive South | | |
| Road Segment: | Between Palos Verdes Drive East and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 15515 |
| Peak Hour Traffic: | **1551.5** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 32 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

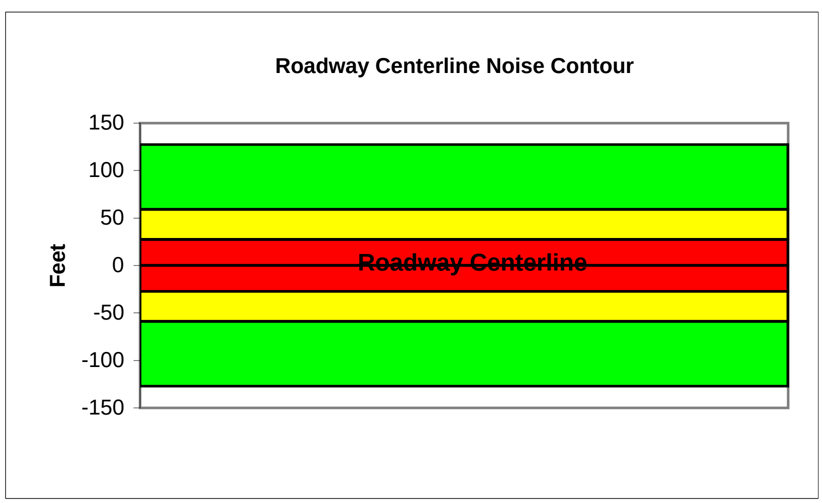
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 48.8 | 57.6 | 55.8 | 49.7 | 58.3 | 59.0 |
| Medium Trucks: | 58.5 | 50.4 | 44.1 | 42.5 | 51.0 | 51.2 |
| Heavy Trucks: | 63.7 | 51.8 | 42.7 | 44.0 | 53.9 | 54.0 |
| **Vehicle Noise:** | **66.2** | **59.5** | **56.3** | **51.7** | **60.2** | **60.7** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 127 |
| 65 dBA | 59 |
| 70 dBA | 27 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Via Colinita And Crest Drive | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 9511 |
| Peak Hour Traffic: | **951.1** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

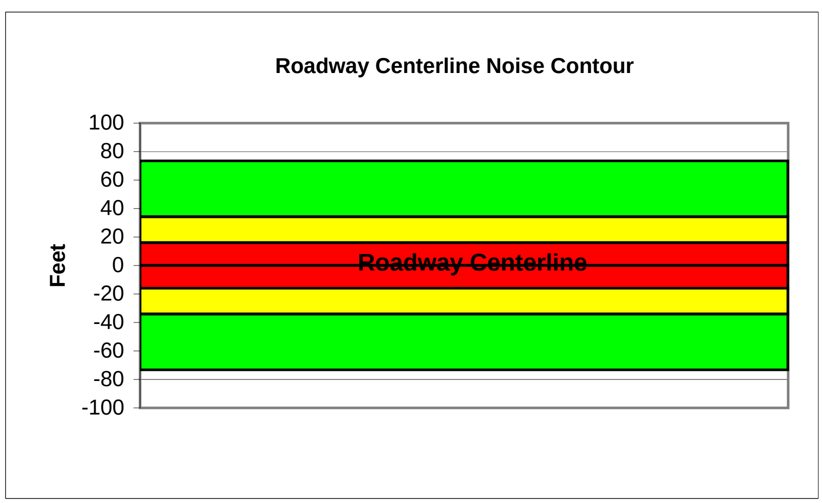
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 45.3 | 54.0 | 52.2 | 46.2 | 54.8 | 55.4 |
| Medium Trucks: | 55.9 | 47.8 | 41.4 | 39.8 | 48.3 | 48.6 |
| Heavy Trucks: | 61.5 | 49.6 | 40.5 | 41.7 | 51.9 | 52.0 |
| **Vehicle Noise:** | **64.0** | **56.5** | **53.0** | **48.6** | **57.2** | **57.6** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 73 |
| 65 dBA | 34 |
| 70 dBA | 16 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Crest Drive and Palos Verdes Drive South | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 4524 |
| Peak Hour Traffic: | **452.4** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

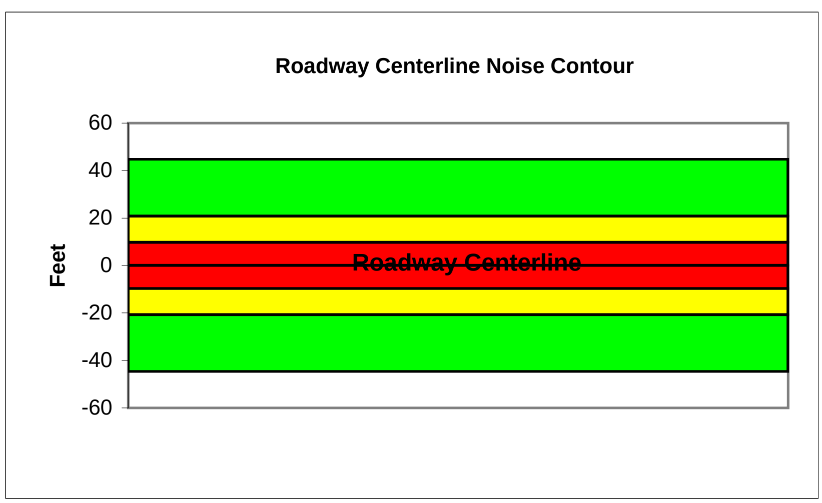
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 42.0 | 50.8 | 49.0 | 42.9 | 51.6 | 52.2 |
| Medium Trucks: | 52.6 | 44.6 | 38.2 | 36.6 | 45.1 | 45.3 |
| Heavy Trucks: | 58.3 | 46.3 | 37.3 | 38.5 | 48.6 | 48.8 |
| **Vehicle Noise:** | **60.8** | **53.3** | **49.7** | **45.4** | **54.0** | **54.4** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 45 |
| 65 dBA | 21 |
| 70 dBA | 10 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Palos Verdes Drive East and Via Colinita | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 14450 |
| Peak Hour Traffic: | **1445** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

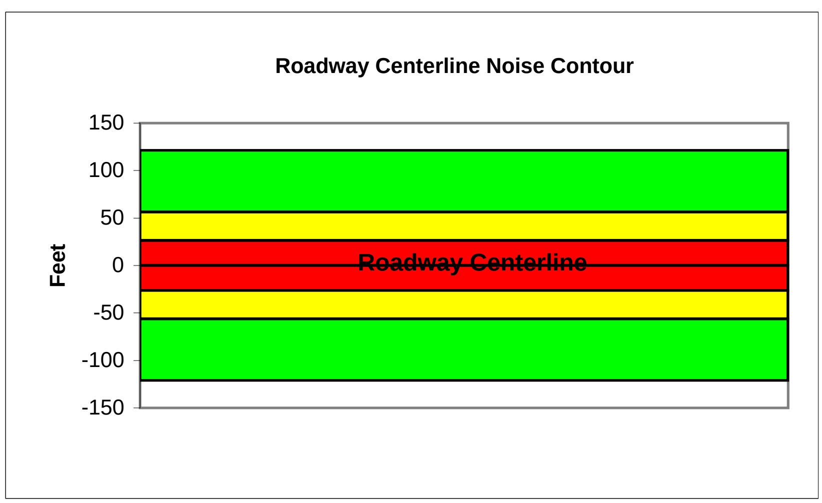
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 47.2 | 56.0 | 54.2 | 48.1 | 56.8 | 57.4 |
| Medium Trucks: | 56.9 | 48.9 | 42.5 | 40.9 | 49.4 | 49.6 |
| Heavy Trucks: | 62.2 | 50.2 | 41.2 | 42.4 | 52.3 | 52.4 |
| **Vehicle Noise:** | **64.6** | **58.0** | **54.8** | **50.1** | **58.7** | **59.1** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 121 |
| 65 dBA | 56 |
| 70 dBA | 26 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Via Colinita and First Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 10568 |
| Peak Hour Traffic: | **1056.8** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

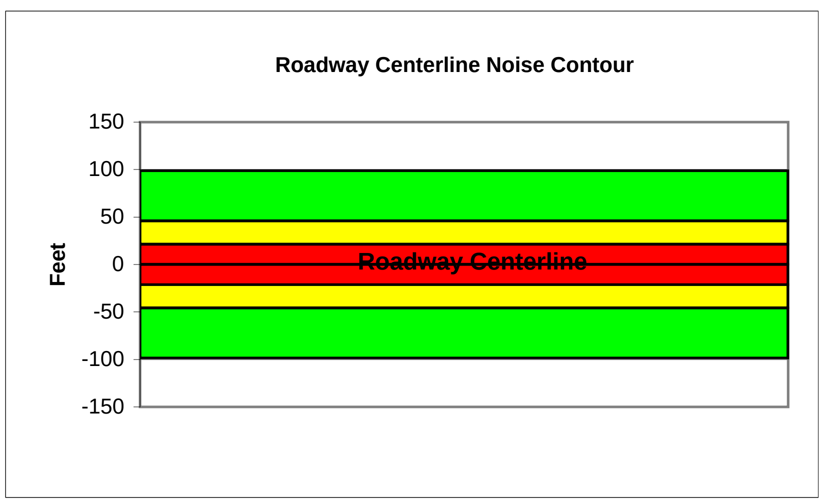
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 45.9 | 54.6 | 52.9 | 46.8 | 55.4 | 56.0 |
| Medium Trucks: | 55.6 | 47.5 | 41.1 | 39.6 | 48.0 | 48.3 |
| Heavy Trucks: | 60.8 | 48.9 | 39.8 | 41.0 | 50.9 | 51.1 |
| **Vehicle Noise:** | **63.2** | **56.6** | **53.4** | **48.7** | **57.3** | **57.8** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 99 |
| 65 dBA | 46 |
| 70 dBA | 21 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between First Street and Western Avenue | | |

### PROJECT DATA

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

### NOISE SOURCE ELEVATIONS (Feet)

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

### SITE DATA

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 7683 |
| Peak Hour Traffic: | **768.3** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 28 |

### NOISE INPUTS

Site conditions:**SOFT SITE**

### FLEET MIX

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

### UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)

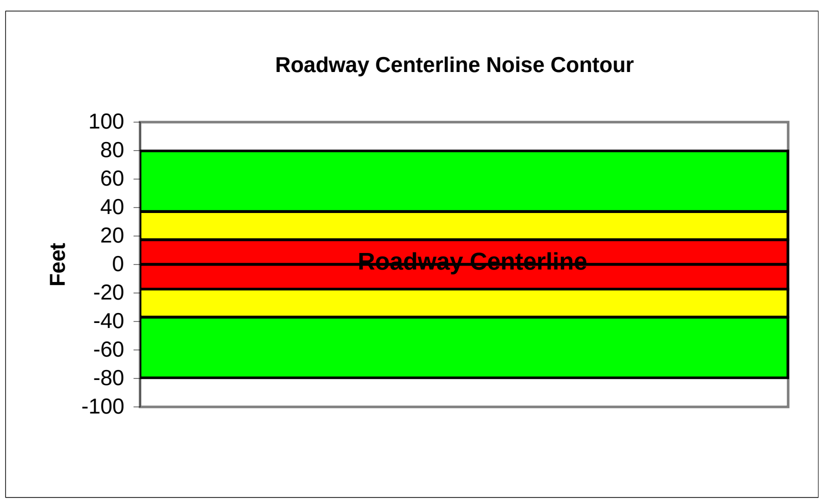
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 45.8 | 54.6 | 52.8 | 46.7 | 55.4 | 56.0 |
| Medium Trucks: | 55.6 | 47.5 | 41.1 | 39.5 | 48.0 | 48.3 |
| Heavy Trucks: | 60.8 | 48.8 | 39.8 | 41.0 | 50.9 | 51.0 |
| **Vehicle Noise:** | **63.2** | **56.6** | **53.4** | **48.7** | **57.3** | **57.7** |

### MITIGATED NOISE LEVELS (With topographic or barrier attenuation)

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

### CENTERLINE NOISE CONTOUR

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 80 |
| 65 dBA | 37 |
| 70 dBA | 17 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Toscanini Drive and Capitol Drive | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **0** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 41,942 |
| Peak Hour Traffic: | **4194.2** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

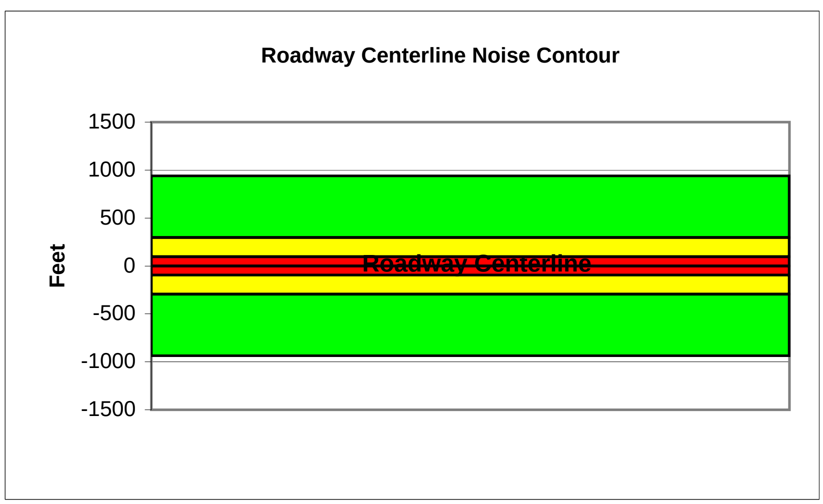
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 57.5 | 65.6 | 64.3 | 58.2 | 66.6 | 67.3 |
| Medium Trucks: | 66.5 | 42.8 | 35.0 | 44.2 | 50.4 | 50.4 |
| Heavy Trucks: | 71.3 | 62.1 | 44.3 | 53.5 | 63.5 | 63.5 |
| **Vehicle Noise:** | **73.7** | **67.7** | **64.3** | **60.0** | **68.4** | **68.9** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 938 |
| 65 dBA | 297 |
| 70 dBA | 94 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Capitol Drive and Crestwood Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **0** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 43,231 |
| Peak Hour Traffic: | **4323.1** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

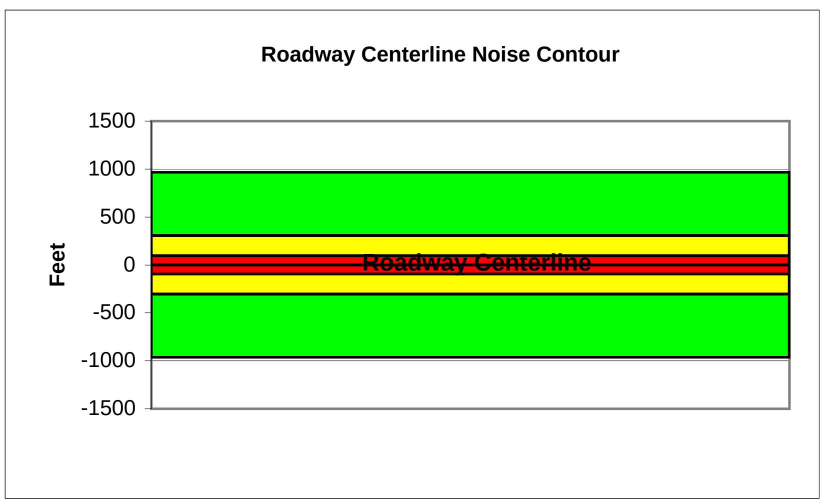
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 57.7 | 65.7 | 64.4 | 58.3 | 66.8 | 67.4 |
| Medium Trucks: | 66.6 | 43.0 | 35.2 | 44.3 | 50.5 | 50.5 |
| Heavy Trucks: | 71.5 | 62.3 | 44.5 | 53.6 | 63.7 | 63.7 |
| **Vehicle Noise:** | **73.8** | **67.8** | **64.5** | **60.1** | **68.6** | **69.0** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 966 |
| 65 dBA | 306 |
| 70 dBA | 97 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Crestwood Street and First Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 37053 |
| Peak Hour Traffic: | **3705.3** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

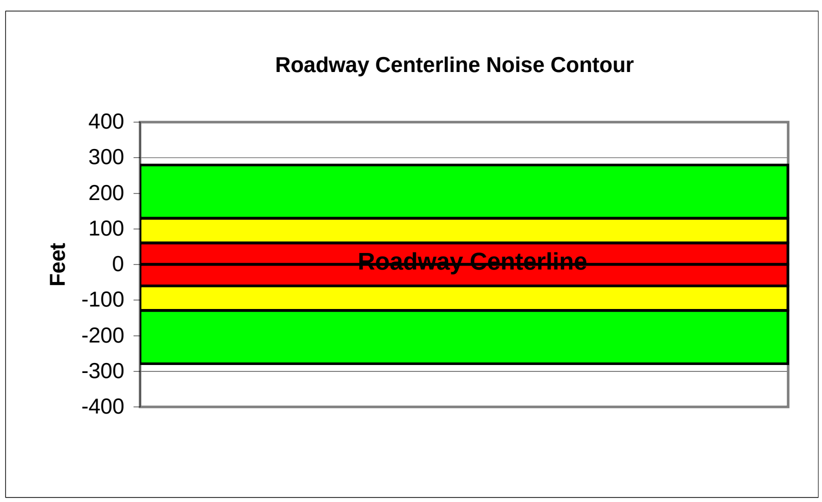
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 53.9 | 62.6 | 60.9 | 54.8 | 63.4 | 64.0 |
| Medium Trucks: | 62.8 | 54.8 | 48.4 | 46.8 | 55.3 | 55.5 |
| Heavy Trucks: | 67.7 | 55.7 | 46.7 | 47.9 | 57.6 | 57.7 |
| **Vehicle Noise:** | **70.0** | **64.2** | **61.3** | **56.4** | **64.9** | **65.4** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 279 |
| 65 dBA | 130 |
| 70 dBA | 60 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between First Street and Ninth Street | | |

### PROJECT DATA

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

### NOISE SOURCE ELEVATIONS (Feet)

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

### SITE DATA

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 29360 |
| Peak Hour Traffic: | **2936** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

### NOISE INPUTS

Site conditions:**SOFT SITE**

### FLEET MIX

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

### UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)

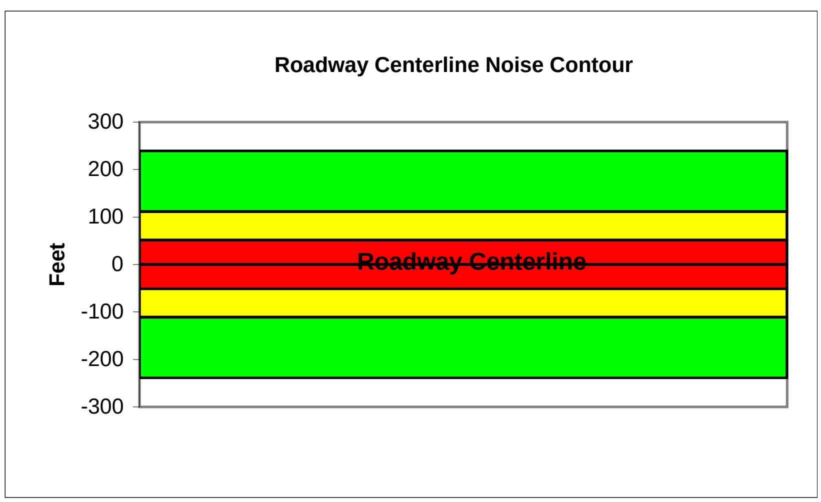
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.9 | 61.6 | 59.8 | 53.8 | 62.4 | 63.0 |
| Medium Trucks: | 61.8 | 53.7 | 47.4 | 45.8 | 54.3 | 54.5 |
| Heavy Trucks: | 66.7 | 54.7 | 45.7 | 46.9 | 56.6 | 56.7 |
| **Vehicle Noise:** | **69.0** | **63.2** | **60.3** | **55.3** | **63.9** | **64.4** |

### MITIGATED NOISE LEVELS (With topographic or barrier attenuation)

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

### CENTERLINE NOISE CONTOUR

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 239 |
| 65 dBA | 111 |
| 70 dBA | 52 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Ninth Street and West 25th Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 30488 |
| Peak Hour Traffic: | **3048.8** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 43 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

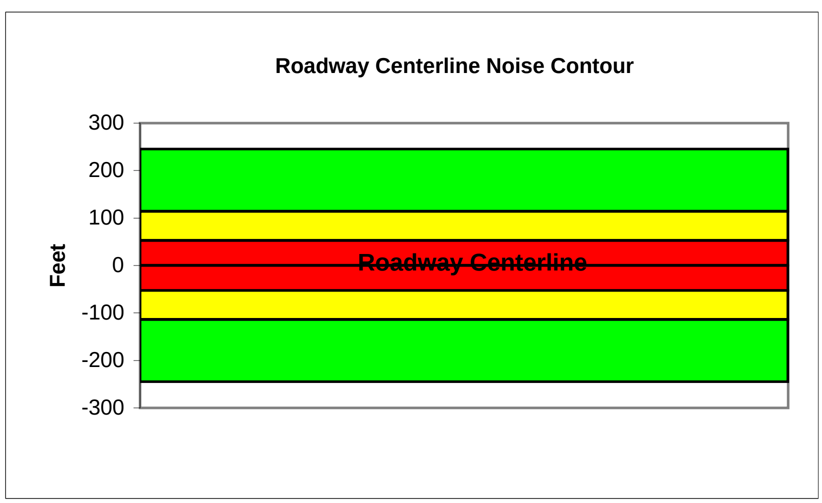
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 53.1 | 61.9 | 60.1 | 54.0 | 62.7 | 63.3 |
| Medium Trucks: | 62.1 | 54.0 | 47.6 | 46.1 | 54.5 | 54.8 |
| Heavy Trucks: | 66.9 | 55.0 | 45.9 | 47.2 | 56.9 | 57.0 |
| **Vehicle Noise:** | **69.3** | **63.5** | **60.6** | **55.6** | **64.2** | **64.7** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 245 |
| 65 dBA | 114 |
| 70 dBA | 53 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | First Street | | |
| Road Segment: | Between Miraleste Drive and Western Avenue | | |

### PROJECT DATA

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

### NOISE SOURCE ELEVATIONS (Feet)

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

### SITE DATA

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 6407 |
| Peak Hour Traffic: | **640.7** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 14 |

### NOISE INPUTS

Site conditions: **SOFT SITE**

### FLEET MIX

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

### UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)

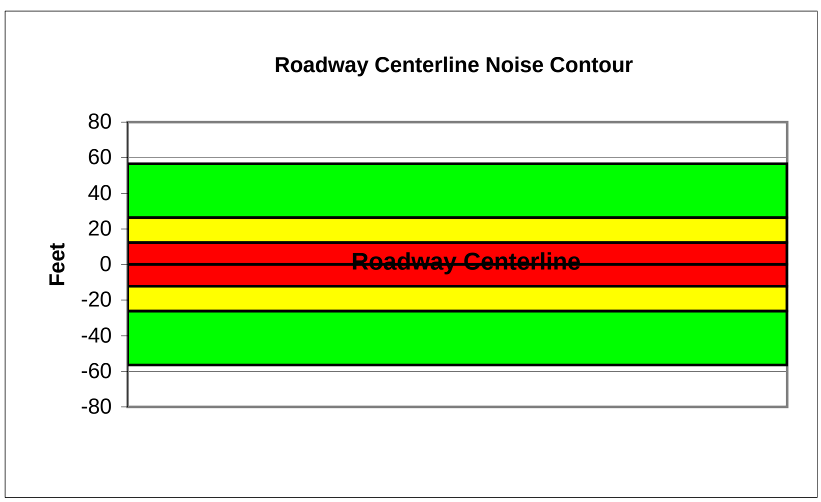
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 43.5 | 52.3 | 50.5 | 44.4 | 53.1 | 53.7 |
| Medium Trucks: | 54.1 | 46.0 | 39.6 | 38.1 | 46.6 | 46.8 |
| Heavy Trucks: | 59.7 | 47.8 | 38.8 | 40.0 | 50.1 | 50.2 |
| **Vehicle Noise:** | **62.3** | **54.8** | **51.2** | **46.9** | **55.4** | **55.9** |

### MITIGATED NOISE LEVELS (With topographic or barrier attenuation)

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

### CENTERLINE NOISE CONTOUR

| | |
|---|---|
| **Unmitigated** | |
| 60 dBA | 57 |
| 65 dBA | 26 |
| 70 dBA | 12 |
| **Mitigated** | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive South | | |
| Road Segment: | Between Palos Verdes Drive East and Western Avenue | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 15901 |
| Peak Hour Traffic: | **1590.1** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 32 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

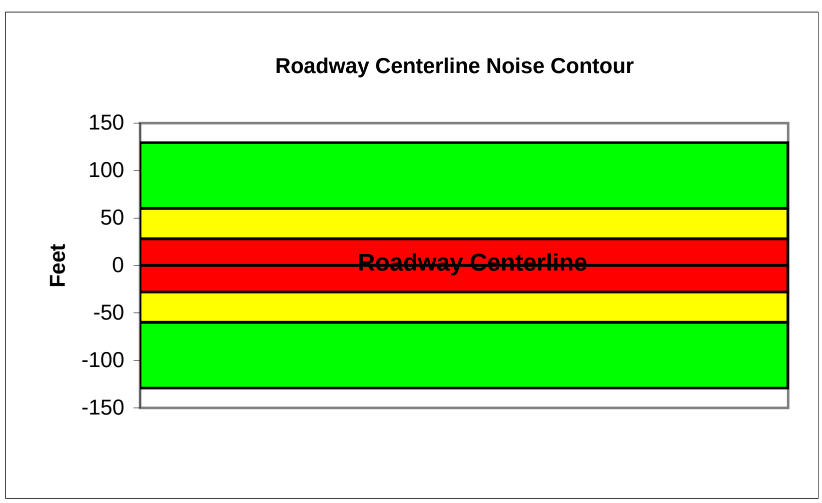
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 48.9 | 57.7 | 55.9 | 49.8 | 58.5 | 59.1 |
| Medium Trucks: | 58.6 | 50.5 | 44.2 | 42.6 | 51.1 | 51.3 |
| Heavy Trucks: | 63.8 | 51.9 | 42.8 | 44.1 | 54.0 | 54.1 |
| **Vehicle Noise:** | **66.3** | **59.6** | **56.4** | **51.8** | **60.3** | **60.8** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 130 |
| 65 dBA | 60 |
| 70 dBA | 28 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Via Colinita And Crest Drive | | |

| PROJECT DATA | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

| NOISE SOURCE ELEVATIONS (Feet) | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

| SITE DATA | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 5766 |
| Peak Hour Traffic: | **576.6** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

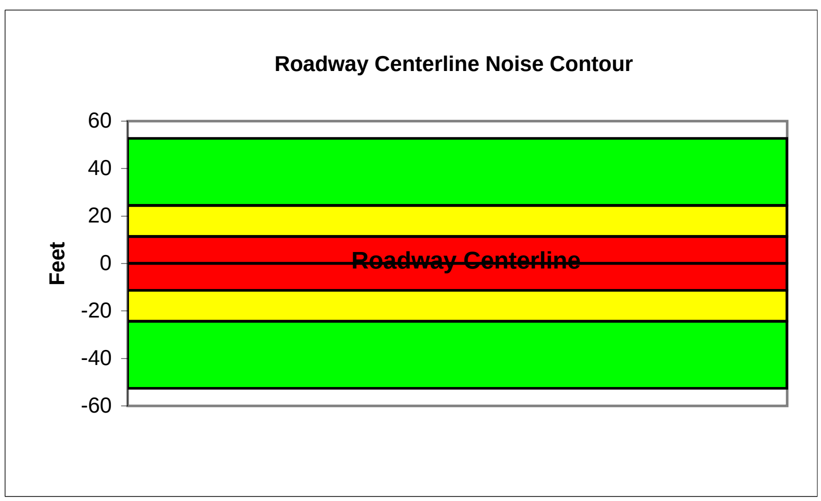
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 43.1 | 51.9 | 50.1 | 44.0 | 52.6 | 53.2 |
| Medium Trucks: | 53.7 | 45.6 | 39.2 | 37.7 | 46.1 | 46.4 |
| Heavy Trucks: | 59.3 | 47.4 | 38.3 | 39.6 | 49.7 | 49.8 |
| **Vehicle Noise:** | **61.9** | **54.3** | **50.8** | **46.5** | **55.0** | **55.4** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 53 |
| 65 dBA | 24 |
| 70 dBA | 11 |
| **Mitigated** | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Crest Drive and Palos Verdes Drive South | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 3326 |
| Peak Hour Traffic: | **332.6** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

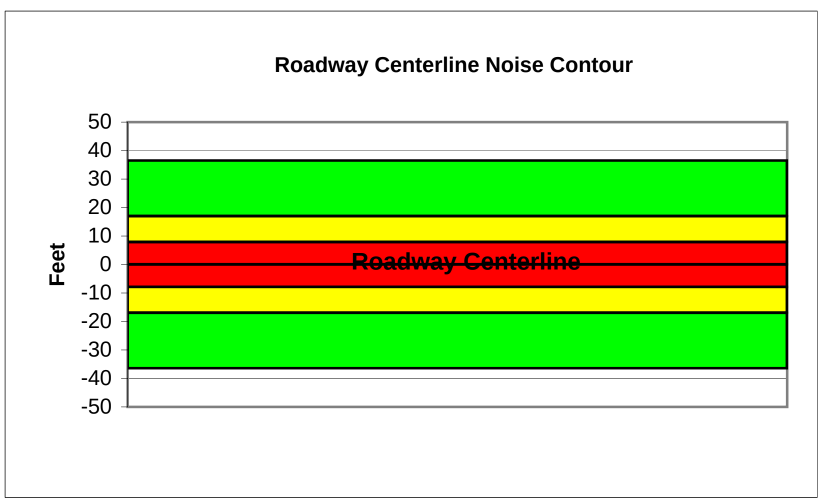
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 40.7 | 49.5 | 47.7 | 41.6 | 50.3 | 50.9 |
| Medium Trucks: | 51.3 | 43.2 | 36.8 | 35.3 | 43.8 | 44.0 |
| Heavy Trucks: | 56.9 | 45.0 | 35.9 | 37.2 | 47.3 | 47.4 |
| **Vehicle Noise:** | **59.5** | **52.0** | **48.4** | **44.1** | **52.6** | **53.1** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 36 |
| 65 dBA | 17 |
| 70 dBA | 8 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Palos Verdes Drive East and Via Colinita | | |

| PROJECT DATA | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

| NOISE SOURCE ELEVATIONS (Feet) | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

| SITE DATA | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 11103 |
| Peak Hour Traffic: | **1110.3** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

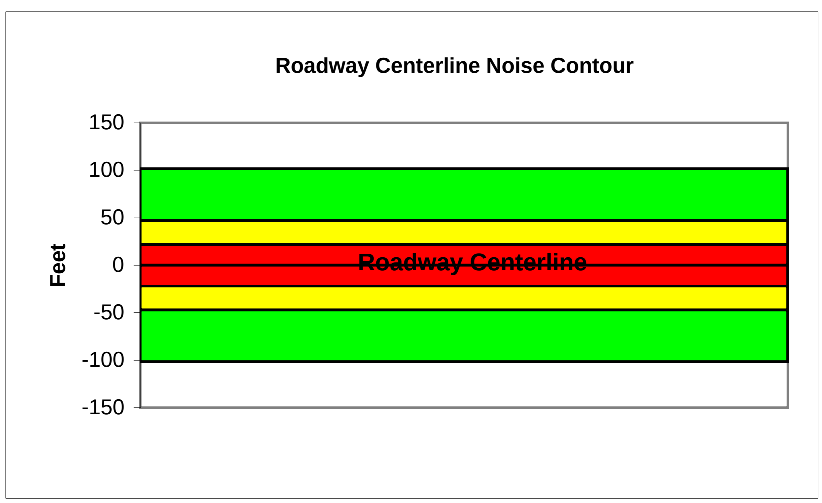
**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 46.1 | 54.9 | 53.1 | 47.0 | 55.6 | 56.2 |
| Medium Trucks: | 55.8 | 47.7 | 41.3 | 39.8 | 48.3 | 48.5 |
| Heavy Trucks: | 61.0 | 49.1 | 40.0 | 41.2 | 51.1 | 51.3 |
| **Vehicle Noise:** | **63.5** | **56.8** | **53.6** | **48.9** | **57.5** | **58.0** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

| CENTERLINE NOISE CONTOUR | |
|---|---|
| Unmitigated | |
| 60 dBA | 102 |
| 65 dBA | 47 |
| 70 dBA | 22 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Via Colinita and First Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 5880 |
| Peak Hour Traffic: | **588** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

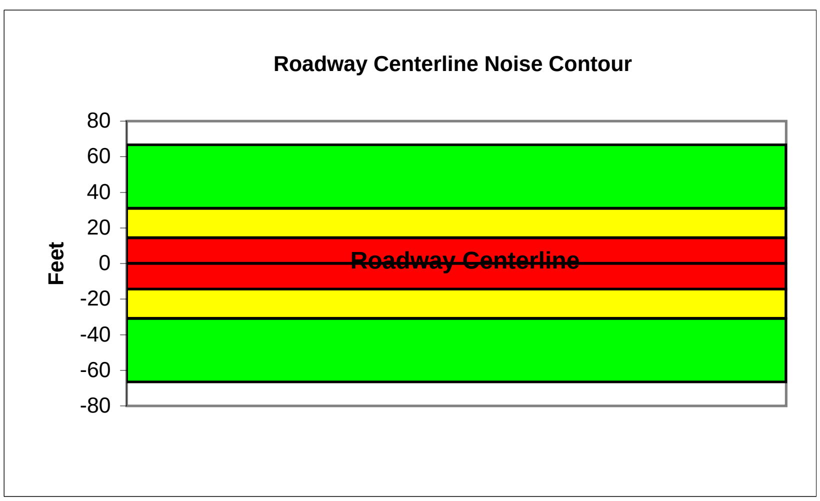
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 43.3 | 52.1 | 50.3 | 44.2 | 52.9 | 53.5 |
| Medium Trucks: | 53.0 | 45.0 | 38.6 | 37.0 | 45.5 | 45.7 |
| Heavy Trucks: | 58.3 | 46.3 | 37.3 | 38.5 | 48.4 | 48.5 |
| **Vehicle Noise:** | **60.7** | **54.1** | **50.9** | **46.2** | **54.7** | **55.2** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 67 |
| 65 dBA | 31 |
| 70 dBA | 14 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between First Street and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 5798 |
| Peak Hour Traffic: | **579.8** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 28 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

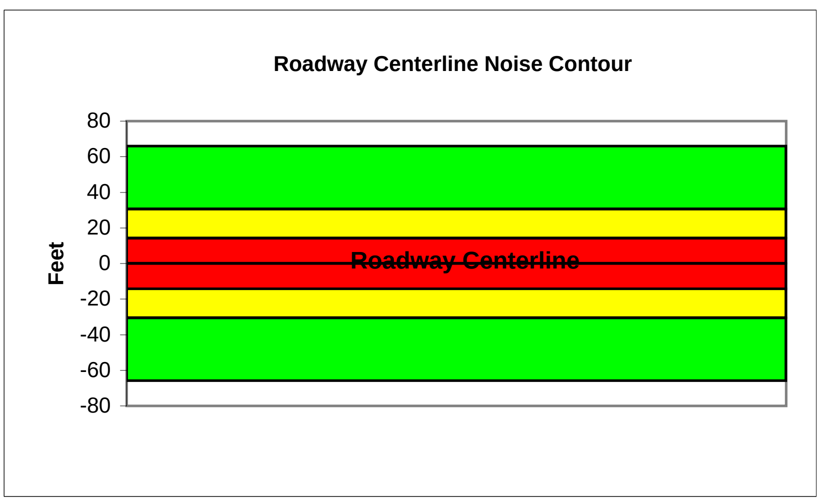
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 44.6 | 53.4 | 51.6 | 45.5 | 54.2 | 54.8 |
| Medium Trucks: | 54.3 | 46.3 | 39.9 | 38.3 | 46.8 | 47.0 |
| Heavy Trucks: | 59.5 | 47.6 | 38.6 | 39.8 | 49.7 | 49.8 |
| **Vehicle Noise:** | **62.0** | **55.3** | **52.2** | **47.5** | **56.0** | **56.5** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 66 |
| 65 dBA | 31 |
| 70 dBA | 14 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Toscanini Drive and Capitol Drive | | |

### PROJECT DATA

| | |
|---|---|
| Centerline Dist to Barrier | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **0** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

### NOISE SOURCE ELEVATIONS (Feet)

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

### SITE DATA

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 34,038 |
| Peak Hour Traffic: | **3403.8** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

### NOISE INPUTS

Site conditions **HARD SITE**

### FLEET MIX

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

### UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)

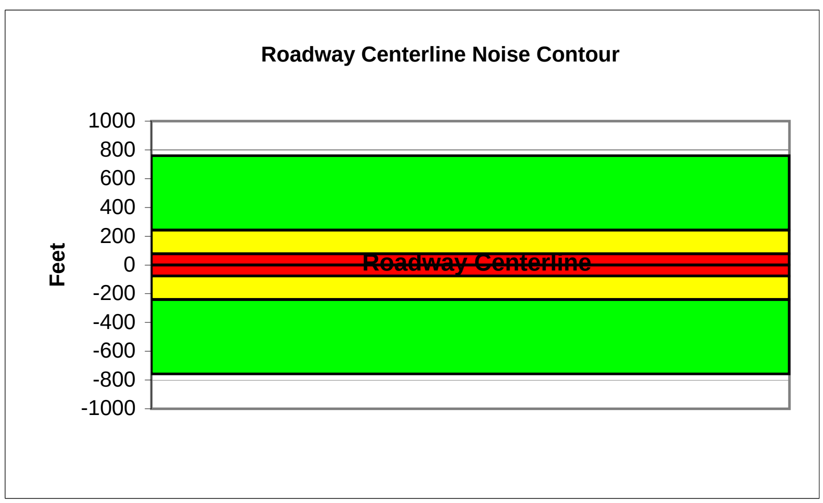
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 56.6 | 64.7 | 63.4 | 57.3 | 65.7 | 66.4 |
| Medium Trucks: | 65.6 | 41.9 | 34.1 | 43.3 | 49.5 | 49.5 |
| Heavy Trucks: | 70.4 | 61.2 | 43.4 | 52.6 | 62.6 | 62.6 |
| **Vehicle Noise:** | **72.8** | **66.8** | **63.4** | **59.0** | **67.5** | **68.0** |

### MITIGATED NOISE LEVELS (With topographic or barrier attenuation)

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

### CENTERLINE NOISE CONTOUR

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 761 |
| 65 dBA | 241 |
| 70 dBA | 76 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Capitol Drive and Crestwood Street | | |

### PROJECT DATA

| | |
|---|---|
| Centerline Dist to Barrier | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **0** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

### NOISE SOURCE ELEVATIONS (Feet)

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

### SITE DATA

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 33,493 |
| Peak Hour Traffic: | **3349.3** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

### NOISE INPUTS

Site conditions **HARD SITE**

### FLEET MIX

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

### UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)

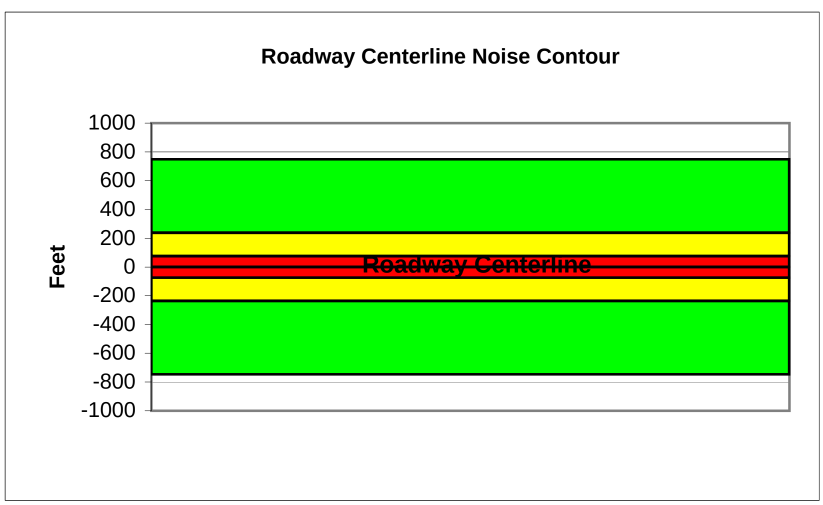
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 56.6 | 64.6 | 63.3 | 57.2 | 65.7 | 66.3 |
| Medium Trucks: | 65.5 | 41.9 | 34.1 | 43.2 | 49.4 | 49.4 |
| Heavy Trucks: | 70.4 | 61.1 | 43.3 | 52.5 | 62.6 | 62.6 |
| **Vehicle Noise:** | **72.7** | **66.7** | **63.4** | **59.0** | **67.5** | **67.9** |

### MITIGATED NOISE LEVELS (With topographic or barrier attenuation)

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

### CENTERLINE NOISE CONTOUR

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 748 |
| 65 dBA | 237 |
| 70 dBA | 75 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Crestwood Street and First Street | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 27121 |
| Peak Hour Traffic: | **2712.1** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions: **SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

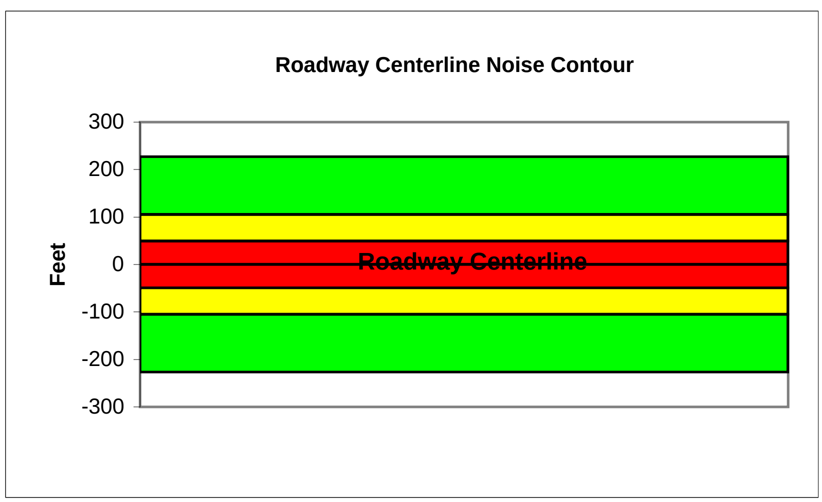
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.5 | 61.3 | 59.5 | 53.4 | 62.1 | 62.7 |
| Medium Trucks: | 61.5 | 53.4 | 47.0 | 45.4 | 53.9 | 54.2 |
| Heavy Trucks: | 66.3 | 54.4 | 45.3 | 46.5 | 56.3 | 56.4 |
| **Vehicle Noise:** | **68.7** | **62.9** | **59.9** | **55.0** | **63.6** | **64.1** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 227 |
| 65 dBA | 105 |
| 70 dBA | 49 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between First Street and Ninth Street | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 20749 |
| Peak Hour Traffic: | **2074.9** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

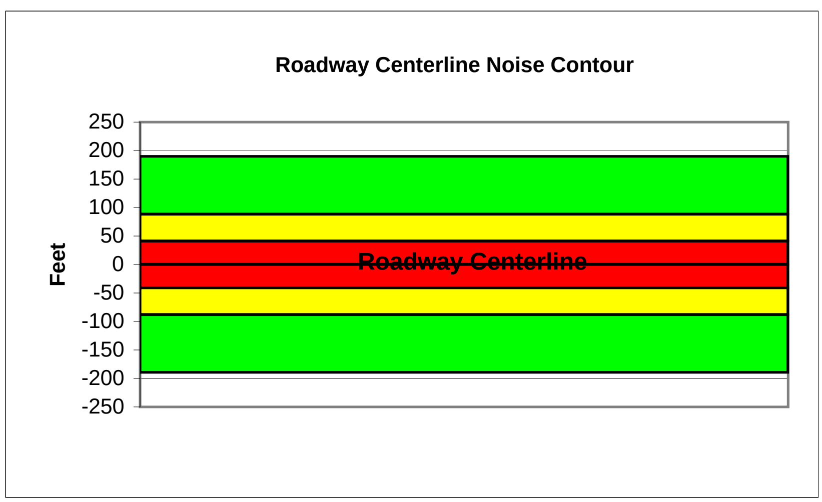
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 51.3 | 60.1 | 58.3 | 52.3 | 60.9 | 61.5 |
| Medium Trucks: | 60.3 | 52.2 | 45.9 | 44.3 | 52.8 | 53.0 |
| Heavy Trucks: | 65.1 | 53.2 | 44.2 | 45.4 | 55.1 | 55.2 |
| **Vehicle Noise:** | **67.5** | **61.7** | **58.8** | **53.8** | **62.4** | **62.9** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 190 |
| 65 dBA | 88 |
| 70 dBA | 41 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Ninth Street and West 25th Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 25726 |
| Peak Hour Traffic: | **2572.6** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 43 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

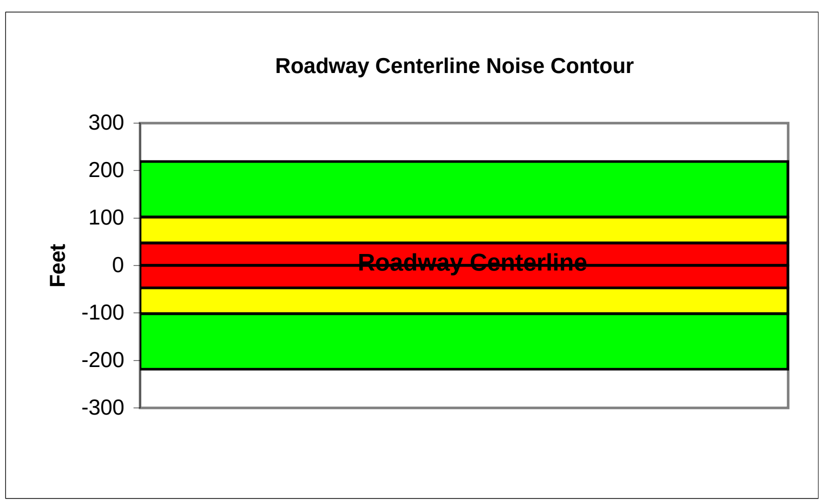
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.4 | 61.2 | 59.4 | 53.3 | 62.0 | 62.6 |
| Medium Trucks: | 61.3 | 53.3 | 46.9 | 45.3 | 53.8 | 54.0 |
| Heavy Trucks: | 66.2 | 54.3 | 45.2 | 46.4 | 56.1 | 56.3 |
| **Vehicle Noise:** | **68.6** | **62.8** | **59.8** | **54.9** | **63.5** | **63.9** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 219 |
| 65 dBA | 102 |
| 70 dBA | 47 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | First Street | | |
| Road Segment: | Between Miraleste Drive and Western Avenue | | |

| PROJECT DATA | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

| NOISE SOURCE ELEVATIONS (Feet) | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

| SITE DATA | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 4616 |
| Peak Hour Traffic: | **461.6** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 14 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

| FLEET MIX | | | | |
|---|---|---|---|---|
| Type | Day | Evening | Night | Daily |
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

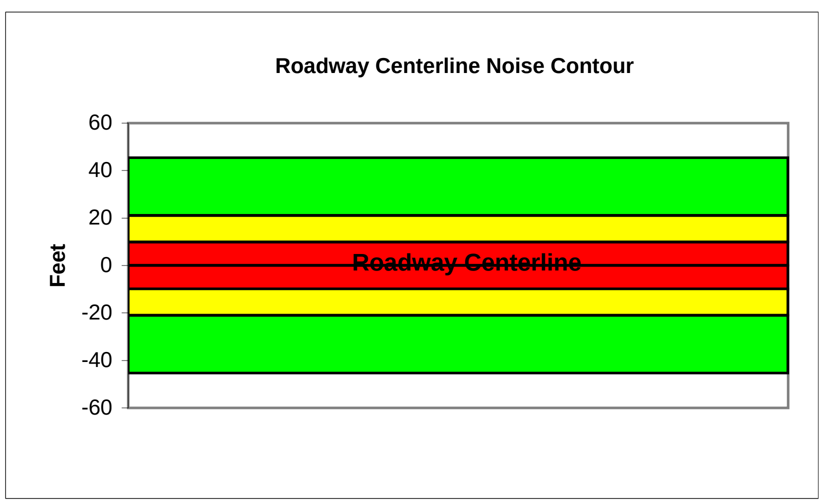
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 42.1 | 50.9 | 49.1 | 43.0 | 51.6 | 52.2 |
| Medium Trucks: | 52.7 | 44.6 | 38.2 | 36.7 | 45.1 | 45.4 |
| Heavy Trucks: | 58.3 | 46.4 | 37.3 | 38.5 | 48.7 | 48.8 |
| **Vehicle Noise:** | **60.9** | **53.3** | **49.8** | **45.5** | **54.0** | **54.4** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 45 |
| 65 dBA | 21 |
| 70 dBA | 10 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive South | | |
| Road Segment: | Between Palos Verdes Drive East and Western Avenue | | |

### PROJECT DATA

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

### NOISE SOURCE ELEVATIONS (Feet)

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

### SITE DATA

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 12444 |
| Peak Hour Traffic: | **1244.4** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 32 |

### NOISE INPUTS

Site conditions:**SOFT SITE**

### FLEET MIX

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

### UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)

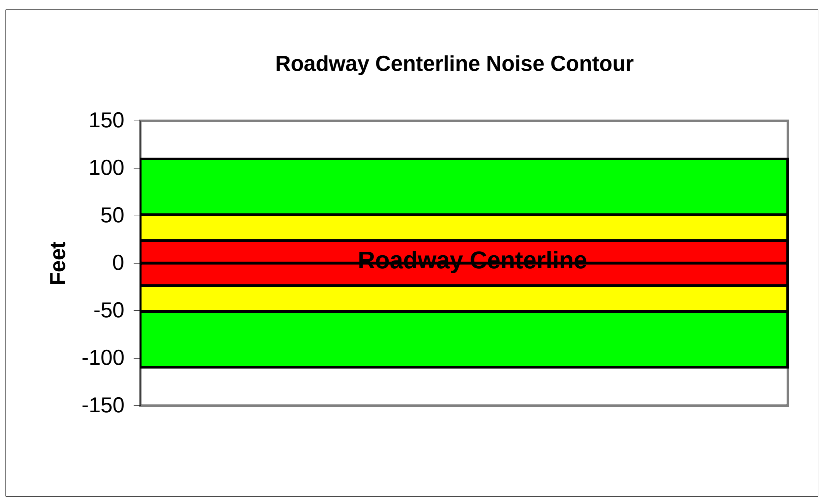
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 47.8 | 56.6 | 54.8 | 48.7 | 57.4 | 58.0 |
| Medium Trucks: | 57.5 | 49.5 | 43.1 | 41.5 | 50.0 | 50.2 |
| Heavy Trucks: | 62.8 | 50.8 | 41.8 | 43.0 | 52.9 | 53.0 |
| **Vehicle Noise:** | **65.2** | **58.6** | **55.4** | **50.7** | **59.3** | **59.7** |

### MITIGATED NOISE LEVELS (With topographic or barrier attenuation)

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

### CENTERLINE NOISE CONTOUR

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 110 |
| 65 dBA | 51 |
| 70 dBA | 24 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Via Colinita And Crest Drive | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 6432 |
| Peak Hour Traffic: | **643.2** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

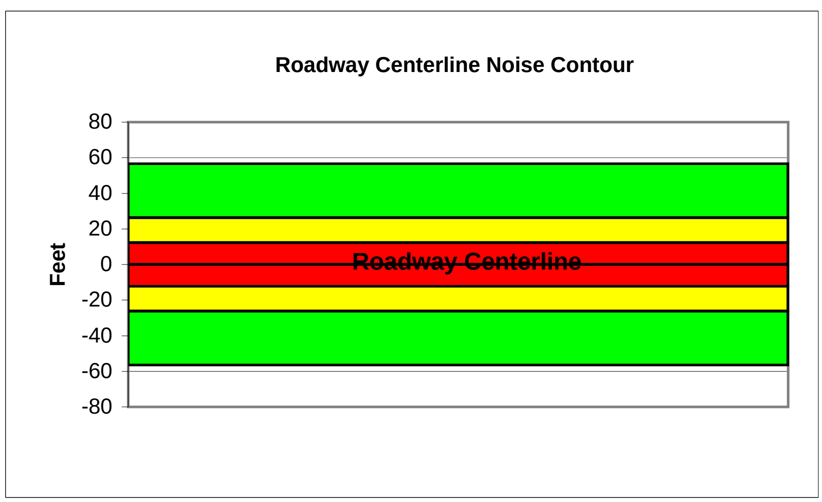
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 43.6 | 52.3 | 50.5 | 44.5 | 53.1 | 53.7 |
| Medium Trucks: | 54.2 | 46.1 | 39.7 | 38.1 | 46.6 | 46.9 |
| Heavy Trucks: | 59.8 | 47.9 | 38.8 | 40.0 | 50.2 | 50.3 |
| **Vehicle Noise:** | **62.3** | **54.8** | **51.3** | **46.9** | **55.5** | **55.9** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 57 |
| 65 dBA | 26 |
| 70 dBA | 12 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Crest Drive and Palos Verdes Drive South | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | **0** | | |
| Barrier (0=wall, 1= berm): | **0** | | |
| Receiver Barrier Dist: | **0** | | |
| Centerline Dist. To Observer: | **100** | | |
| Barrier Near Lane CL Dist: | **0** | | |
| Barrier Far lane CL Dist: | **0** | | |
| Pad Elevation: | **0.5** | | |
| Road Elevation: | **0** | | |
| Observer Height (above grade): | **5.5** | | |
| Barrier Height: | **0** | | |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 3548 |
| Peak Hour Traffic: | **354.8** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

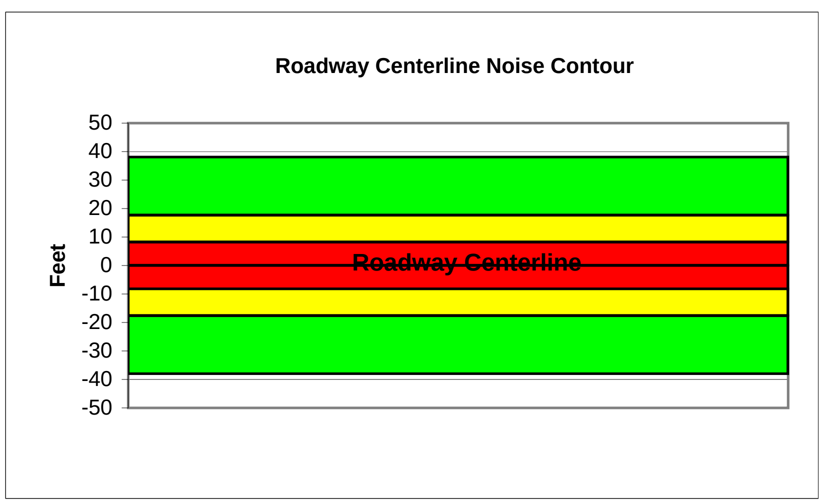
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 41.0 | 49.8 | 48.0 | 41.9 | 50.5 | 51.1 |
| Medium Trucks: | 51.6 | 43.5 | 37.1 | 35.6 | 44.0 | 44.3 |
| Heavy Trucks: | 57.2 | 45.3 | 36.2 | 37.4 | 47.6 | 47.7 |
| **Vehicle Noise:** | **59.8** | **52.2** | **48.7** | **44.4** | **52.9** | **53.3** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 38 |
| 65 dBA | 18 |
| 70 dBA | 8 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Palos Verdes Drive East and Via Colinita | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 11680 |
| Peak Hour Traffic: | **1168** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

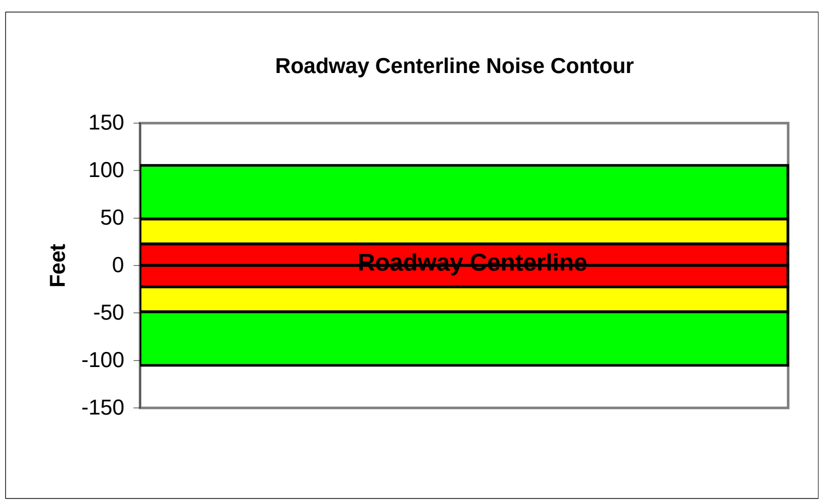
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 46.3 | 55.1 | 53.3 | 47.2 | 55.9 | 56.5 |
| Medium Trucks: | 56.0 | 48.0 | 41.6 | 40.0 | 48.5 | 48.7 |
| Heavy Trucks: | 61.2 | 49.3 | 40.2 | 41.5 | 51.4 | 51.5 |
| **Vehicle Noise:** | **63.7** | **57.0** | **53.9** | **49.2** | **57.7** | **58.2** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 105 |
| 65 dBA | 49 |
| 70 dBA | 23 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Via Colinita and First Street | | |

| PROJECT DATA | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | **0** | | |
| Barrier (0=wall, 1= berm): | **0** | | |
| Receiver Barrier Dist: | **0** | | |
| Centerline Dist. To Observer: | **100** | | |
| Barrier Near Lane CL Dist: | **0** | | |
| Barrier Far lane CL Dist: | **0** | | |
| Pad Elevation: | **0.5** | | |
| Road Elevation: | **0** | | |
| Observer Height (above grade): | **5.5** | | |
| Barrier Height: | **0** | | |
| Rt View: | **90** | Lft View: | **-90** |

| SITE DATA | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 6102 |
| Peak Hour Traffic: | **610.2** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

| FLEET MIX | | | | |
|---|---|---|---|---|
| Type | Day | Evening | Night | Daily |
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

| NOISE SOURCE ELEVATIONS (Feet) | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

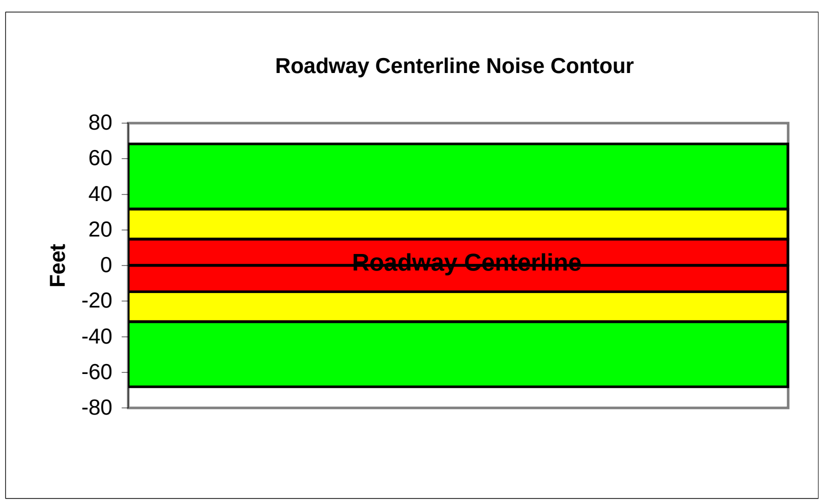
**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 43.5 | 52.3 | 50.5 | 44.4 | 53.0 | 53.6 |
| Medium Trucks: | 53.2 | 45.1 | 38.7 | 37.2 | 45.7 | 45.9 |
| Heavy Trucks: | 58.4 | 46.5 | 37.4 | 38.6 | 48.5 | 48.7 |
| **Vehicle Noise:** | **60.9** | **54.2** | **51.0** | **46.3** | **54.9** | **55.4** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

| CENTERLINE NOISE CONTOUR | |
|---|---|
| Unmitigated | |
| 60 dBA | 68 |
| 65 dBA | 32 |
| 70 dBA | 15 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between First Street and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 5842 |
| Peak Hour Traffic: | **584.2** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 28 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

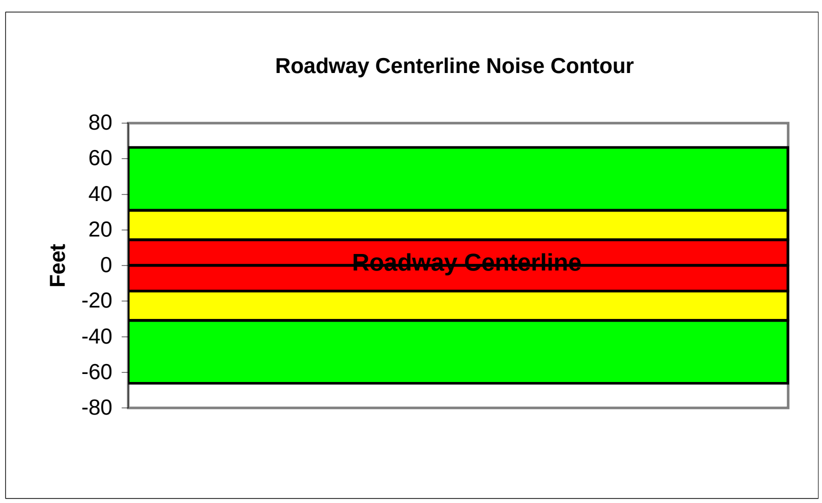
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 44.6 | 53.4 | 51.6 | 45.6 | 54.2 | 54.8 |
| Medium Trucks: | 54.4 | 46.3 | 39.9 | 38.3 | 46.8 | 47.1 |
| Heavy Trucks: | 59.6 | 47.6 | 38.6 | 39.8 | 49.7 | 49.8 |
| **Vehicle Noise:** | **62.0** | **55.4** | **52.2** | **47.5** | **56.1** | **56.5** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 66 |
| 65 dBA | 31 |
| 70 dBA | 14 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Toscanini Drive and Capitol Drive | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **0** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 34,393 |
| Peak Hour Traffic: | **3439.3** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

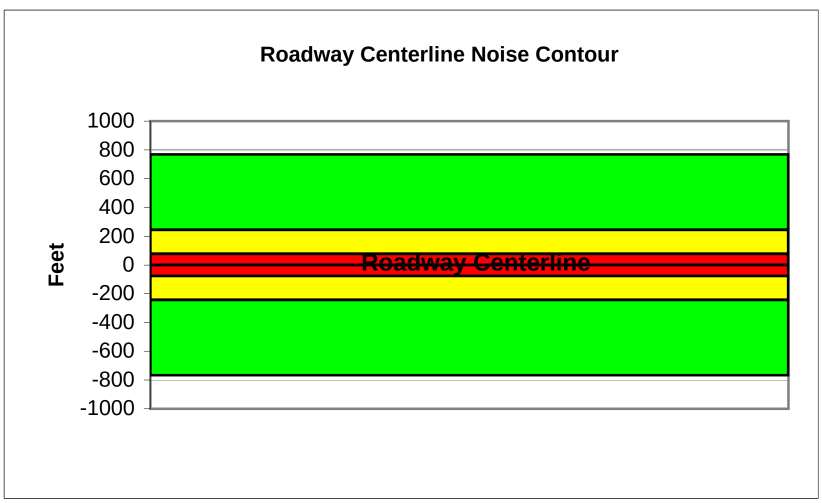
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 56.7 | 64.7 | 63.4 | 57.3 | 65.8 | 66.4 |
| Medium Trucks: | 65.6 | 42.0 | 34.2 | 43.4 | 49.5 | 49.6 |
| Heavy Trucks: | 70.5 | 61.3 | 43.5 | 52.6 | 62.7 | 62.7 |
| **Vehicle Noise:** | **72.8** | **66.8** | **63.5** | **59.1** | **67.6** | **68.0** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 769 |
| 65 dBA | 243 |
| 70 dBA | 77 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Capitol Drive and Crestwood Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **0** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 33,626 |
| Peak Hour Traffic: | **3362.6** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

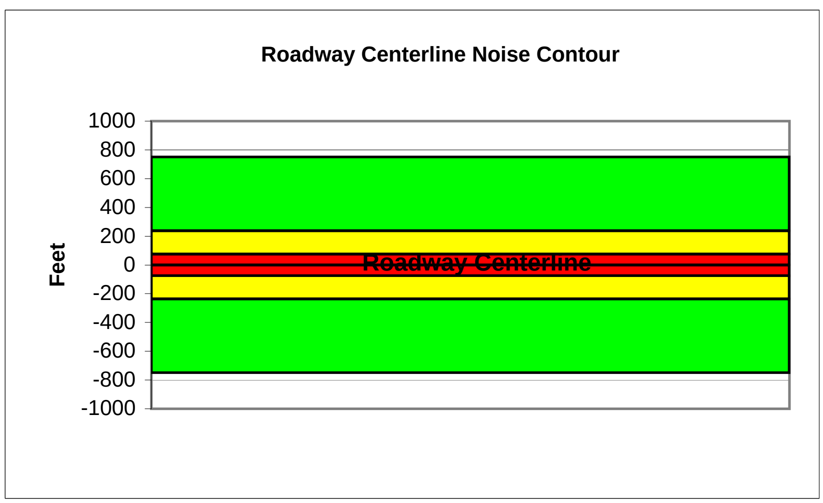
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 56.6 | 64.6 | 63.3 | 57.2 | 65.7 | 66.3 |
| Medium Trucks: | 65.5 | 41.9 | 34.1 | 43.3 | 49.4 | 49.5 |
| Heavy Trucks: | 70.4 | 61.2 | 43.4 | 52.5 | 62.6 | 62.6 |
| **Vehicle Noise:** | **72.7** | **66.7** | **63.4** | **59.0** | **67.5** | **67.9** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 752 |
| 65 dBA | 238 |
| 70 dBA | 75 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Crestwood Street and First Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 27254 |
| Peak Hour Traffic: | **2725.4** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

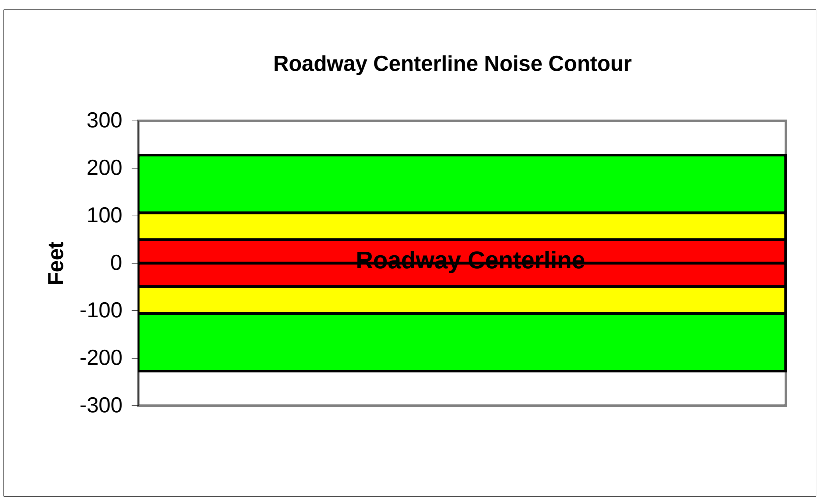
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.5 | 61.3 | 59.5 | 53.4 | 62.1 | 62.7 |
| Medium Trucks: | 61.5 | 53.4 | 47.0 | 45.5 | 53.9 | 54.2 |
| Heavy Trucks: | 66.3 | 54.4 | 45.3 | 46.6 | 56.3 | 56.4 |
| **Vehicle Noise:** | **68.7** | **62.9** | **60.0** | **55.0** | **63.6** | **64.1** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 228 |
| 65 dBA | 106 |
| 70 dBA | 49 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between First Street and Ninth Street | | |

| PROJECT DATA | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

| NOISE SOURCE ELEVATIONS (Feet) | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

| SITE DATA | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 20749 |
| Peak Hour Traffic: | **2074.9** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

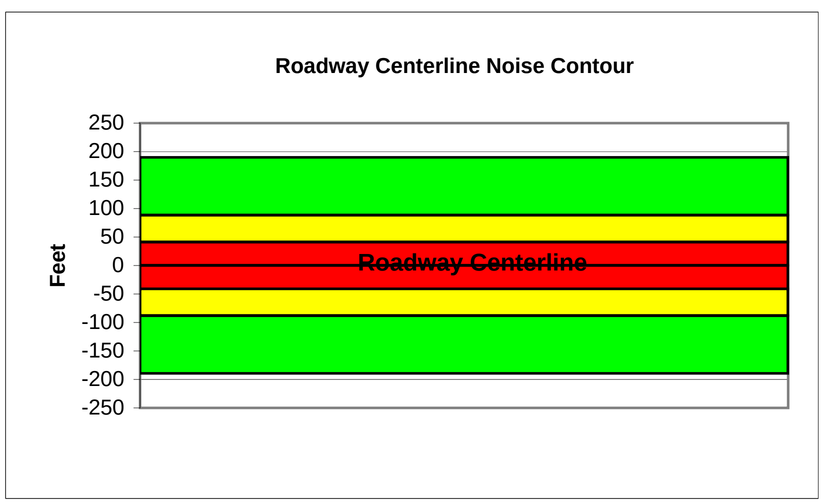
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 51.3 | 60.1 | 58.3 | 52.3 | 60.9 | 61.5 |
| Medium Trucks: | 60.3 | 52.2 | 45.9 | 44.3 | 52.8 | 53.0 |
| Heavy Trucks: | 65.1 | 53.2 | 44.2 | 45.4 | 55.1 | 55.2 |
| **Vehicle Noise:** | **67.5** | **61.7** | **58.8** | **53.8** | **62.4** | **62.9** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 190 |
| 65 dBA | 88 |
| 70 dBA | 41 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Ninth Street and West 25th Street | | |

| PROJECT DATA | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

| NOISE SOURCE ELEVATIONS (Feet) | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

| SITE DATA | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 25726 |
| Peak Hour Traffic: | **2572.6** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 43 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

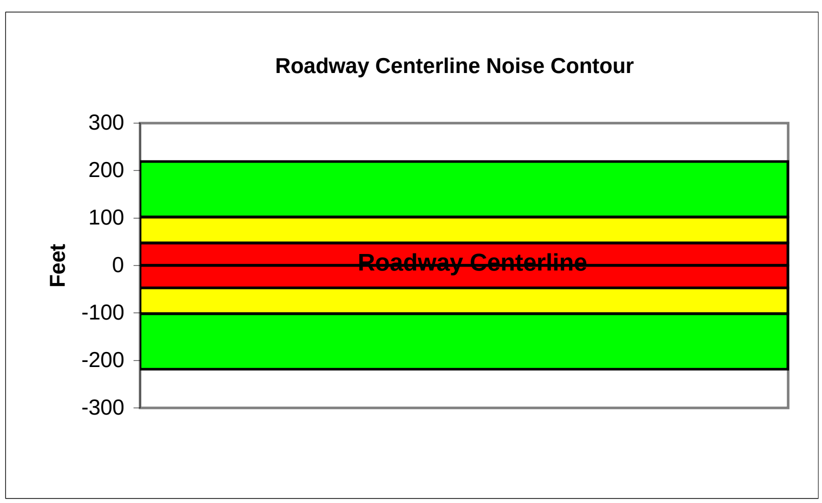
**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.4 | 61.2 | 59.4 | 53.3 | 62.0 | 62.6 |
| Medium Trucks: | 61.3 | 53.3 | 46.9 | 45.3 | 53.8 | 54.0 |
| Heavy Trucks: | 66.2 | 54.3 | 45.2 | 46.4 | 56.1 | 56.3 |
| **Vehicle Noise:** | **68.6** | **62.8** | **59.8** | **54.9** | **63.5** | **63.9** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

| CENTERLINE NOISE CONTOUR | |
|---|---|
| Unmitigated | |
| 60 dBA | 219 |
| 65 dBA | 102 |
| 70 dBA | 47 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | First Street | | |
| Road Segment: | Between Miraleste Drive and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 4794 |
| Peak Hour Traffic: | **479.4** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 14 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

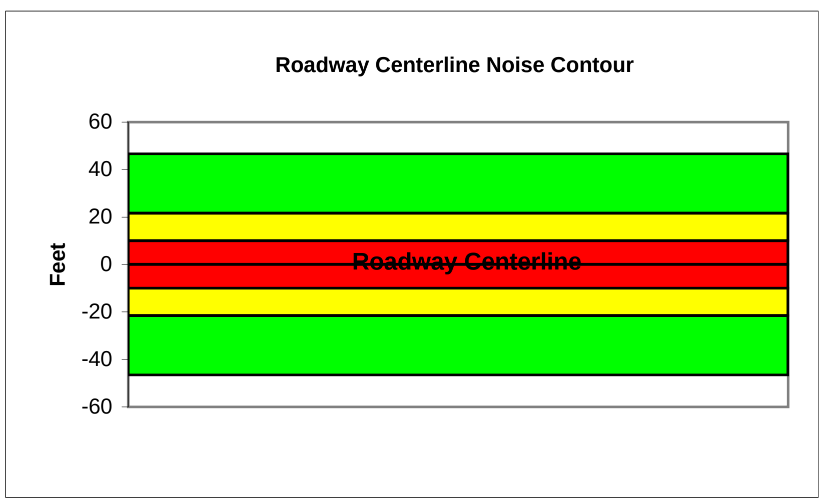
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 42.2 | 51.0 | 49.2 | 43.1 | 51.8 | 52.4 |
| Medium Trucks: | 52.8 | 44.8 | 38.4 | 36.8 | 45.3 | 45.5 |
| Heavy Trucks: | 58.5 | 46.5 | 37.5 | 38.7 | 48.8 | 49.0 |
| **Vehicle Noise:** | **61.0** | **53.5** | **50.0** | **45.6** | **54.2** | **54.6** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 47 |
| 65 dBA | 22 |
| 70 dBA | 10 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | Existing Plus Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive South | | |
| Road Segment: | Between Palos Verdes Drive East and Western Avenue | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 12622 |
| Peak Hour Traffic: | **1262.2** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 32 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

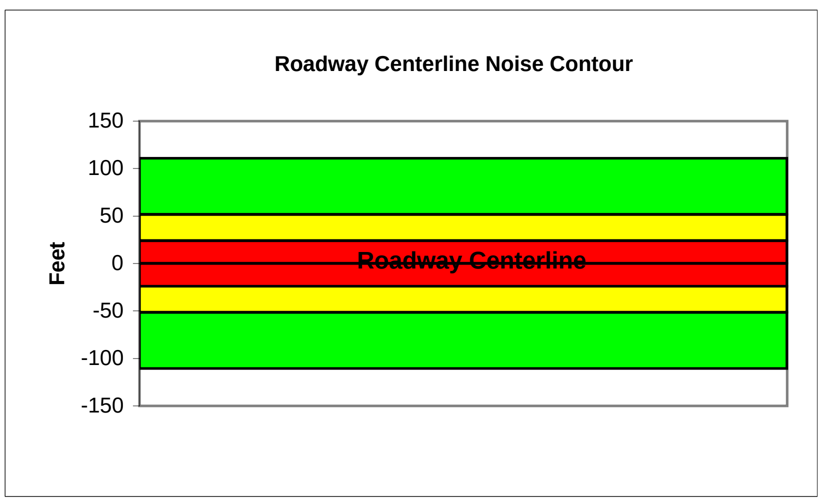
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 47.9 | 56.7 | 54.9 | 48.8 | 57.5 | 58.1 |
| Medium Trucks: | 57.6 | 49.5 | 43.2 | 41.6 | 50.1 | 50.3 |
| Heavy Trucks: | 62.8 | 50.9 | 41.8 | 43.1 | 53.0 | 53.1 |
| **Vehicle Noise:** | **65.3** | **58.6** | **55.4** | **50.8** | **59.3** | **59.8** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 111 |
| 65 dBA | 51 |
| 70 dBA | 24 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Via Colinita And Crest Drive | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 6282 |
| Peak Hour Traffic: | **628.2** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

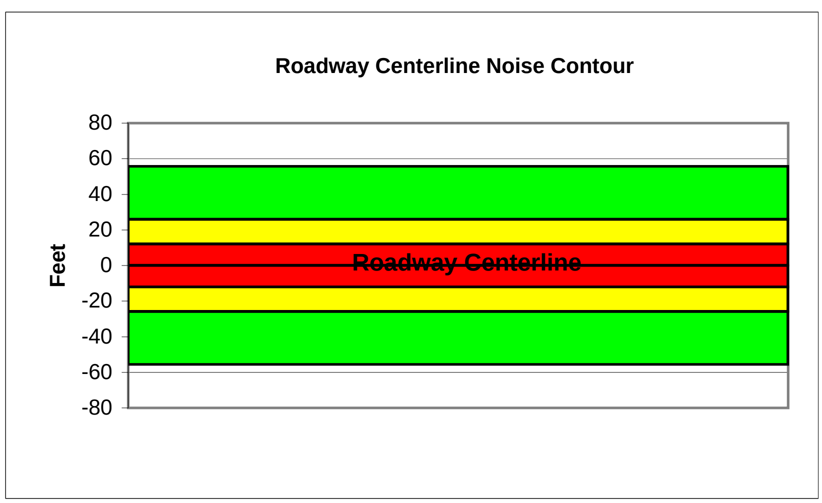
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 43.5 | 52.2 | 50.4 | 44.4 | 53.0 | 53.6 |
| Medium Trucks: | 54.1 | 46.0 | 39.6 | 38.0 | 46.5 | 46.8 |
| Heavy Trucks: | 59.7 | 47.8 | 38.7 | 39.9 | 50.1 | 50.2 |
| **Vehicle Noise:** | **62.2** | **54.7** | **51.2** | **46.8** | **55.4** | **55.8** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 56 |
| 65 dBA | 26 |
| 70 dBA | 12 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Crest Drive and Palos Verdes Drive South | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 3574 |
| Peak Hour Traffic: | **357.4** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

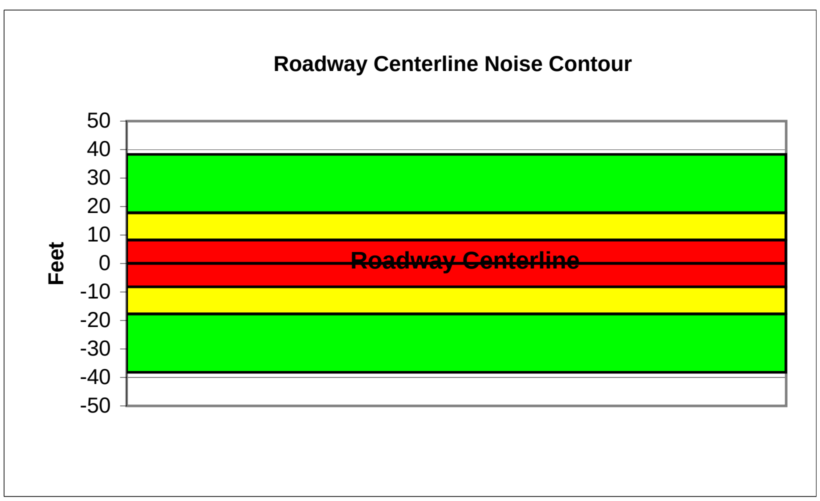
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 41.0 | 49.8 | 48.0 | 41.9 | 50.6 | 51.2 |
| Medium Trucks: | 51.6 | 43.5 | 37.2 | 35.6 | 44.1 | 44.3 |
| Heavy Trucks: | 57.3 | 45.3 | 36.3 | 37.5 | 47.6 | 47.7 |
| **Vehicle Noise:** | **59.8** | **52.3** | **48.7** | **44.4** | **52.9** | **53.4** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 38 |
| 65 dBA | 18 |
| 70 dBA | 8 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Palos Verdes Drive East and Via Colinita | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 11887 |
| Peak Hour Traffic: | **1188.7** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

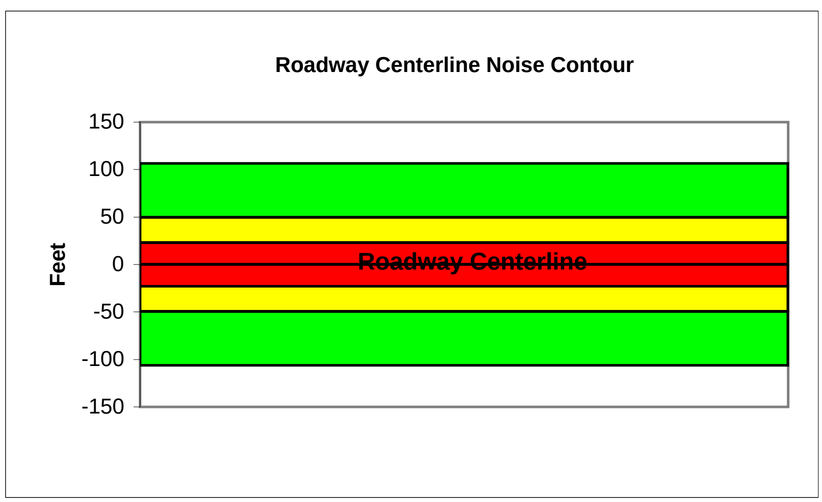
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 46.4 | 55.2 | 53.4 | 47.3 | 55.9 | 56.5 |
| Medium Trucks: | 56.1 | 48.0 | 41.6 | 40.1 | 48.6 | 48.8 |
| Heavy Trucks: | 61.3 | 49.4 | 40.3 | 41.5 | 51.4 | 51.6 |
| **Vehicle Noise:** | **63.8** | **57.1** | **53.9** | **49.2** | **57.8** | **58.3** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 107 |
| 65 dBA | 50 |
| 70 dBA | 23 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Via Colinita and First Street | | |

| PROJECT DATA | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

| NOISE SOURCE ELEVATIONS (Feet) | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

| SITE DATA | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 6272 |
| Peak Hour Traffic: | **627.2** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

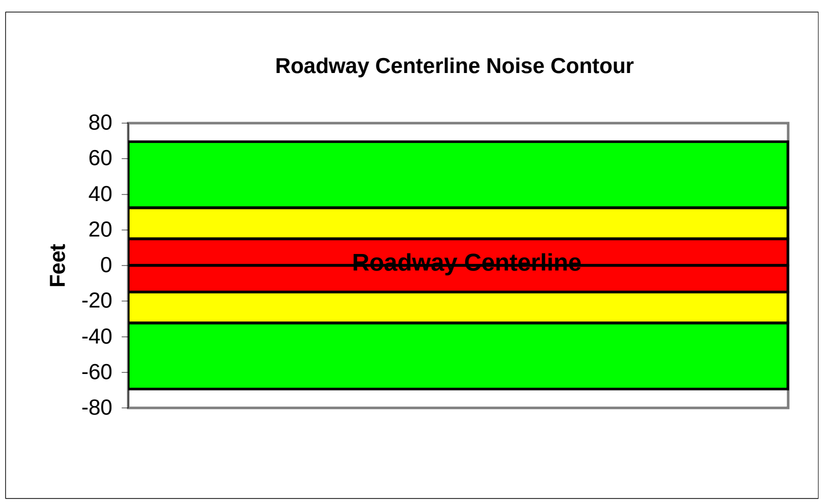
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 43.6 | 52.4 | 50.6 | 44.5 | 53.2 | 53.8 |
| Medium Trucks: | 53.3 | 45.3 | 38.9 | 37.3 | 45.8 | 46.0 |
| Heavy Trucks: | 58.5 | 46.6 | 37.5 | 38.8 | 48.7 | 48.8 |
| **Vehicle Noise:** | **61.0** | **54.3** | **51.2** | **46.5** | **55.0** | **55.5** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 70 |
| 65 dBA | 32 |
| 70 dBA | 15 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between First Street and Western Avenue | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 5994 |
| Peak Hour Traffic: | **599.4** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 28 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

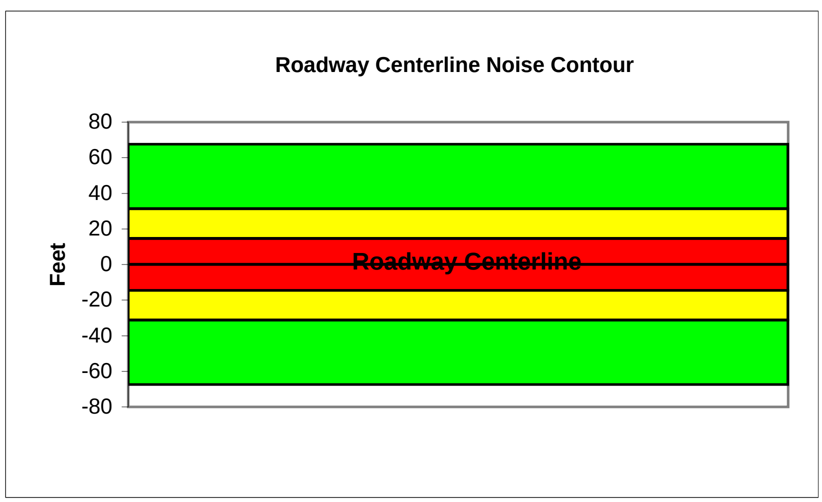
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 44.8 | 53.5 | 51.8 | 45.7 | 54.3 | 54.9 |
| Medium Trucks: | 54.5 | 46.4 | 40.0 | 38.5 | 46.9 | 47.2 |
| Heavy Trucks: | 59.7 | 47.8 | 38.7 | 39.9 | 49.8 | 50.0 |
| **Vehicle Noise:** | **62.1** | **55.5** | **52.3** | **47.6** | **56.2** | **56.6** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 68 |
| 65 dBA | 31 |
| 70 dBA | 15 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Toscanini Drive and Capitol Drive | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **0** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 40,650 |
| Peak Hour Traffic: | **4065** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

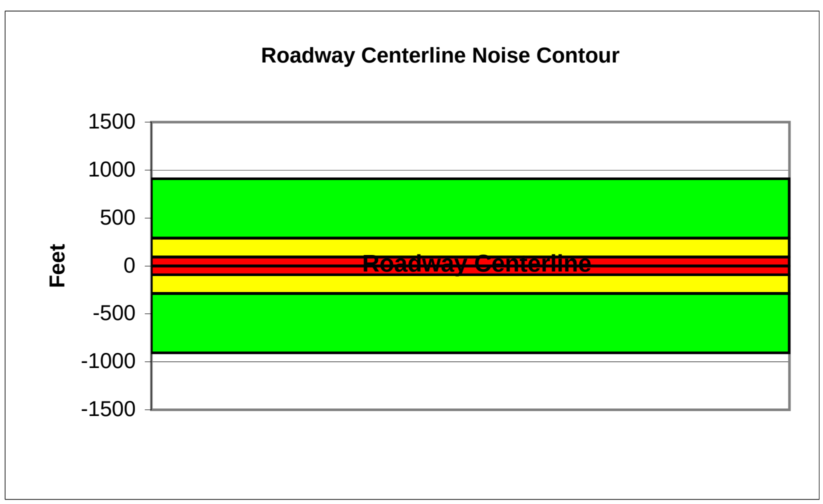
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 57.4 | 65.5 | 64.1 | 58.1 | 66.5 | 67.1 |
| Medium Trucks: | 66.3 | 42.7 | 34.9 | 44.1 | 50.2 | 50.3 |
| Heavy Trucks: | 71.2 | 62.0 | 44.2 | 53.4 | 63.4 | 63.4 |
| **Vehicle Noise:** | **73.6** | **67.5** | **64.2** | **59.8** | **68.3** | **68.7** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 910 |
| 65 dBA | 288 |
| 70 dBA | 91 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Capitol Drive and Crestwood Street | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **0** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 40,529 |
| Peak Hour Traffic: | **4052.9** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

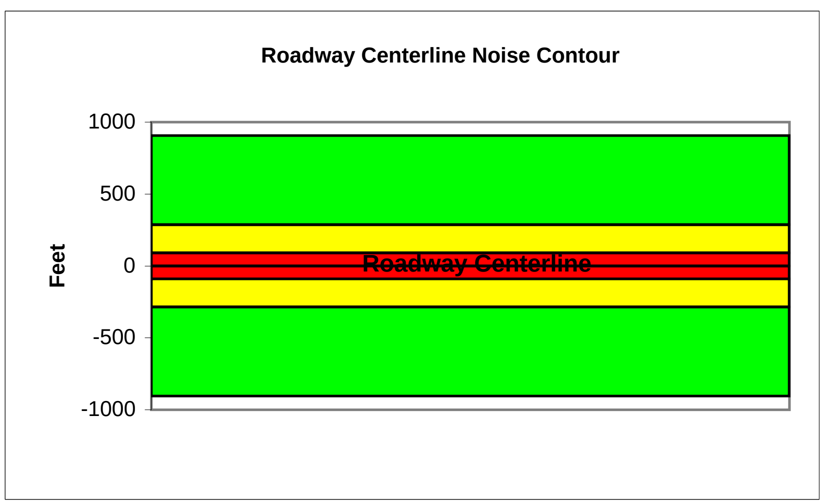
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 57.4 | 65.4 | 64.1 | 58.0 | 66.5 | 67.1 |
| Medium Trucks: | 66.3 | 42.7 | 34.9 | 44.1 | 50.2 | 50.3 |
| Heavy Trucks: | 71.2 | 62.0 | 44.2 | 53.3 | 63.4 | 63.4 |
| **Vehicle Noise:** | **73.6** | **67.5** | **64.2** | **59.8** | **68.3** | **68.7** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 906 |
| 65 dBA | 287 |
| 70 dBA | 91 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Crestwood Street and First Street | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 33382 |
| Peak Hour Traffic: | **3338.2** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

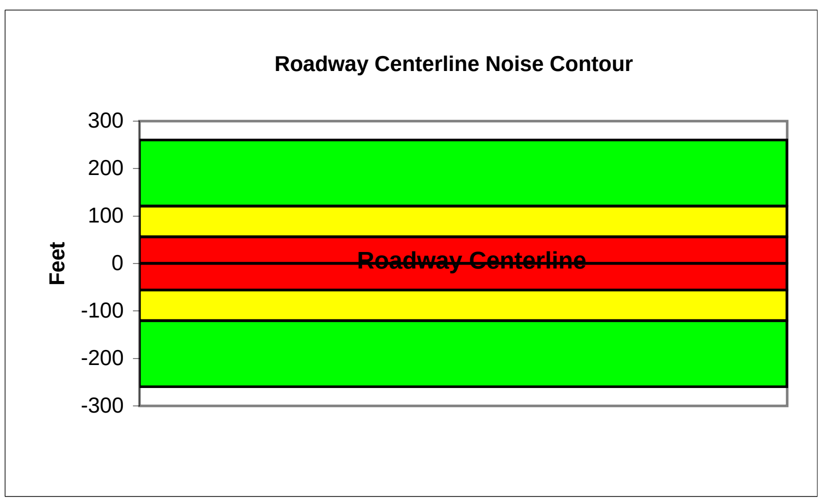
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 53.4 | 62.2 | 60.4 | 54.3 | 63.0 | 63.6 |
| Medium Trucks: | 62.4 | 54.3 | 47.9 | 46.3 | 54.8 | 55.1 |
| Heavy Trucks: | 67.2 | 55.3 | 46.2 | 47.4 | 57.2 | 57.3 |
| **Vehicle Noise:** | **69.6** | **63.8** | **60.9** | **55.9** | **64.5** | **65.0** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 261 |
| 65 dBA | 121 |
| 70 dBA | 56 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between First Street and Ninth Street | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 25320 |
| Peak Hour Traffic: | **2532** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

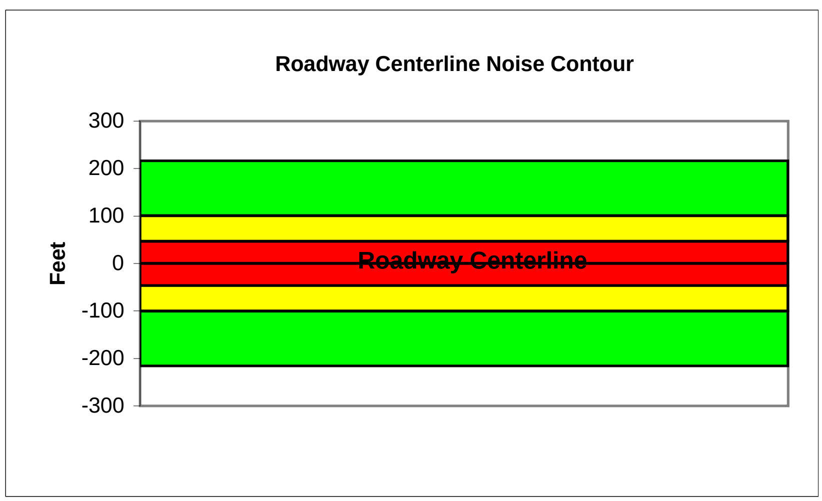
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.2 | 61.0 | 59.2 | 53.1 | 61.8 | 62.4 |
| Medium Trucks: | 61.2 | 53.1 | 46.7 | 45.1 | 53.6 | 53.9 |
| Heavy Trucks: | 66.0 | 54.1 | 45.0 | 46.2 | 56.0 | 56.1 |
| **Vehicle Noise:** | **68.4** | **62.6** | **59.7** | **54.7** | **63.3** | **63.8** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 217 |
| 65 dBA | 101 |
| 70 dBA | 47 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Ninth Street and West 25th Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 28784 |
| Peak Hour Traffic: | **2878.4** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 43 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

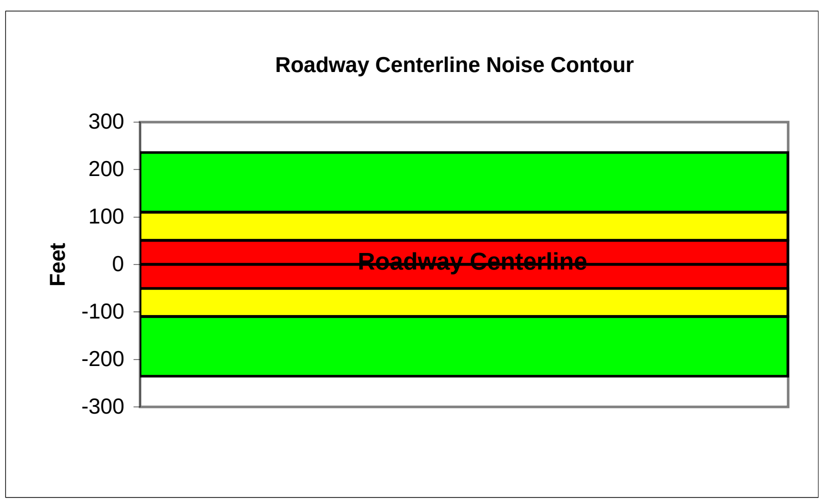
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.9 | 61.7 | 59.9 | 53.8 | 62.4 | 63.0 |
| Medium Trucks: | 61.8 | 53.8 | 47.4 | 45.8 | 54.3 | 54.5 |
| Heavy Trucks: | 66.7 | 54.7 | 45.7 | 46.9 | 56.6 | 56.7 |
| **Vehicle Noise:** | **69.1** | **63.2** | **60.3** | **55.4** | **63.9** | **64.4** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 236 |
| 65 dBA | 110 |
| 70 dBA | 51 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | First Street | | |
| Road Segment: | Between Miraleste Drive and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 5262 |
| Peak Hour Traffic: | **526.2** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 14 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

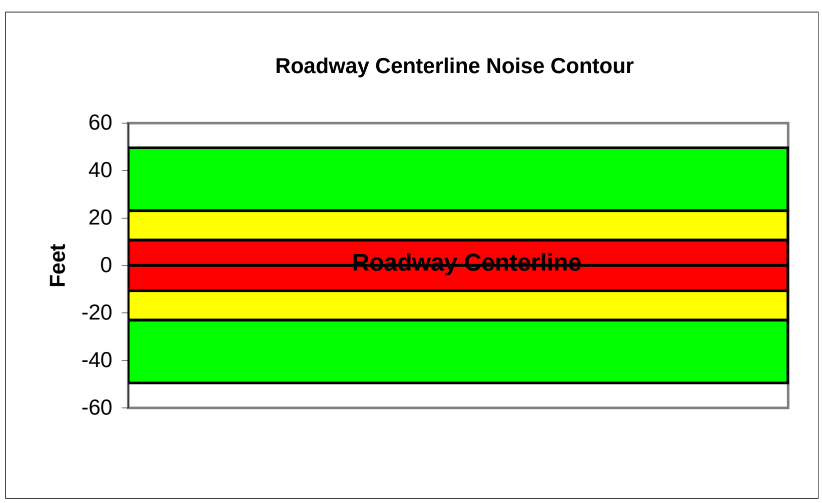
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 42.6 | 51.4 | 49.6 | 43.6 | 52.2 | 52.8 |
| Medium Trucks: | 53.2 | 45.2 | 38.8 | 37.2 | 45.7 | 45.9 |
| Heavy Trucks: | 58.9 | 47.0 | 37.9 | 39.1 | 49.2 | 49.4 |
| **Vehicle Noise:** | **61.4** | **53.9** | **50.4** | **46.0** | **54.6** | **55.0** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 50 |
| 65 dBA | 23 |
| 70 dBA | 11 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 Without Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive South | | |
| Road Segment: | Between Palos Verdes Drive East and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 15998 |
| Peak Hour Traffic: | **1599.8** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 32 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

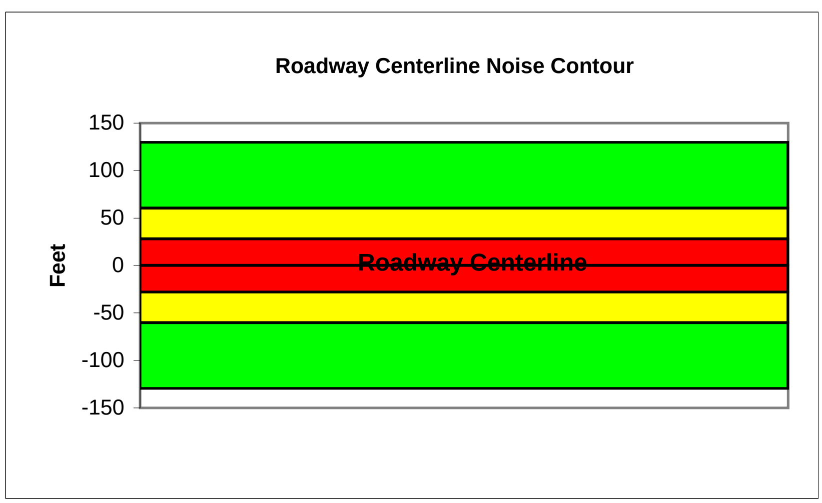
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 48.9 | 57.7 | 55.9 | 49.8 | 58.5 | 59.1 |
| Medium Trucks: | 58.6 | 50.6 | 44.2 | 42.6 | 51.1 | 51.3 |
| Heavy Trucks: | 63.9 | 51.9 | 42.9 | 44.1 | 54.0 | 54.1 |
| **Vehicle Noise:** | **66.3** | **59.7** | **56.5** | **51.8** | **60.4** | **60.8** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| Unmitigated | |
|---|---|
| 60 dBA | 130 |
| 65 dBA | 60 |
| 70 dBA | 28 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Via Colinita And Crest Drive | | |

| PROJECT DATA | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

| NOISE SOURCE ELEVATIONS (Feet) | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

| SITE DATA | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 6948 |
| Peak Hour Traffic: | **694.8** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

| FLEET MIX | | | | |
|---|---|---|---|---|
| Type | Day | Evening | Night | Daily |
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

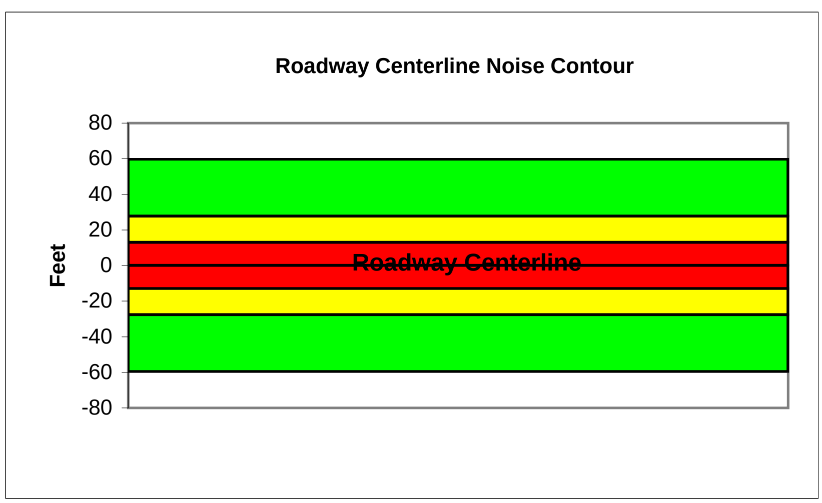
**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 43.9 | 52.7 | 50.9 | 44.8 | 53.5 | 54.1 |
| Medium Trucks: | 54.5 | 46.4 | 40.0 | 38.5 | 47.0 | 47.2 |
| Heavy Trucks: | 60.1 | 48.2 | 39.1 | 40.4 | 50.5 | 50.6 |
| **Vehicle Noise:** | **62.7** | **55.2** | **51.6** | **47.3** | **55.8** | **56.3** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

| CENTERLINE NOISE CONTOUR | |
|---|---|
| Unmitigated | |
| 60 dBA | 60 |
| 65 dBA | 28 |
| 70 dBA | 13 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive East | | |
| Road Segment: | Between Crest Drive and Palos Verdes Drive South | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 3796 |
| Peak Hour Traffic: | **379.6** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 12.5 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

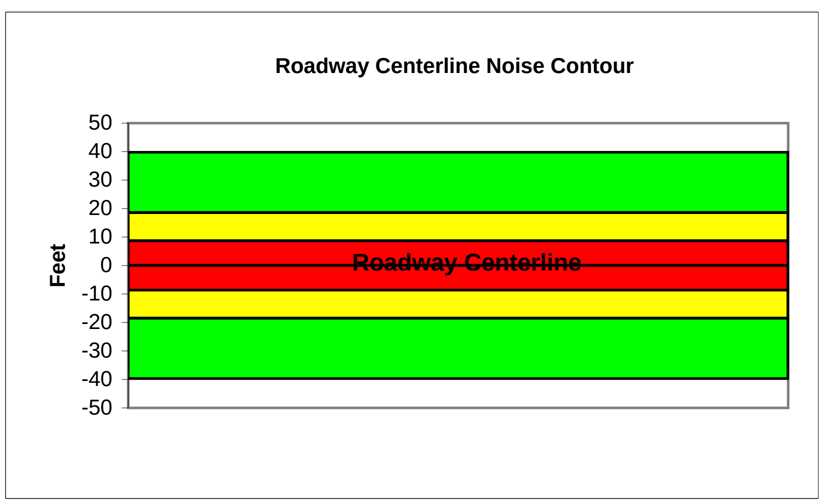
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 41.3 | 50.0 | 48.3 | 42.2 | 50.8 | 51.4 |
| Medium Trucks: | 51.9 | 43.8 | 37.4 | 35.8 | 44.3 | 44.6 |
| Heavy Trucks: | 57.5 | 45.6 | 36.5 | 37.7 | 47.9 | 48.0 |
| **Vehicle Noise:** | **60.0** | **52.5** | **49.0** | **44.7** | **53.2** | **53.6** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 40 |
| 65 dBA | 19 |
| 70 dBA | 9 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Palos Verdes Drive East and Via Colinita | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 12464 |
| Peak Hour Traffic: | **1246.4** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

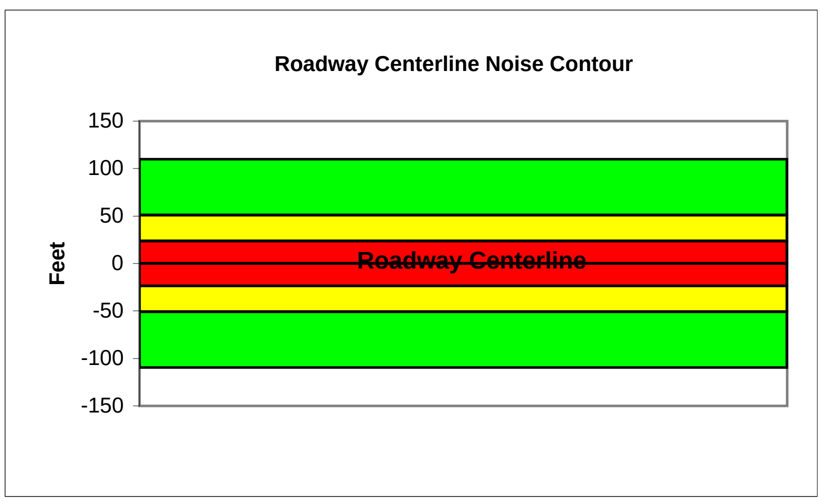
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 46.6 | 55.4 | 53.6 | 47.5 | 56.1 | 56.7 |
| Medium Trucks: | 56.3 | 48.2 | 41.9 | 40.3 | 48.8 | 49.0 |
| Heavy Trucks: | 61.5 | 49.6 | 40.5 | 41.7 | 51.7 | 51.8 |
| **Vehicle Noise:** | **64.0** | **57.3** | **54.1** | **49.4** | **58.0** | **58.5** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 110 |
| 65 dBA | 51 |
| 70 dBA | 24 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between Via Colinita and First Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 6494 |
| Peak Hour Traffic: | **649.4** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 94 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

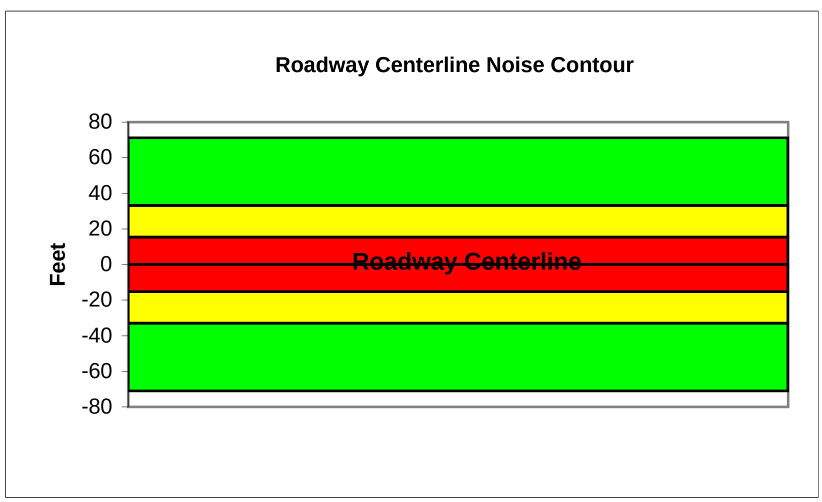
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 43.8 | 52.5 | 50.7 | 44.7 | 53.3 | 53.9 |
| Medium Trucks: | 53.5 | 45.4 | 39.0 | 37.4 | 45.9 | 46.2 |
| Heavy Trucks: | 58.7 | 46.8 | 37.7 | 38.9 | 48.8 | 48.9 |
| **Vehicle Noise:** | **61.1** | **54.5** | **51.3** | **46.6** | **55.2** | **55.6** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 71 |
| 65 dBA | 33 |
| 70 dBA | 15 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Miraleste Drive | | |
| Road Segment: | Between First Street and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 6038 |
| Peak Hour Traffic: | **603.8** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 28 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

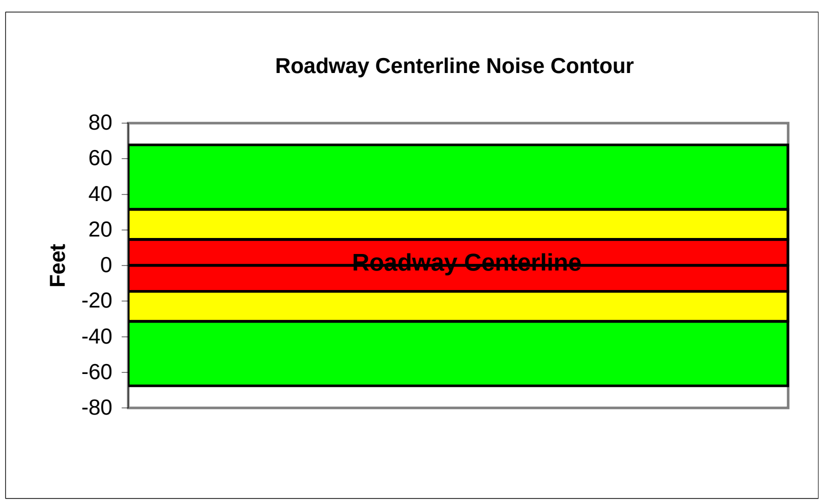
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 44.8 | 53.6 | 51.8 | 45.7 | 54.3 | 55.0 |
| Medium Trucks: | 54.5 | 46.4 | 40.1 | 38.5 | 47.0 | 47.2 |
| Heavy Trucks: | 59.7 | 47.8 | 38.7 | 40.0 | 49.9 | 50.0 |
| **Vehicle Noise:** | **62.2** | **55.5** | **52.3** | **47.7** | **56.2** | **56.7** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 68 |
| 65 dBA | 31 |
| 70 dBA | 15 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Toscanini Drive and Capitol Drive | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **0** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 41,005 |
| Peak Hour Traffic: | **4100.5** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

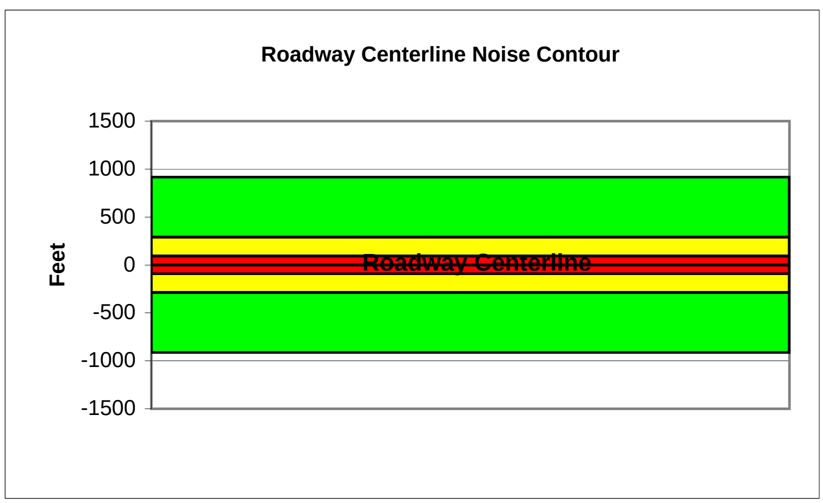
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 57.4 | 65.5 | 64.2 | 58.1 | 66.6 | 67.2 |
| Medium Trucks: | 66.4 | 42.7 | 34.9 | 44.1 | 50.3 | 50.3 |
| Heavy Trucks: | 71.2 | 62.0 | 44.2 | 53.4 | 63.4 | 63.5 |
| **Vehicle Noise:** | **73.6** | **67.6** | **64.2** | **59.9** | **68.3** | **68.8** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 917 |
| 65 dBA | 290 |
| 70 dBA | 92 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Capitol Drive and Crestwood Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **0** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 40,662 |
| Peak Hour Traffic: | **4066.2** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions **HARD SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.695 | 0.129 | 0.096 | 0.92 |
| Med. Truck | 0.0144 | 0.0006 | 0.015 | 0.03 |
| Heavy Truck | 0.24 | 0.001 | 0.025 | 0.05 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

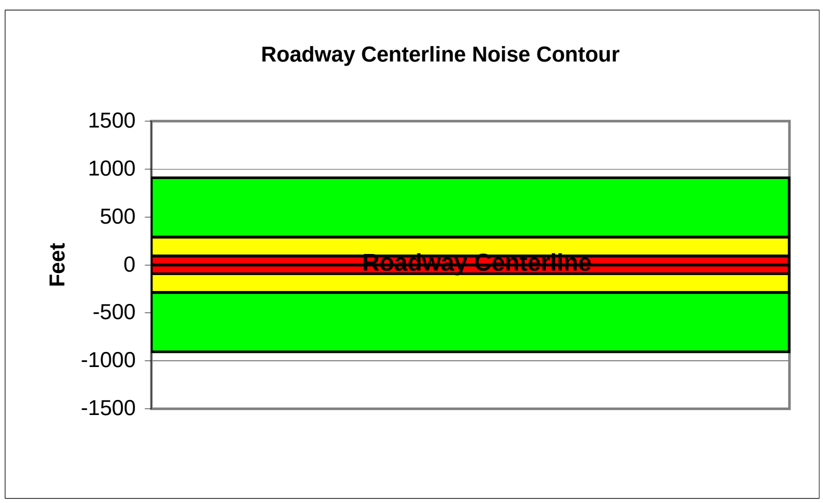
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 57.4 | 65.5 | 64.1 | 58.1 | 66.5 | 67.1 |
| Medium Trucks: | 66.3 | 42.7 | 34.9 | 44.1 | 50.2 | 50.3 |
| Heavy Trucks: | 71.2 | 62.0 | 44.2 | 53.4 | 63.4 | 63.4 |
| **Vehicle Noise:** | **73.6** | **67.5** | **64.2** | **59.8** | **68.3** | **68.7** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 910 |
| 65 dBA | 288 |
| 70 dBA | 91 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Crestwood Street and First Street | | |

**PROJECT DATA**

| | |
|---|---|
| Centerline Dist to Barrier: | **0** |
| Barrier (0=wall, 1= berm): | **0** |
| Receiver Barrier Dist: | **0** |
| Centerline Dist. To Observer: | **100** |
| Barrier Near Lane CL Dist: | **0** |
| Barrier Far lane CL Dist: | **0** |
| Pad Elevation: | **0.5** |
| Road Elevation: | **0** |
| Observer Height (above grade): | **5.5** |
| Barrier Height: | **0** |
| Rt View: **90** | Lft View: **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 33515 |
| Peak Hour Traffic: | **3351.5** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

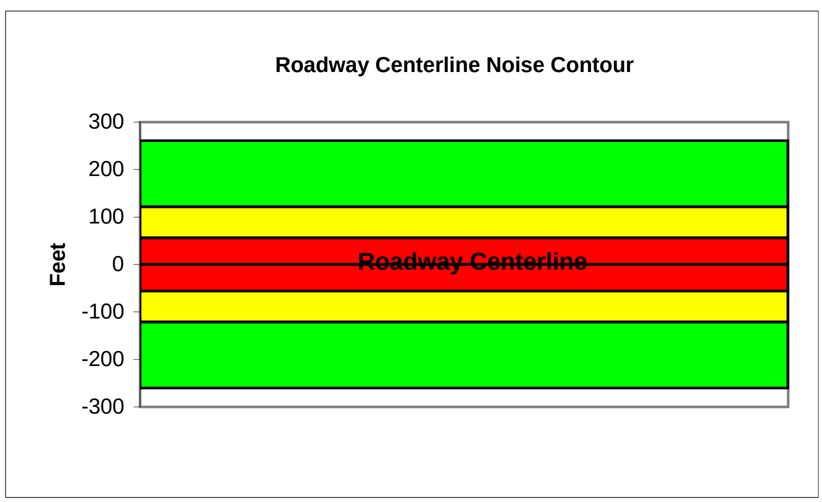
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 53.4 | 62.2 | 60.4 | 54.3 | 63.0 | 63.6 |
| Medium Trucks: | 62.4 | 54.3 | 47.9 | 46.4 | 54.8 | 55.1 |
| Heavy Trucks: | 67.2 | 55.3 | 46.2 | 47.5 | 57.2 | 57.3 |
| **Vehicle Noise:** | **69.6** | **63.8** | **60.9** | **55.9** | **64.5** | **65.0** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 261 |
| 65 dBA | 121 |
| 70 dBA | 56 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



**Federal Highway Administration RD-77-108**
**Traffic Noise Prediction Model (CALVENO)**

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between First Street and Ninth Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 25320 |
| Peak Hour Traffic: | **2532** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 48 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

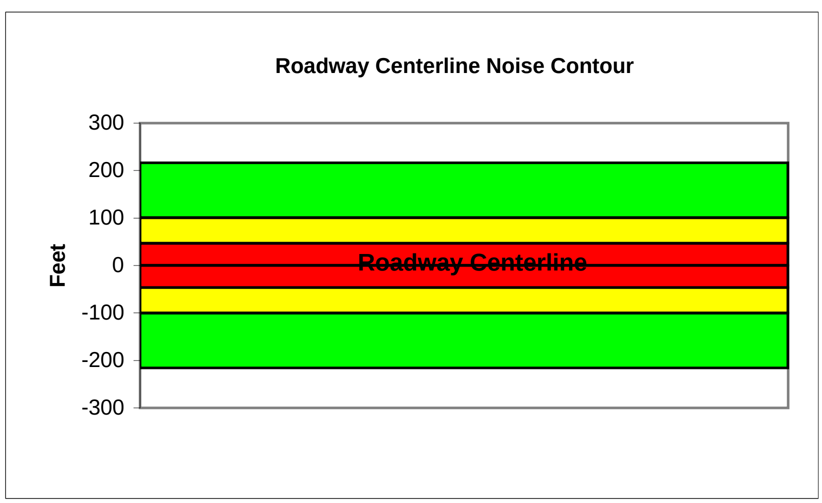
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.2 | 61.0 | 59.2 | 53.1 | 61.8 | 62.4 |
| Medium Trucks: | 61.2 | 53.1 | 46.7 | 45.1 | 53.6 | 53.9 |
| Heavy Trucks: | 66.0 | 54.1 | 45.0 | 46.2 | 56.0 | 56.1 |
| **Vehicle Noise:** | **68.4** | **62.6** | **59.7** | **54.7** | **63.3** | **63.8** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 217 |
| 65 dBA | 101 |
| 70 dBA | 47 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Western Avenue | | |
| Road Segment: | Between Ninth Street and West 25th Street | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 28784 |
| Peak Hour Traffic: | **2878.4** |
| Vehicle Speed: | 40 |
| Centerline Separation: | 43 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

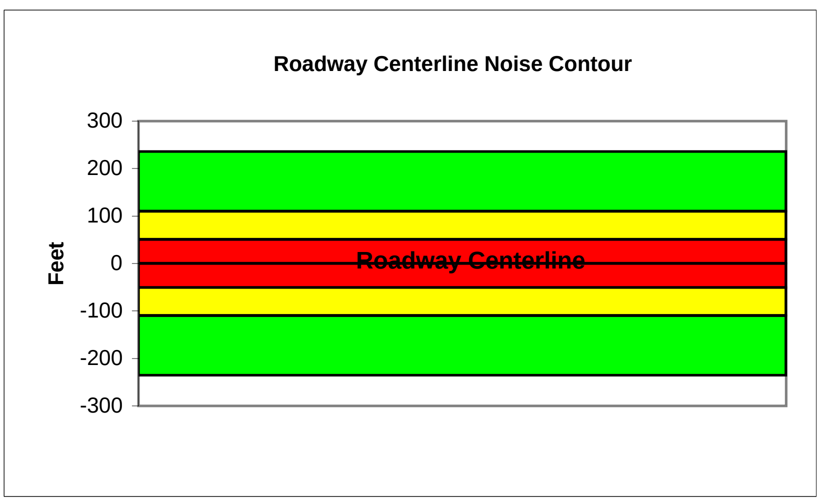
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 52.9 | 61.7 | 59.9 | 53.8 | 62.4 | 63.0 |
| Medium Trucks: | 61.8 | 53.8 | 47.4 | 45.8 | 54.3 | 54.5 |
| Heavy Trucks: | 66.7 | 54.7 | 45.7 | 46.9 | 56.6 | 56.7 |
| **Vehicle Noise:** | **69.1** | **63.2** | **60.3** | **55.4** | **63.9** | **64.4** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 236 |
| 65 dBA | 110 |
| 70 dBA | 51 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | First Street | | |
| Road Segment: | Between Miraleste Drive and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 5440 |
| Peak Hour Traffic: | **544** |
| Vehicle Speed: | 30 |
| Centerline Separation: | 14 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

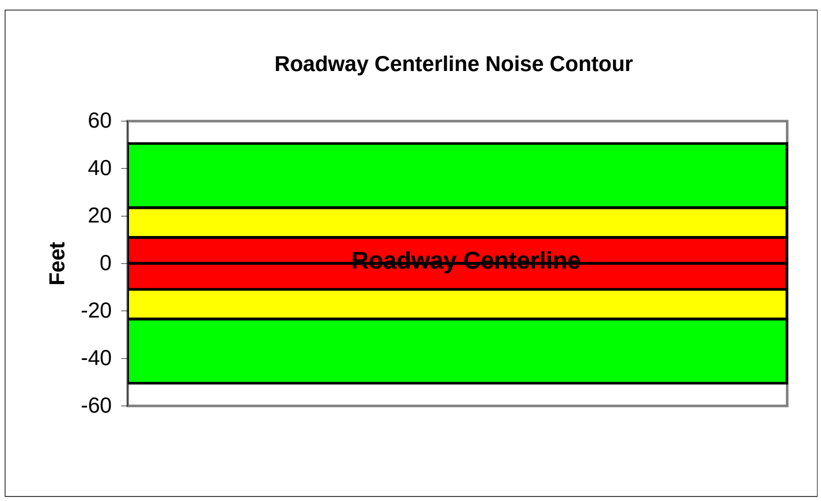
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 42.8 | 51.6 | 49.8 | 43.7 | 52.3 | 53.0 |
| Medium Trucks: | 53.4 | 45.3 | 38.9 | 37.4 | 45.9 | 46.1 |
| Heavy Trucks: | 59.0 | 47.1 | 38.0 | 39.3 | 49.4 | 49.5 |
| **Vehicle Noise:** | **61.6** | **54.0** | **50.5** | **46.2** | **54.7** | **55.1** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 51 |
| 65 dBA | 23 |
| 70 dBA | 11 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



## Federal Highway Administration RD-77-108
## Traffic Noise Prediction Model (CALVENO)

| | | | |
|---|---|---|---|
| Project Name: | Marymount College Facilities Expansion Project | Scenario: | 2012 With Project |
| Analyst: | Michelle Dunn | Job #: | 10-104089 |
| Roadway: | Palos Verdes Drive South | | |
| Road Segment: | Between Palos Verdes Drive East and Western Avenue | | |

**PROJECT DATA**

| | | | |
|---|---|---|---|
| Centerline Dist to Barrier: | | | **0** |
| Barrier (0=wall, 1= berm): | | | **0** |
| Receiver Barrier Dist: | | | **0** |
| Centerline Dist. To Observer: | | | **100** |
| Barrier Near Lane CL Dist: | | | **0** |
| Barrier Far lane CL Dist: | | | **0** |
| Pad Elevation: | | | **0.5** |
| Road Elevation: | | | **0** |
| Observer Height (above grade): | | | **5.5** |
| Barrier Height: | | | **0** |
| Rt View: | **90** | Lft View: | **-90** |

**NOISE SOURCE ELEVATIONS (Feet)**

| | |
|---|---|
| Autos: | **0** |
| Medium Trucks: | **2.3** |
| Heavy Trucks: | **8** |

**SITE DATA**

| | |
|---|---|
| Road Grade: | 0 |
| Average Daily Traffic: | 16176 |
| Peak Hour Traffic: | **1617.6** |
| Vehicle Speed: | 35 |
| Centerline Separation: | 32 |

**NOISE INPUTS**

Site conditions:**SOFT SITE**

**FLEET MIX**

| Type | Day | Evening | Night | Daily |
|---|---|---|---|---|
| Auto | 0.775 | 0.129 | 0.096 | 0.9742 |
| Med. Truck | 0.848 | 0.049 | 0.103 | 0.0184 |
| Heavy Truck | 0.865 | 0.027 | 0.108 | 0.0074 |

**UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)**

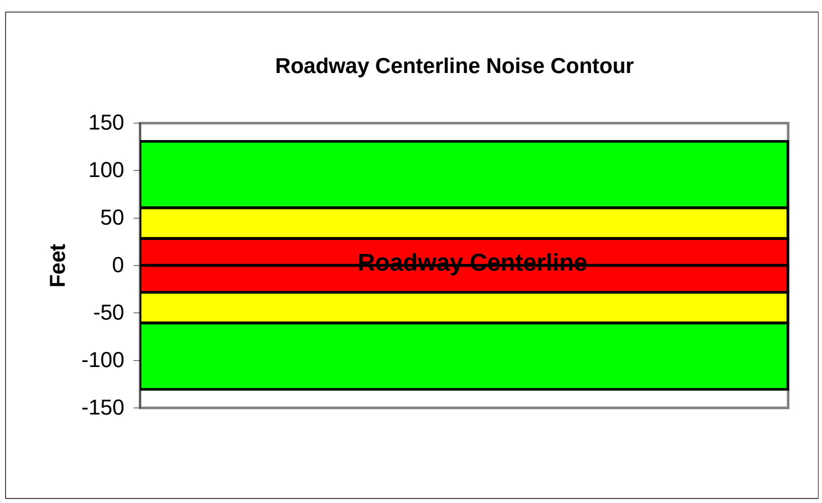
| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 49.0 | 57.7 | 56.0 | 49.9 | 58.5 | 59.1 |
| Medium Trucks: | 58.7 | 50.6 | 44.2 | 42.7 | 51.2 | 51.4 |
| Heavy Trucks: | 63.9 | 52.0 | 42.9 | 44.1 | 54.0 | 54.2 |
| **Vehicle Noise:** | **66.3** | **59.7** | **56.5** | **51.8** | **60.4** | **60.9** |

**MITIGATED NOISE LEVELS (With topographic or barrier attenuation)**

| Vehicle Type | Peak Leq | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | | | | | | |
| Medium Trucks: | | | | | | |
| Heavy Trucks: | | | | | | |
| Vehicle Noise: | | | | | | |

**CENTERLINE NOISE CONTOUR**

| | |
|---|---|
| Unmitigated | |
| 60 dBA | 131 |
| 65 dBA | 61 |
| 70 dBA | 28 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



# Appendix D-4
# Mira Vista Neighborhood
# Residential Street Segment Review

# MEMORANDUM

To: Ara Mihranian, AICP JN 10104089

From: Paul Martin – RBF Consulting

Date: January 19, 2010

Subject: Mira Vista Neighborhood Residential Street Segment Review

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This technical memorandum updates the *Marymount College – Traffic Count Data Analysis Memorandum*, dated May 18, 2008, prepared by Joanne Itagaki, City of Rancho Palos Verdes Consultant Traffic Engineer, and the *Mira Vista Neighborhood Residential Street Segment Review (RBF Consulting, May 19, 2009)*, to account for the following modifications to the Marymount College project:

- Designation of up to 250 students from an Associates of Arts degree program (AA Program) to a Bachelor of Arts degree program (BA Program).

For purposes of this analysis, the AA Program and BA Program are defined as follows:

- **AA Program –** For traffic purposes defined as educational programs under the Junior/Community College land use, which usually last about two-years, but may vary depending on the student; and
- **BA Program –** For traffic purposes defined as educational programs under the University land use, which usually last about four-years, but may vary depending on the student.

The *Mira Vista Neighborhood Residential Street Segment Review (May 19, 2009)*, included analysis for the following modifications:

- Removal of residence halls;
- Revised number of existing student seats from 578 to 648;
- Reduce net new seats from 131 to 5 seats;
- Reduce new employees/faculty from 12 to 7 staff; and
- Increase weekend student enrollment from 83 to 150 students.

This analysis reviews traffic operation of roadway segment within the Mira Vista neighborhood.

Traffic counts were collected on Tuesday, April 22, 2008, on the following streets:

- **Enrose Avenue between**
  1. Summerland Street and General Street
  2. General Street and Fairhill Drive
  3. Fairhill Drive and Crestwood Street
  4. Crestwood Street and Nobel View Drive
- **General Street between**
  5. Bayend Drive and Bernice Drive (W)
  6. Bayend Drive and Wycliff Avenue
  7. Fairhill Drive and Enrose Avenue
- **Trudie Drive between**
  8. Western Avenue and Highmore Avenue
  9. Homeworth Drive and Bayend Drive
  10. Bayend Drive and Trotwood Avenue
- **Via Colinita between**
  11. Enrose Avenue and Miraleste Drive

The trip distribution utilized in this analysis is consistent with that identified in the *Marymount College Facilities Expansion Project Traffic & Parking Impact Analysis (September 28, 2007)* and is assumed to remain unchanged with project description modifications. As indicated in the EIR, 40 percent of project trips are forecast to travel through the residential neighborhood. When accounting for modifications to the project description, which consists of designation of up to 250 students from an Associates of Arts degree program (AA Program) to a Bachelor of Arts degree program (BA Program, the project is forecast to generate the following number of trips during various periods of the day.

- AM Peak Hour Trips = 200
- Mid-day Peak Hour Trips = 204
- Afternoon Peak Hour Trips = 187
- PM Peak Hour Trips = 175
- Total Daily Trips = 1,931

Tables 1 through 4 identify the increase in hourly traffic volumes on the residential streets in question. The Tables reflect the trip generation of the four peak periods (AM peak, Mid-day peak, Afternoon peak, and PM peak) analyzed in the EIR. The distribution pattern from the EIR indicates that there would be no additional trips on General Street.

The City uses the Los Angeles County Traffic Impact Analysis Report Guidelines dated January 1, 1997 to determine significant traffic impacts. This document has defined a significant traffic impact on two-lane roadway occurs when a project adds the following percentages based on Level of Service (LOS) of the preproject conditions.

| TWO-LANE ROADWAYS | | | | |
|---|---|---|---|---|
| | | **Percentages Increase in Passenger Car Per Hour (PCPH) by Project** | | |
| **Directional Split** | **Total Capacity (PCPH)** | **Preproject LOS** | | |
| | | **C** | **D** | **E/F** |
| 50/50 | 2,800 | 4 | 2 | 1 |
| 60/40 | 2,650 | 4 | 2 | 1 |
| 70/30 | 2,500 | 4 | 2 | 1 |
| 80/20 | 2,300 | 4 | 2 | 1 |
| 90/10 | 2,100 | 4 | 2 | 1 |
| 100/0 | 2,000 | 4 | 2 | 1 |

**Source:** *Los Angeles County Traffic Impact Analysis Report Guidelines, January 1, 1997*.

In comparing the County of Los Angeles criteria with Tables 1 to 4, the roadway segments analyzed are operating at an acceptable LOS "A" during all four periods. With the addition of proposed project trips accounting for project description modifications, the roadway segments continue to operate at an acceptable LOS "A".

When accounting for modifications to the project description and associated trip generation, the results of the Mira Vista Neighborhood review remain unchanged. Please contact me with any questions.

Attachments
- Table 1 – Peak Hour Analysis: AM Peak Hour
- Table 2 – Peak Hour Analysis: Mid-day Peak Hour
- Table 3 – Peak Hour Analysis: Afternoon Peak Hour
- Table 4 – Peak Hour Analysis: PM Peak Hour

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**MARYMOUNT COLLEGE**

**Peak Hour Analysis**

**Table 1 - AM PEAK HOUR**

AM Peak Hour between 7 AM and 10 AM    AM Peak Hour Total Trips = 200    40% = 80 trips

| | | **Location** | AM Peak Hour | Traffic Volume NB/EB | SB/WB | Total | Preproject V/C | LOS | Project Traffic Trips | Total Trips | With Project V/C | LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Enrose Avenue between | | | | | | | | | | | | |
| Traffic Volume Directional | 60/40 split | Summerland St. and General St. | 8:00 | 220 | 143 | 363 | 0.14 | A | 80 | 443 | 0.17 | A |
| | 60/40 split | General St. and Fairhill Dr. | 8:00 | 74 | 112 | 186 | 0.07 | A | 80 | 266 | 0.10 | A |
| | 70/30 split | Fairhill Dr. and Crestwood St. | 8:00 | 121 | 52 | 173 | 0.07 | A | 80 | 253 | 0.10 | A |
| | 60/40/split | Crestwood St. and Nobel View Dr. | 7:00 | 100 | 74 | 174 | 0.07 | A | 80 | 254 | 0.10 | A |
| General Street between | | | | | | | | | | | | |
| Traffic Volume Directional | 60/40 split | Bayend Dr. and Bernice Dr. (W) | 8:00 | 113 | 148 | 261 | 0.10 | A | 0 | 261 | 0.10 | A |
| | 60/40 split | Bayend Dr. and Wycliff Ave. | 8:00 | 210 | 151 | 361 | 0.14 | A | 0 | 361 | 0.14 | A |
| | 60/40 split | Fairhill Dr. and Enrose Ave. | 8:00 | 101 | 65 | 166 | 0.06 | A | 0 | 166 | 0.06 | A |
| Trudie Drive between | | | | | | | | | | | | |
| Traffic Volume Directional | 60/40 split | Western Ave. and Highmore Ave. | 8:00 | 381 | 127 | 508 | 0.19 | A | 80 | 588 | 0.22 | A |
| | 50/50 split | Homeworth Dr. and Bayend Dr. | 8:00 | 154 | 162 | 316 | 0.11 | A | 80 | 396 | 0.14 | A |
| | 60/40 split | Bayend Dr. and Trotwood Ave. | 8:00 | 83 | 56 | 139 | 0.05 | A | 80 | 219 | 0.08 | A |
| Via Colinita between | | | | | | | | | | | | |
| | 50/50 split | Enrose Ave. and Miraleste Dr. | 7:00 | 190 | 213 | 403 | 0.14 | A | 80 | 483 | 0.17 | A |

Capacity: pcph = passenger cars per hour
50/50 split = 2,800 pcph
60/40 split = 2,650 pcph
70/30 split = 2,500 pcph

**MARYMOUNT COLLEGE**
**Peak Hour Analysis**
**Table 2 - MID-DAY PEAK HOUR**

Mid-Day Peak Hour between 11 AM and 1 PM    Mid-day Peak Hour Total Trips = 204    40% = 82 trips

| | | Location | Mid-day Hour | Traffic Volume NB/EB | Traffic Volume SB/WB | Traffic Volume Total | Preproject V/C | Preproject LOS | Project Traffic Trips | Total Trips | With Project V/C | With Project LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Enrose Avenue between | | | | | | | | | | | | |
| Traffic Volume Directional | 50/50 split | Summerland St. and General St. | 1:00 | 145 | 124 | 269 | 0.10 | A | 82 | 351 | 0.13 | A |
| | 50/50 split | General St. and Fairhill Dr. | 1:00 | 57 | 67 | 124 | 0.04 | A | 82 | 206 | 0.07 | A |
| | 60/40 split | Fairhill Dr. and Crestwood St. | 1:00 | 65 | 48 | 113 | 0.04 | A | 82 | 195 | 0.07 | A |
| | 50/50 split | Crestwood St. and Nobel View Dr. | 1:00 | 45 | 53 | 98 | 0.04 | A | 82 | 180 | 0.06 | A |
| General Street between | | | | | | | | | | | | |
| Traffic Volume Directional | 50/50 split | Bayend Dr. and Bernice Dr. (W) | 1:00 | 129 | 147 | 276 | 0.10 | A | 0 | 276 | 0.10 | A |
| | 50/50 split | Bayend Dr. and Wycliff Ave. | 1:00 | 158 | 142 | 300 | 0.11 | A | 0 | 300 | 0.11 | A |
| | 50/50 split | Fairhill Dr. and Enrose Ave. | 1:00 | 76 | 76 | 152 | 0.05 | A | 0 | 152 | 0.05 | A |
| Trudie Drive between | | | | | | | | | | | | |
| Traffic Volume Directional | 60/40 split | Western Ave. and Highmore Ave. | 1:00 | 216 | 124 | 340 | 0.13 | A | 82 | 422 | 0.16 | A |
| | 50/50 split | Homeworth Dr. and Bayend Dr. | 1:00 | 109 | 100 | 209 | 0.07 | A | 82 | 291 | 0.10 | A |
| | 70/30 split | Bayend Dr. and Trotwood Ave. | 12:00 | 59 | 29 | 88 | 0.04 | A | 82 | 170 | 0.07 | A |
| Via Colinita between | | | | | | | | | | | | |
| | 50/50 split | Enrose Ave. and Miraleste Dr. | 1:00 | 126 | 135 | 261 | 0.09 | A | 82 | 343 | 0.12 | A |

Capacity: pcph = passenger cars per hour
50/50 split = 2,800 pcph
60/40 split = 2,650 pcph
70/30 split = 2,500 pcph

**MARYMOUNT COLLEGE**
**Peak Hour Analysis**
**Table 3 - AFTERNOON PEAK HOUR**

Afternoon Peak Hour between 2 PM and 4 PM    Afternoon Peak Hour Total Trips = 187    40% = 75 trips

| | | **Location** | Afternoon Hour | Traffic Volume NB/EB | Traffic Volume SB/WB | Traffic Volume Total | Preproject V/C | Preproject LOS | Project Traffic Trips | Total Trips | With Project V/C | With Project LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Enrose Avenue between | | | | | | | | | | | | |
| Traffic Volume Directional | 60/40 split | Summerland St. and General St. | 3:00 | 223 | 139 | 362 | 0.14 | A | 75 | 437 | 0.16 | A |
| | 60/40 split | General St. and Fairhill Dr. | 3:00 | 84 | 146 | 230 | 0.09 | A | 75 | 305 | 0.12 | A |
| | 70/30 split | Fairhill Dr. and Crestwood St. | 3:00 | 150 | 68 | 218 | 0.09 | A | 75 | 293 | 0.12 | A |
| | 70/30 split | Crestwood St. and Nobel View Dr. | 3:00 | 70 | 139 | 209 | 0.08 | A | 75 | 284 | 0.11 | A |
| General Street between | | | | | | | | | | | | |
| Traffic Volume Directional | 50/50 split | Bayend Dr. and Bernice Dr. (W) | 3:00 | 114 | 109 | 223 | 0.08 | A | 0 | 223 | 0.08 | A |
| | 50/50 split | Bayend Dr. and Wycliff Ave. | 3:00 | 144 | 115 | 259 | 0.09 | A | 0 | 259 | 0.09 | A |
| | 50/50 split | Fairhill Dr. and Enrose Ave. | 3:00 | 66 | 62 | 128 | 0.05 | A | 0 | 128 | 0.05 | A |
| Trudie Drive between | | | | | | | | | | | | |
| Traffic Volume Directional | 70/30 split | Western Ave. and Highmore Ave. | 3:00 | 313 | 162 | 475 | 0.19 | A | 75 | 550 | 0.22 | A |
| | 60/40 split | Homeworth Dr. and Bayend Dr. | 3:00 | 126 | 157 | 283 | 0.11 | A | 75 | 358 | 0.14 | A |
| | 60/40 split | Bayend Dr. and Trotwood Ave. | 3:00 | 108 | 62 | 170 | 0.06 | A | 75 | 245 | 0.09 | A |
| Via Colinita between | | | | | | | | | | | | |
| | 60/40 split | Enrose Ave. and Miraleste Dr. | 3:00 | 204 | 133 | 337 | 0.13 | A | 75 | 412 | 0.16 | A |

Capacity: pcph = passenger cars per hour
50/50 split = 2,800 pcph
60/40 split = 2,650 pcph
70/30 split = 2,500 pcph

# MARYMOUNT COLLEGE
## Peak Hour Analysis
### <u>Table 4 - PM PEAK HOUR</u>

PM Peak Hour between 4 PM and 6 PM — PM Peak Hour Total Trips = 175 — 40% = 70 trips

| | | **Location** | PM Peak Hour | Traffic Volume | | | Preproject | | Project Traffic Trips | Total Trips | With Project | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | NB/EB | SB/WB | Total | V/C | LOS | | | V/C | LOS |
| Enrose Avenue between | | | | | | | | | | | | |
| Traffic Volume Directional | 50/50 split | Summerland St. and General St. | 5:00 | 128 | 132 | 260 | 0.09 | A | 70 | 330 | 0.12 | A |
| | 50/50 split | General St. and Fairhill Dr. | 5:00 | 76 | 72 | 148 | 0.05 | A | 70 | 218 | 0.08 | A |
| | 50/50 split | Fairhill Dr. and Crestwood St. | 5:00 | 82 | 67 | 149 | 0.05 | A | 70 | 219 | 0.08 | A |
| | 50/50 split | Crestwood St. and Nobel View Dr. | 5:00 | 67 | 78 | 145 | 0.05 | A | 70 | 215 | 0.08 | A |
| General Street between | | | | | | | | | | | | |
| Traffic Volume Directional | 60/40 split | Bayend Dr. and Bernice Dr. (W) | 5:00 | 101 | 133 | 234 | 0.09 | A | 0 | 234 | 0.09 | A |
| | 50/50 split | Bayend Dr. and Wycliff Ave. | 5:00 | 107 | 134 | 241 | 0.09 | A | 0 | 241 | 0.09 | A |
| | 60/40 split | Fairhill Dr. and Enrose Ave. | 5:00 | 42 | 58 | 100 | 0.04 | A | 0 | 100 | 0.04 | A |
| Trudie Drive between | | | | | | | | | | | | |
| Traffic Volume Directional | 60/40 split | Western Ave. and Highmore Ave. | 5:00 | 164 | 235 | 399 | 0.15 | A | 70 | 469 | 0.18 | A |
| | 70/30 split | Homeworth Dr. and Bayend Dr. | 5:00 | 64 | 179 | 243 | 0.10 | A | 70 | 313 | 0.13 | A |
| | 60/40 split | Bayend Dr. and Trotwood Ave. | 5:00 | 59 | 77 | 136 | 0.05 | A | 70 | 206 | 0.08 | A |
| Via Colinita between | | | | | | | | | | | | |
| | 50/50 split | Enrose Ave. and Miraleste Dr. | 5:00 | 127 | 132 | 259 | 0.09 | A | 70 | 329 | 0.12 | A |

Capacity: pcph = passenger cars per hour
50/50 split = 2,800 pcph
60/40 split = 2,650 pcph
70/30 split = 2,500 pcph