

## **Appendix G**



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*Traffic: Supplemental Traffic Analysis (August 2012)*

*Traffic Impact Study (April 2011)*

*Construction Traffic Impact Analysis*

*Emergency Access and Evacuation Evaluation*

## **Appendix G**



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*Traffic: Supplemental Traffic Analysis (August 2012)*

*Traffic Impact Study (April 2011)*

*Construction Traffic Impact Analysis*

*Emergency Access and Evacuation Evaluation*

# MEMORANDUM

|          |                                                                                             |          |                 |
|----------|---------------------------------------------------------------------------------------------|----------|-----------------|
| To:      | Abe Leider, AICP CEP<br>Rincon Consultants, Inc.                                            | Date:    | August 20, 2012 |
| From:    | Clare Look-Jaeger, P.E., <i>CL-Jaeger</i><br>Francesca Bravo, <i>FB</i><br>LLG, Engineers   | LLG Ref: | 1-10-3845-1     |
| Subject: | Supplemental Traffic Analysis for the Zone 2 Landslide Moratorium – Portuguese Bend Project |          |                 |

As requested, Linscott, Law & Greenspan, Engineers is pleased to submit this supplemental traffic analysis for inclusion into the Draft EIR for the Zone 2 Moratorium – Portuguese Bend Project. Due to the length of time that has transpired since the Notice of Preparation was circulated for public review, changes have occurred in the cumulative development projects list (i.e., the related projects list). Therefore, this supplemental traffic impact analysis was prepared in order to determine if the deletion of the former Annenberg project would change any of the previous findings and conclusions with respect to significant traffic impacts. The following paragraphs summarize the conclusions of the April 12, 2012 LLG traffic analysis as well as the supplemental traffic analysis which is presented for informational purposes.

## Conclusions of the April 12, 2011 LLG Traffic Analysis

It was previously concluded in the traffic study that the proposed project would contribute on a cumulative basis to significant traffic impacts at a total of three study intersections (i.e., via application of the City's threshold criteria to the "Year 2020 Future With Project Traffic Conditions" scenario). According to the City's impact criteria, the following locations were reported to be significantly impacted by cumulative growth during the peak hours shown below with the addition of ambient growth, related projects and project-related traffic:

- Int. No. 1: Via Rivera/Hawthorne Boulevard  
AM peak hour *delay* increase of 4.4 seconds [to 141.7 from 137.3 (LOS F)]  
PM peak hour *delay* increase of 5.3 seconds [to 102.3 from 97.0 (LOS F)]
- Int. No. 2: Seahill Drive-Tramonto Drive/Palos Verdes Drive South  
AM peak hour *delay* increase of 2.4 seconds [to 47.0 from 44.6 (LOS E)]  
PM peak hour *delay* increase of 3.8 seconds [to 53.3 (LOS F) from 49.5 (LOS E)]
- Int. No. 6: Forrestal Drive/Palos Verdes Drive South  
AM peak hour *delay* increase of 2.8 seconds [to 78.6 from 75.8 (LOS F)]  
PM peak hour *delay* increase of 4.5 seconds [to 91.9 from 87.4 (LOS F)]

Conclusions of the Supplemental Traffic Analysis

Without the forecast traffic associated with the former Annenberg Project, we conclude that the same three study intersections identified above are expected to be significantly impacted on a cumulative basis. However, as shown in the attached **Revised Table 8-2**, Intersection No. 2 (Seahill Drive-Tramonto Drive/Palos Verdes Drive South) is now expected to be significantly impacted on a cumulative basis during *only* the PM peak hour, as compared to both the AM *and* PM peak hours when traffic associated with the Annenberg project was incorporated into the traffic analysis. Subsequently, the mitigation measures as outlined in the April 12, 2012 traffic study remain valid and unchanged.

Please feel free to call us with any questions or comments at 626.796.2322.

cc: File

**REVISED TABLE 8-2  
YEAR 2020 WITH PROJECT INTERSECTION LEVELS OF SERVICE SUMMARY**

| Int No. | Key Intersection                                          | Unsignalized (1)/<br>Signalized (2) | Time Period | [1]<br>Year 2020 Future Pre-Project<br>Traffic Conditions |       |         | [2]<br>Year 2020 Future With Project<br>Traffic Conditions |       |         | [3]                                  |                                  | [4]<br>Year 2020 Future With Project<br>+ Mitigation |       |         | [5]                                  |                                  |
|---------|-----------------------------------------------------------|-------------------------------------|-------------|-----------------------------------------------------------|-------|---------|------------------------------------------------------------|-------|---------|--------------------------------------|----------------------------------|------------------------------------------------------|-------|---------|--------------------------------------|----------------------------------|
|         |                                                           |                                     |             | Delay                                                     | V/C   | LOS [a] | Delay                                                      | V/C   | LOS [a] | Change in<br>V/C or Delay<br>[(3-2)] | Significant<br>Impact<br>[b],[c] | Delay                                                | V/C   | LOS [a] | Change in<br>V/C or Delay<br>[(3-2)] | Significant<br>Impact<br>[b],[c] |
|         |                                                           |                                     |             |                                                           |       |         |                                                            |       |         |                                      |                                  |                                                      |       |         |                                      |                                  |
| 1       | Via Rivera/<br>Hawthorne Boulevard                        | 1                                   | AM<br>PM    | 122.8                                                     | 0.916 | F       | 127.1                                                      | 0.928 | F       | 4.3                                  | YES                              | 83.0                                                 | 0.928 | F       | -39.8                                | NO                               |
|         |                                                           |                                     |             | 89.5                                                      | 0.698 | F       | 94.1                                                       | 0.715 | F       | 4.6                                  | YES                              | 79.7                                                 | 0.715 | F       | -9.8                                 | NO                               |
| 2       | Tramonto Drive-Seahill Drive/<br>Palos Verdes Drive South | 1                                   | AM<br>PM    | 39.8                                                      | 0.577 | E       | 41.7                                                       | 0.592 | E       | 1.9                                  | NO                               | 19.7                                                 | ---   | C       | -20.1                                | NO                               |
|         |                                                           |                                     |             | 43.8                                                      | 0.479 | E       | 46.8                                                       | 0.501 | E       | 3.0                                  | YES                              | 21.2                                                 | ---   | C       | -22.6                                | YES                              |
| 3       | Barkentine Road/<br>Palos Verdes Drive South              | 1                                   | AM<br>PM    | 24.9                                                      | 0.133 | C       | 25.5                                                       | 0.137 | D       | 0.6                                  | NO                               | 25.5                                                 | 0.137 | D       | 0.6                                  | NO                               |
|         |                                                           |                                     |             | 27.6                                                      | 0.115 | D       | 28.7                                                       | 0.120 | D       | 1.1                                  | NO                               | 28.7                                                 | 0.120 | D       | 1.1                                  | NO                               |
| 4       | Narcissa Drive/<br>Palos Verdes Drive South               | 1                                   | AM<br>PM    | 23.1                                                      | 0.111 | C       | 25.7                                                       | 0.172 | D       | 2.6                                  | NO                               | 25.7                                                 | 0.172 | D       | 2.6                                  | NO                               |
|         |                                                           |                                     |             | 23.2                                                      | 0.121 | C       | 24.3                                                       | 0.162 | C       | 1.1                                  | NO                               | 24.3                                                 | 0.162 | C       | 1.1                                  | NO                               |
| 5       | Peppertree Drive/<br>Palos Verdes Drive South             | 1                                   | AM<br>PM    | 26.7                                                      | 0.105 | D       | 25.6                                                       | 0.131 | D       | -1.1                                 | NO                               | 25.6                                                 | 0.131 | D       | -1.1                                 | NO                               |
|         |                                                           |                                     |             | 27.7                                                      | 0.122 | D       | 26.7                                                       | 0.145 | D       | -1.0                                 | NO                               | 26.7                                                 | 0.145 | D       | -1.0                                 | NO                               |
| 6       | Forrestal Drive/<br>Palos Verdes Drive South              | 1                                   | AM<br>PM    | 65.8                                                      | 0.574 | F       | 68.2                                                       | 0.587 | F       | 2.4                                  | YES                              | ---                                                  | 0.713 | C       | 0.139                                | YES                              |
|         |                                                           |                                     |             | 75.6                                                      | 0.597 | F       | 79.3                                                       | 0.615 | F       | 3.7                                  | YES                              | ---                                                  | 0.687 | B       | 0.090                                | YES                              |
| 7       | Palos Verdes Drive East/<br>Palos Verdes Drive South      | 1                                   | AM<br>PM    | 8.5                                                       | 0.366 | A       | 8.9                                                        | 0.370 | A       | 0.4                                  | NO                               | 8.9                                                  | 0.370 | A       | 0.4                                  | NO                               |
|         |                                                           |                                     |             | 6.7                                                       | 0.507 | A       | 7.6                                                        | 0.520 | A       | 0.9                                  | NO                               | 7.6                                                  | 0.520 | A       | 0.9                                  | NO                               |

[a] Level of Service (LOS) is based on the delay for unsignalized intersections and on the reported ICU value for signalized intersections.

[b] For signalized intersections, the City of Rancho Palos Verdes utilizes the County of Los Angeles traffic thresholds of significance. According to the County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines," January 1, 1997, Page 6: "an impact is considered significant if the project related increase in the volume-to-capacity ratio (v/c) equals or exceeds the thresholds shown below:

| Level of Service | Pre-Project ICU | Project-Related Increase in V/C |
|------------------|-----------------|---------------------------------|
| C                | >= 0.71 - 0.80  | equal to or greater than 0.040  |
| D                | >= 0.81 - 0.90  | equal to or greater than 0.020  |
| E/F              | >= 0.91         | equal to or greater than 0.010  |

[c] For unsignalized intersections, the City of Rancho Palos Verdes has established the following thresholds of significance:

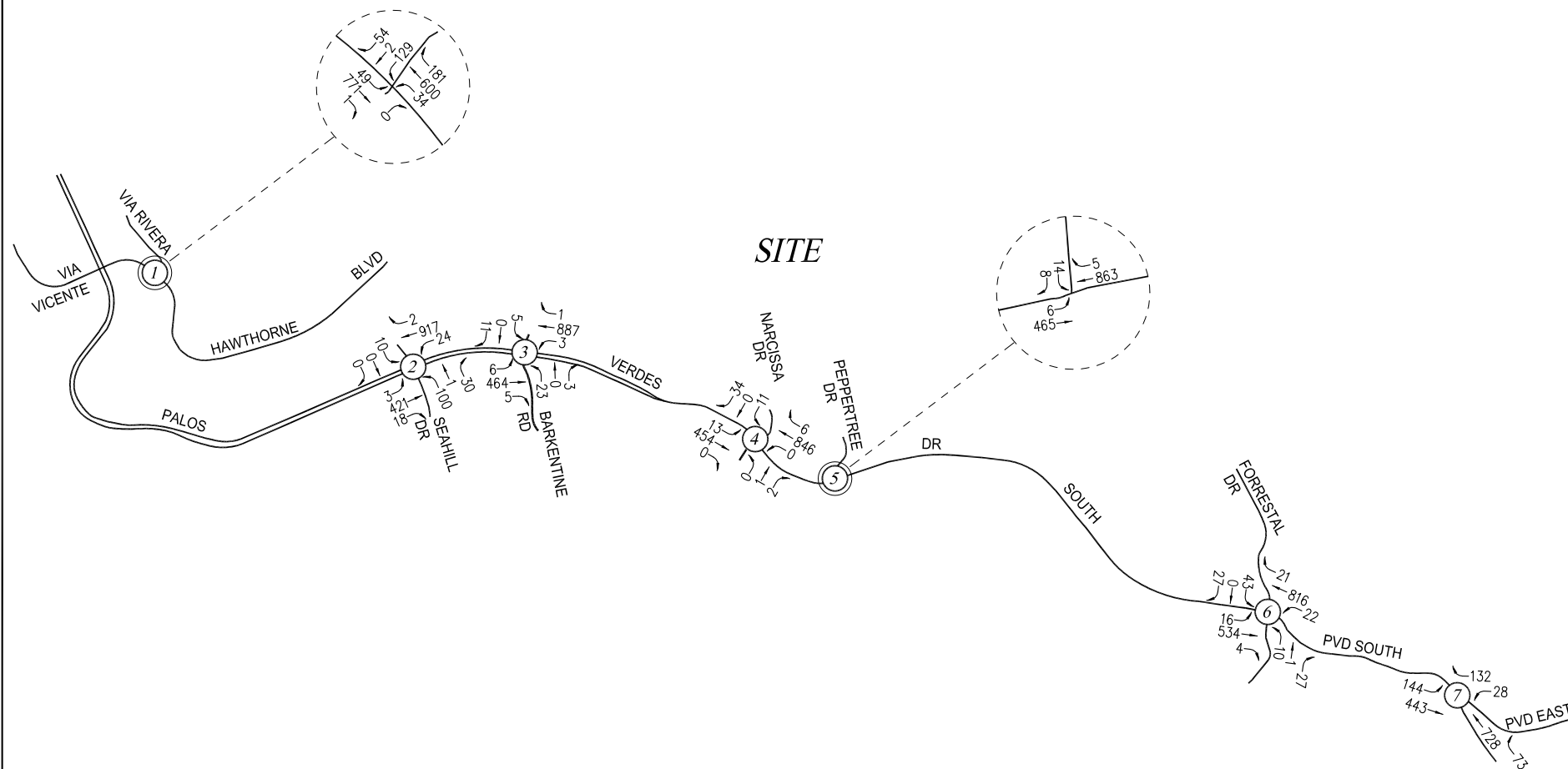
- A significant impact would occur at an unsignalized intersection when the addition of project-generated trips causes the peak hour level of service of the intersection to change from acceptable operation (LOS D or better) to deficient operation (LOS E or F); or
- A significant impact would occur at an unsignalized intersection if the peak hour level of service of the intersection is LOS E or F and the addition of project-generated trips changes the delay by 2.0 seconds or more.

## **APPENDIX**

### **TRAFFIC VOLUME FIGURES**

### **INTERSECTION LEVELS OF SERVICE DATA WORKSHEETS**

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NOT TO SCALE

(X) = INTERSECTION NUMBER

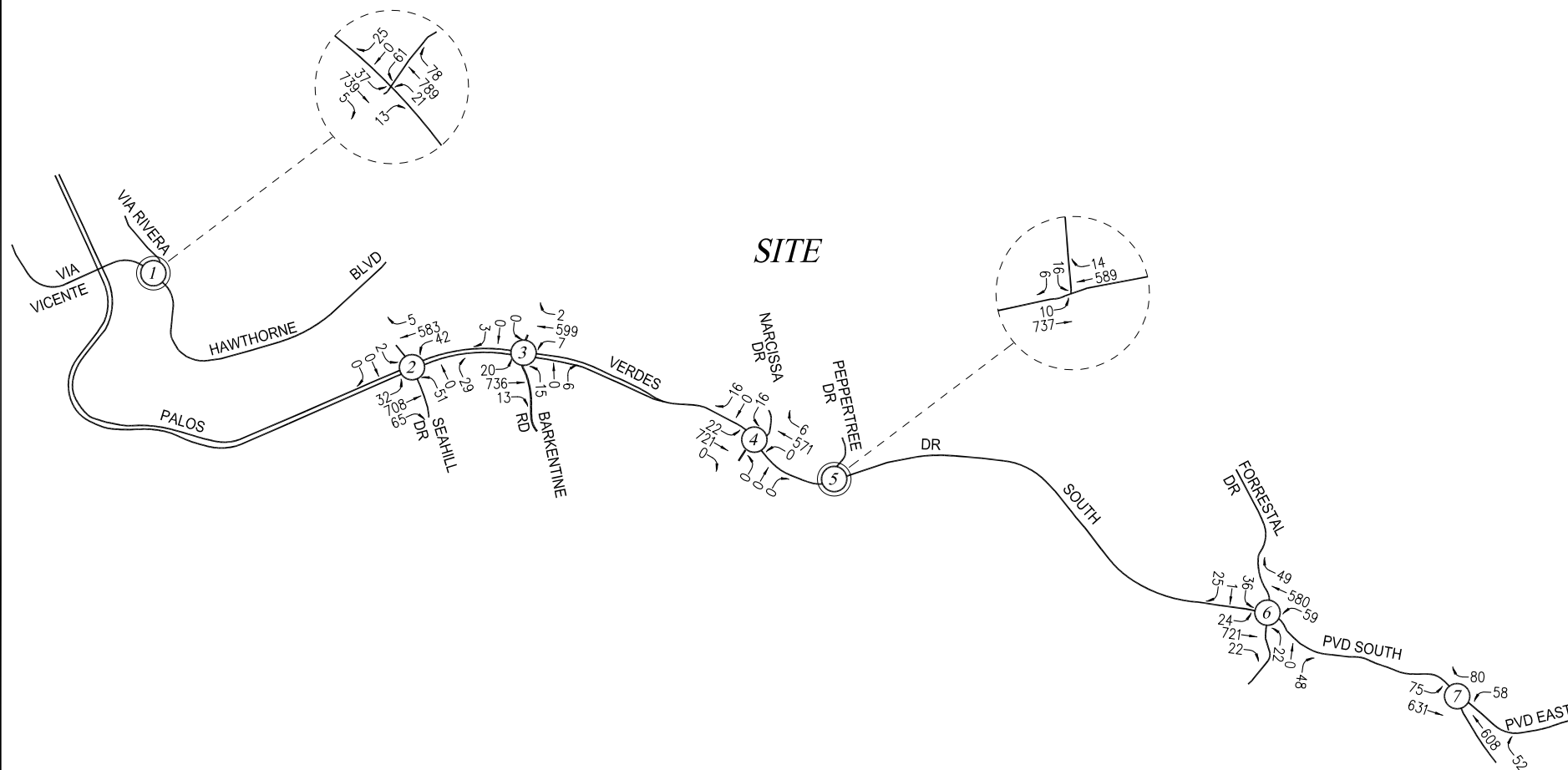
## YEAR 2020 FUTURE PRE-PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

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NOT TO SCALE

(X) = INTERSECTION NUMBER

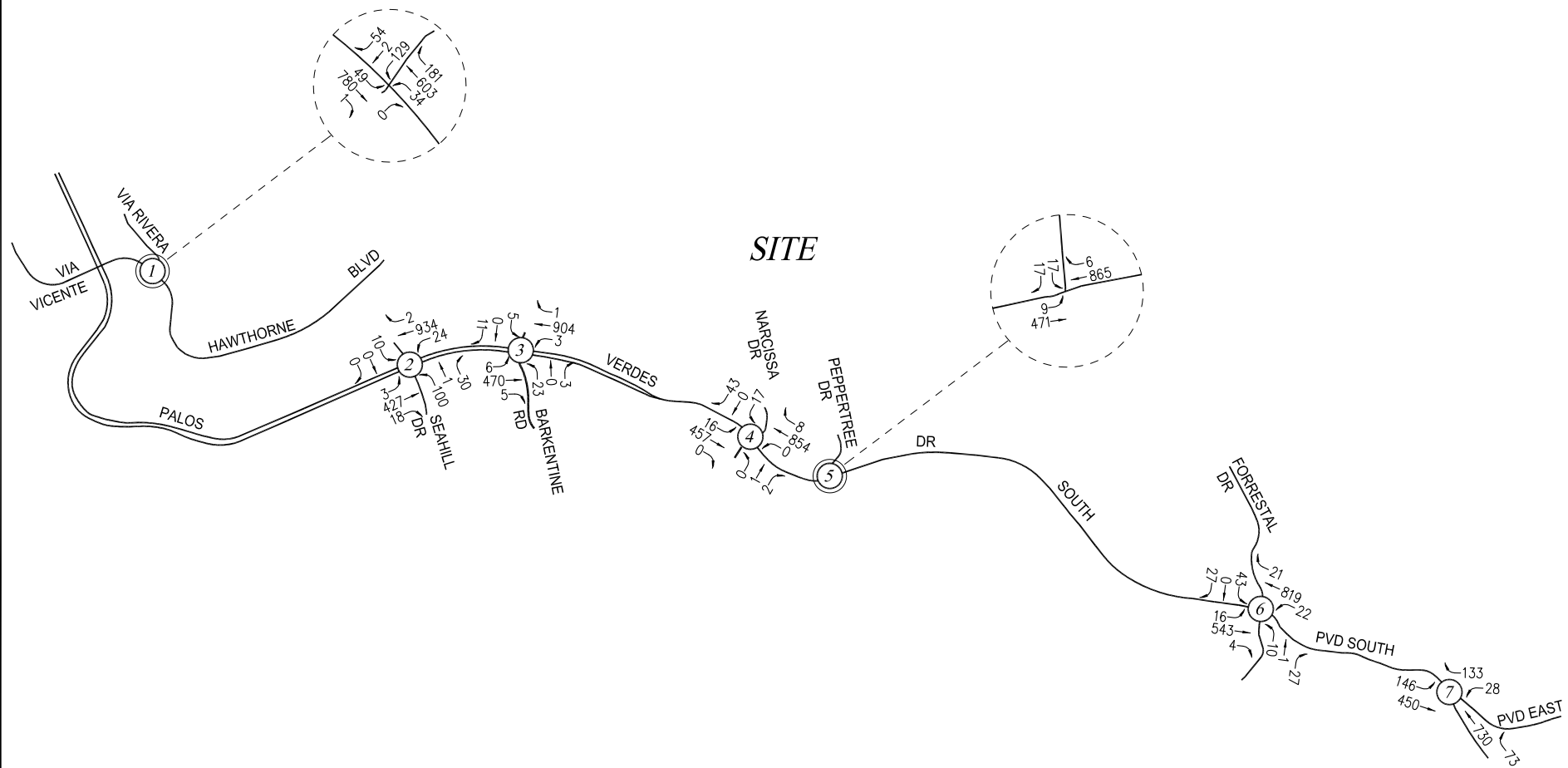
## YEAR 2020 FUTURE PRE-PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

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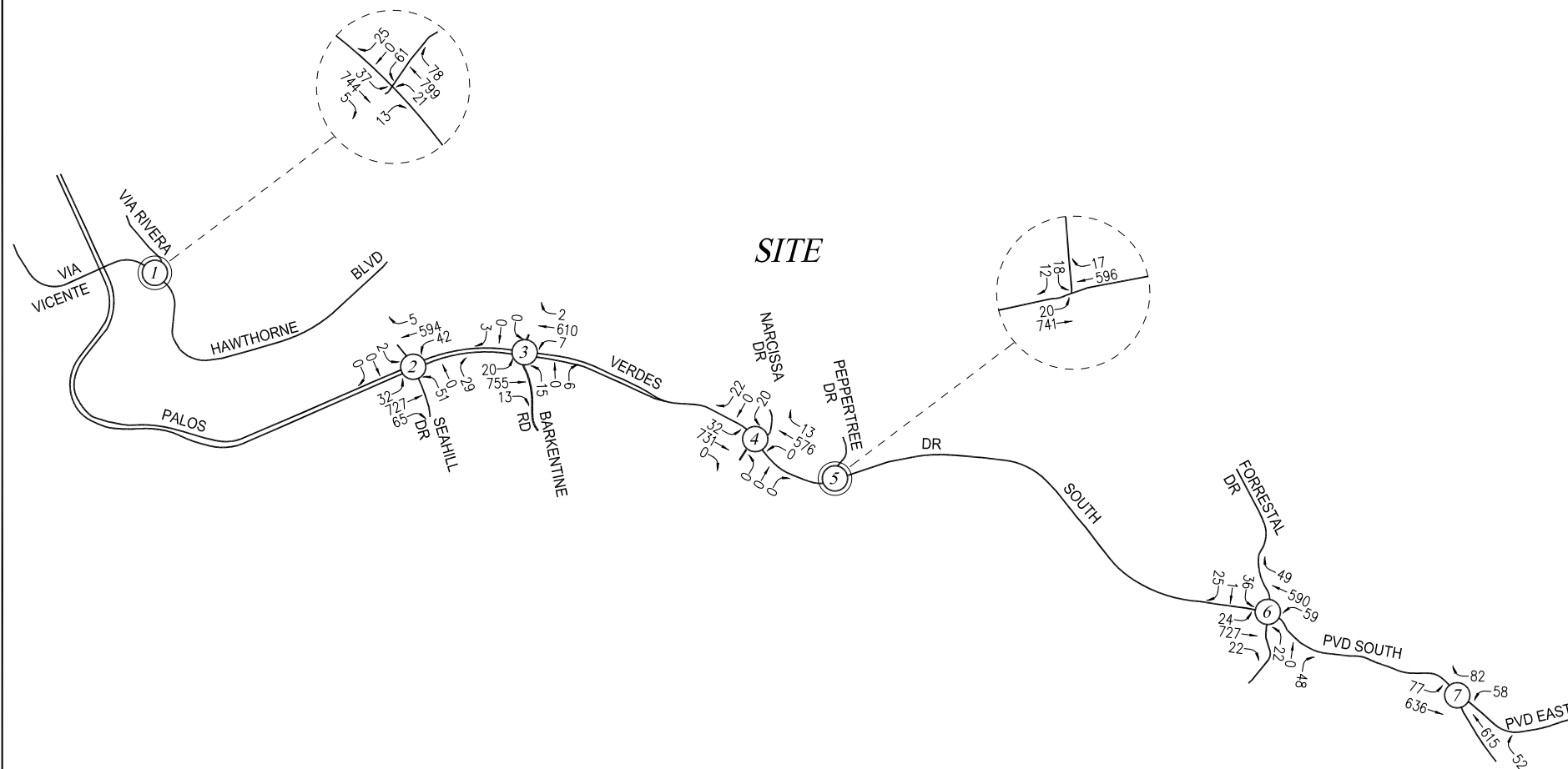
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(X) = INTERSECTION NUMBER

## YEAR 2020 FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

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NOT TO SCALE

(X) = INTERSECTION NUMBER

## YEAR 2020 FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

Year 2020 With Related Projects Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #6 Via Rivera/Hawthorne Boulevard

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Average Delay (sec/veh): 12.9 Worst Case Level Of Service: F[122.8]

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| Street Name: | Via Rivera  |   |   |             |   |   | Hawthorne Boulevard |   |   |              |   |   |
|--------------|-------------|---|---|-------------|---|---|---------------------|---|---|--------------|---|---|
| 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 | 1 | 0            | 1 | 0 |

| Volume Module: | Via Rivera |      |      | Via Rivera |      |      | Hawthorne Boulevard |      |      | Hawthorne Boulevard |      |      |
|----------------|------------|------|------|------------|------|------|---------------------|------|------|---------------------|------|------|
| Base Vol:      | 0          | 0    | 0    | 122        | 2    | 51   | 46                  | 641  | 1    | 32                  | 429  | 171  |
| Growth Adj:    | 1.06       | 1.06 | 1.06 | 1.06       | 1.06 | 1.06 | 1.06                | 1.06 | 1.06 | 1.06                | 1.06 | 1.06 |
| Initial Bse:   | 0          | 0    | 0    | 129        | 2    | 54   | 49                  | 679  | 1    | 34                  | 455  | 181  |
| Added Vol:     | 0          | 0    | 0    | 0          | 0    | 0    | 0                   | 92   | 0    | 0                   | 145  | 0    |
| PasserByVol:   | 0          | 0    | 0    | 0          | 0    | 0    | 0                   | 0    | 0    | 0                   | 0    | 0    |
| Initial Fut:   | 0          | 0    | 0    | 129        | 2    | 54   | 49                  | 771  | 1    | 34                  | 600  | 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          | 0    | 0    | 141        | 2    | 59   | 53                  | 839  | 1    | 37                  | 652  | 197  |
| Reduct Vol:    | 0          | 0    | 0    | 0          | 0    | 0    | 0                   | 0    | 0    | 0                   | 0    | 0    |
| FinalVolume:   | 0          | 0    | 0    | 141        | 2    | 59   | 53                  | 839  | 1    | 37                  | 652  | 197  |

| Critical Gap Module: | Via Rivera |      |     | Via Rivera |     |     | Hawthorne Boulevard |      |      | Hawthorne Boulevard |      |      |
|----------------------|------------|------|-----|------------|-----|-----|---------------------|------|------|---------------------|------|------|
| Critical Gp:         | xxxx       | xxxx | 6.9 | 6.8        | 6.5 | 6.9 | 4.1                 | xxxx | xxxx | 4.1                 | xxxx | xxxx |
| FollowUpTim:         | xxxx       | xxxx | 3.3 | 3.5        | 4.0 | 3.3 | 2.2                 | xxxx | xxxx | 2.2                 | xxxx | xxxx |

| Capacity Module: | Via Rivera |      |      | Via Rivera |      |      | Hawthorne Boulevard |      |      | Hawthorne Boulevard |      |      |
|------------------|------------|------|------|------------|------|------|---------------------|------|------|---------------------|------|------|
| Cnflct Vol:      | xxxx       | xxxx | 420  | 1251       | 1671 | 326  | 849                 | xxxx | xxxx | 840                 | xxxx | xxxx |
| Potent Cap.:     | xxxx       | xxxx | 588  | 167        | 97   | 676  | 798                 | xxxx | xxxx | 804                 | xxxx | xxxx |
| Move Cap.:       | xxxx       | xxxx | 588  | 153        | 86   | 676  | 798                 | xxxx | xxxx | 804                 | xxxx | xxxx |
| Volume/Cap:      | xxxx       | xxxx | 0.00 | 0.92       | 0.03 | 0.09 | 0.07                | xxxx | xxxx | 0.05                | xxxx | xxxx |

| Level Of Service Module: | Via Rivera |      |      | Via Rivera |      |      | Hawthorne Boulevard |      |      | Hawthorne Boulevard |      |      |
|--------------------------|------------|------|------|------------|------|------|---------------------|------|------|---------------------|------|------|
| 2Way95thQ:               | xxxx       | xxxx | xxxx | xxxx       | xxxx | xxxx | 0.2                 | xxxx | xxxx | 0.1                 | xxxx | xxxx |
| Control Del:             | xxxx       | xxxx | xxxx | xxxx       | xxxx | xxxx | 9.8                 | xxxx | xxxx | 9.7                 | xxxx | xxxx |
| LOS by Move:             | *          | *    | *    | *          | *    | *    | A                   | *    | *    | A                   | *    | *    |
| Movement:                | LT         | LTR  | RT   | LT         | LTR  | RT   | LT                  | LTR  | RT   | LT                  | LTR  | RT   |
| Shared Cap.:             | xxxx       | xxxx | xxxx | xxxx       | 196  | xxxx | xxxx                | xxxx | xxxx | xxxx                | xxxx | xxxx |
| SharedQueue:             | xxxx       | xxxx | xxxx | xxxx       | 9.1  | xxxx | xxxx                | xxxx | xxxx | xxxx                | xxxx | xxxx |
| Shrd ConDel:             | xxxx       | xxxx | xxxx | xxxx       | 123  | xxxx | xxxx                | xxxx | xxxx | xxxx                | xxxx | xxxx |
| Shared LOS:              | *          | *    | *    | *          | F    | *    | *                   | *    | *    | *                   | *    | *    |
| ApproachDel:             | xxxxxx     |      |      | 122.8      |      |      | xxxxxx              |      |      | xxxxxx              |      |      |
| ApproachLOS:             | *          |      |      | F          |      |      | *                   |      |      | *                   |      |      |

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

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Year 2020 With Related Projects Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #11 Tramonto Drive-Seahill Drive/Palos Verdes Drive South  
\*\*\*\*\*

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: E[ 39.8]  
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|              |                              |                          |              |
|--------------|------------------------------|--------------------------|--------------|
| Street Name: | Tramonto Drive-Seahill Drive | Palos Verdes Drive South |              |
| Approach:    | North Bound                  | South Bound              | East Bound   |
| Movement:    | L - T - R                    | L - T - R                | L - T - R    |
| Control:     | Stop Sign                    | Stop Sign                | Uncontrolled |
| Rights:      | Include                      | Include                  | Include      |
| Lanes:       | 0 1 0 0 1                    | 1 0 0 0 0                | 1 0 1 1 0    |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 94   | 1    | 28   | 9    | 0    | 0    | 3    | 328  | 17   | 23   | 763  | 2    |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 100  | 1    | 30   | 10   | 0    | 0    | 3    | 348  | 18   | 24   | 809  | 2    |
| Added Vol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 73   | 0    | 0    | 108  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 100  | 1    | 30   | 10   | 0    | 0    | 3    | 421  | 18   | 24   | 917  | 2    |
| User Adj:    | 1.00 | 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:  | 108  | 1    | 32   | 10   | 0    | 0    | 3    | 457  | 20   | 27   | 997  | 2    |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 108  | 1    | 32   | 10   | 0    | 0    | 3    | 457  | 20   | 27   | 997  | 2    |

Critical Gap Module:

|              |     |     |     |     |      |        |     |      |        |     |      |        |
|--------------|-----|-----|-----|-----|------|--------|-----|------|--------|-----|------|--------|
| Critical Gp: | 7.5 | 6.5 | 6.9 | 7.5 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |        |      |      |        |      |      |        |
|--------------|------|------|------|------|------|--------|------|------|--------|------|------|--------|
| Cnflct Vol:  | 1025 | 1526 | 238  | 1286 | xxxx | xxxxxx | 999  | xxxx | xxxxxx | 477  | xxxx | xxxxxx |
| Potent Cap.: | 192  | 119  | 769  | 124  | xxxx | xxxxxx | 701  | xxxx | xxxxxx | 1096 | xxxx | xxxxxx |
| Move Cap.:   | 188  | 115  | 769  | 115  | xxxx | xxxxxx | 701  | xxxx | xxxxxx | 1096 | xxxx | xxxxxx |
| Volume/Cap:  | 0.58 | 0.01 | 0.04 | 0.09 | xxxx | xxxx   | 0.00 | xxxx | xxxx   | 0.02 | xxxx | xxxx   |

Level Of Service Module:

|              |               |               |               |               |               |               |               |               |               |               |               |               |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2Way95thQ:   | xxxx          | xxxx          | 0.1           | 0.3           | xxxx          | xxxxxx        | 0.0           | xxxx          | xxxxxx        | 0.1           | xxxx          | xxxxxx        |
| Control Del: | xxxxx         | xxxx          | 9.9           | 39.4          | xxxx          | xxxxxx        | 10.2          | xxxx          | xxxxxx        | 8.4           | xxxx          | xxxxxx        |
| LOS by Move: | *             | *             | A             | E             | *             | *             | B             | *             | *             | A             | *             | *             |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |
| Shared Cap.: | 186           | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        |
| SharedQueue: | 3.2           | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        |
| Shrd ConDel: | 48.6          | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        |
| Shared LOS:  | E             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             |
| ApproachDel: | 39.8          |               |               | 39.4          |               |               | xxxxxx        |               |               | xxxxxx        |               |               |
| ApproachLOS: | E             |               |               | E             |               |               | *             |               |               | *             |               |               |

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

Year 2020 With Related Projects Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #12 Barkentine Road/Palos Verdes Drive South

\*\*\*\*\*

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: C[ 24.9]

\*\*\*\*\*

|              |                 |                          |              |
|--------------|-----------------|--------------------------|--------------|
| Street Name: | Barkentine Road | Palos Verdes Drive South |              |
| Approach:    | North Bound     | South Bound              | East Bound   |
| Movement:    | L - T - R       | L - T - R                | L - T - R    |
| Control:     | Stop Sign       | Stop Sign                | Uncontrolled |
| Rights:      | Include         | Include                  | Include      |
| Lanes:       | 0 0 1! 0 0      | 0 0 1! 0 0               | 1 0 1 1 0    |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 22   | 0    | 3    | 5    | 0    | 10   | 6    | 369  | 5    | 3    | 735  | 1    |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 23   | 0    | 3    | 5    | 0    | 11   | 6    | 391  | 5    | 3    | 779  | 1    |
| Added Vol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 73   | 0    | 0    | 108  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 23   | 0    | 3    | 5    | 0    | 11   | 6    | 464  | 5    | 3    | 887  | 1    |
| User Adj:    | 1.00 | 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   | 0    | 3    | 6    | 0    | 12   | 7    | 505  | 6    | 3    | 964  | 1    |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 25   | 0    | 3    | 6    | 0    | 12   | 7    | 505  | 6    | 3    | 964  | 1    |

Critical Gap Module:

|              |     |     |     |     |     |     |     |      |        |     |      |        |
|--------------|-----|-----|-----|-----|-----|-----|-----|------|--------|-----|------|--------|
| Critical Gp: | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 | 4.1 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |        |      |      |        |
|--------------|------|------|------|------|------|------|------|------|--------|------|------|--------|
| Cnflct Vol:  | 1010 | 1494 | 255  | 1237 | 1495 | 482  | 965  | xxxx | xxxxxx | 510  | xxxx | xxxxxx |
| Potent Cap.: | 197  | 124  | 750  | 134  | 124  | 536  | 721  | xxxx | xxxxxx | 1065 | xxxx | xxxxxx |
| Move Cap.:   | 191  | 123  | 750  | 132  | 122  | 536  | 721  | xxxx | xxxxxx | 1065 | xxxx | xxxxxx |
| Volume/Cap:  | 0.13 | 0.00 | 0.00 | 0.04 | 0.00 | 0.02 | 0.01 | xxxx | xxxx   | 0.00 | xxxx | xxxx   |

Level Of Service Module:

|              |               |               |               |               |               |               |               |               |               |               |               |               |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2Way95thQ:   | xxxx          | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        | 0.0           | xxxx          | xxxxxx        | 0.0           | xxxx          | xxxxxx        |
| Control Del: | xxxxx         | xxxx          | xxxxxx        | xxxxx         | xxxx          | xxxxxx        | 10.0          | xxxx          | xxxxxx        | 8.4           | xxxx          | xxxxxx        |
| LOS by Move: | *             | *             | *             | *             | *             | *             | B             | *             | *             | A             | *             | *             |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |
| Shared Cap.: | xxxx          | 209           | xxxxxx        | xxxx          | 266           | xxxxxx        | xxxx          | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        |
| SharedQueue: | xxxxx         | 0.5           | xxxxxx        | xxxxx         | 0.2           | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        |
| Shrd ConDel: | xxxxx         | 24.9          | xxxxxx        | xxxxx         | 19.5          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        |
| Shared LOS:  | *             | C             | *             | *             | C             | *             | *             | *             | *             | *             | *             | *             |
| ApproachDel: | 24.9          |               |               | 19.5          |               |               | xxxxxx        |               |               | xxxxxx        |               |               |
| ApproachLOS: | C             |               |               | C             |               |               | *             |               |               | *             |               |               |

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

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Year 2020 With Related Projects Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #48 Narcissa Drive/Palos Verdes Drive South

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Average Delay (sec/veh): 0.9 Worst Case Level Of Service: C[ 23.1]

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|              |                |                          |              |
|--------------|----------------|--------------------------|--------------|
| Street Name: | Narcissa Drive | Palos Verdes Drive South |              |
| Approach:    | North Bound    | South Bound              | East Bound   |
| Movement:    | L - T - R      | L - T - R                | L - T - R    |
| Control:     | Stop Sign      | Stop Sign                | Uncontrolled |
| Rights:      | Include        | Include                  | Include      |
| Lanes:       | 0 0 0 1 0      | 0 1 0 0 1                | 1 0 0 1 0    |

|                |                |                |                |
|----------------|----------------|----------------|----------------|
| Volume Module: |                |                |                |
| Base Vol:      | 0 1 2          | 10 0 32        | 12 359 0       |
| Growth Adj:    | 1.06 1.06 1.06 | 1.06 1.06 1.06 | 1.06 1.06 1.06 |
| Initial Bse:   | 0 1 2          | 11 0 34        | 13 381 0       |
| Added Vol:     | 0 0 0          | 0 0 0          | 0 73 0         |
| PasserByVol:   | 0 0 0          | 0 0 0          | 0 0 0          |
| Initial Fut:   | 0 1 2          | 11 0 34        | 13 454 0       |
| User Adj:      | 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 |
| PHF Volume:    | 0 1 2          | 12 0 37        | 14 493 0       |
| Reduct Vol:    | 0 0 0          | 0 0 0          | 0 0 0          |
| FinalVolume:   | 0 1 2          | 12 0 37        | 14 493 0       |

|                      |                           |                                     |  |
|----------------------|---------------------------|-------------------------------------|--|
| Critical Gap Module: |                           |                                     |  |
| Critical Gp:         | xxxxx 6.5 6.2 7.1 6.5 6.2 | 4.1 xxxxx xxxxxx xxxxxx xxxxx xxxxx |  |
| FollowUpTim:         | xxxxx 4.0 3.3 3.5 4.0 3.3 | 2.2 xxxxx xxxxxx xxxxxx xxxxx xxxxx |  |

|                  |                               |                                    |  |
|------------------|-------------------------------|------------------------------------|--|
| Capacity Module: |                               |                                    |  |
| Cnflct Vol:      | xxxx 1447 493 1442 1440 919   | 926 xxxxx xxxxxx xxxxx xxxxx xxxxx |  |
| Potent Cap.:     | xxxx 133 580 111 134 331      | 746 xxxxx xxxxxx xxxxx xxxxx xxxxx |  |
| Move Cap.:       | xxxx 130 580 109 132 331      | 746 xxxxx xxxxxx xxxxx xxxxx xxxxx |  |
| Volume/Cap:      | xxxx 0.01 0.00 0.11 0.00 0.11 | 0.02 xxxxx xxxxx xxxxx xxxxx xxxxx |  |

|                          |                                     |                                      |               |
|--------------------------|-------------------------------------|--------------------------------------|---------------|
| Level Of Service Module: |                                     |                                      |               |
| 2Way95thQ:               | xxxx xxxxx xxxxxx xxxxx xxxxx 0.4   | 0.1 xxxxx xxxxxx xxxxx xxxxx xxxxx   |               |
| Control Del:             | xxxxx xxxxx xxxxxx xxxxx xxxxx 17.2 | 9.9 xxxxx xxxxxx xxxxxx xxxxx xxxxx  |               |
| LOS by Move:             | * * *                               | C A *                                | * * *         |
| Movement:                | LT - LTR - RT                       | LT - LTR - RT                        | LT - LTR - RT |
| Shared Cap.:             | xxxx xxxxx 270                      | 109 xxxxx xxxxxx xxxxx xxxxx xxxxx   |               |
| SharedQueue:             | xxxxx xxxxx 0.0                     | 0.3 xxxxx xxxxxx xxxxxx xxxxx xxxxx  |               |
| Shrd ConDel:             | xxxxx xxxxx 18.5                    | 42.0 xxxxx xxxxxx xxxxxx xxxxx xxxxx |               |
| Shared LOS:              | * * C                               | E *                                  | * * *         |
| ApproachDel:             | 18.5                                | 23.1                                 | xxxxxx xxxxxx |
| ApproachLOS:             | C                                   | C                                    | * *           |

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

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Year 2020 With Related Projects Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #74 Peppertree Drive/Palos Verdes Drive South  
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Average Delay (sec/veh): 0.5 Worst Case Level Of Service: D[ 26.7]  
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|              |                  |                          |                                |
|--------------|------------------|--------------------------|--------------------------------|
| Street Name: | Peppertree Drive | Palos Verdes Drive South |                                |
| 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          | 13 0 8         | 6 370 0      0 712 5               |
| Growth Adj:    | 1.06 1.06 1.06 | 1.06 1.06 1.06 | 1.06 1.06 1.06      1.06 1.06 1.06 |
| Initial Bse:   | 0 0 0          | 14 0 8         | 6 392 0      0 755 5               |
| Added Vol:     | 0 0 0          | 0 0 0          | 0 73 0      0 108 0                |
| PasserByVol:   | 0 0 0          | 0 0 0          | 0 0 0      0 0 0                   |
| Initial Fut:   | 0 0 0          | 14 0 8         | 6 465 0      0 863 5               |
| User Adj:      | 1.00 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          | 15 0 9         | 7 506 0      0 938 6               |
| Reduct Vol:    | 0 0 0          | 0 0 0          | 0 0 0      0 0 0                   |
| FinalVolume:   | 0 0 0          | 15 0 9         | 7 506 0      0 938 6               |

|                      |                  |              |                                 |
|----------------------|------------------|--------------|---------------------------------|
| 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: |                 |                |                                  |
| Cnflct Vol:      | xxxx xxxx xxxxx | 1457 xxxx 938  | 944 xxxx xxxxx xxxxx xxxx xxxxx  |
| Potent Cap.:     | xxxx xxxx xxxxx | 144 xxxx 323   | 735 xxxx xxxxx xxxxx xxxx xxxxx  |
| Move Cap.:       | xxxx xxxx xxxxx | 143 xxxx 323   | 735 xxxx xxxxx xxxxx xxxx xxxxx  |
| Volume/Cap:      | xxxx xxxx xxxxx | 0.10 xxxx 0.03 | 0.01 xxxx xxxxx xxxxx xxxx xxxxx |

|                          |                  |                  |                                        |
|--------------------------|------------------|------------------|----------------------------------------|
| Level Of Service Module: |                  |                  |                                        |
| 2Way95thQ:               | xxxx xxxx xxxxx  | 0.3 xxxx 0.1     | 0.0 xxxx xxxxx xxxxx xxxx xxxxx        |
| Control Del:             | xxxxx xxxx xxxxx | 33.1 xxxx 16.5   | 9.9 xxxx xxxxx xxxxx xxxx xxxxx        |
| LOS by Move:             | * * *            | D * 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           | 26.7             | xxxxxx      xxxxxx                     |
| ApproachLOS:             | *                | D                | * * *                                  |

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Note: Queue reported is the number of cars per lane.  
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Year 2020 With Related Projects Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #15 Forrestal Drive/Palos Verdes Drive South

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Average Delay (sec/veh): 3.9 Worst Case Level Of Service: F[ 65.8]

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|              |                 |                          |              |
|--------------|-----------------|--------------------------|--------------|
| Street Name: | Forrestal Drive | Palos Verdes Drive South |              |
| Approach:    | North Bound     | South Bound              | East Bound   |
| Movement:    | L - T - R       | L - T - R                | L - T - R    |
| Control:     | Stop Sign       | Stop Sign                | Uncontrolled |
| Rights:      | Include         | Include                  | Include      |
| Lanes:       | 1 0 0 1 0       | 1 0 0 1 0                | 1 0 1 0 1    |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 3    | 1    | 1    | 41   | 0    | 25   | 15   | 438  | 2    | 12   | 676  | 20   |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 3    | 1    | 1    | 43   | 0    | 27   | 16   | 464  | 2    | 13   | 717  | 21   |
| Added Vol:   | 7    | 0    | 26   | 0    | 0    | 0    | 0    | 70   | 2    | 9    | 99   | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 10   | 1    | 27   | 43   | 0    | 27   | 16   | 534  | 4    | 22   | 816  | 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:  | 11   | 1    | 29   | 47   | 0    | 29   | 17   | 581  | 4    | 24   | 886  | 23   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 11   | 1    | 29   | 47   | 0    | 29   | 17   | 581  | 4    | 24   | 886  | 23   |

Critical Gap Module:

|              |     |     |     |     |     |     |     |      |        |     |      |        |
|--------------|-----|-----|-----|-----|-----|-----|-----|------|--------|-----|------|--------|
| Critical Gp: | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |        |      |      |        |
|--------------|------|------|------|------|------|------|------|------|--------|------|------|--------|
| Cnflct Vol:  | 1575 | 1572 | 581  | 1567 | 1553 | 886  | 910  | xxxx | xxxxxx | 585  | xxxx | xxxxxx |
| Potent Cap.: | 90   | 111  | 517  | 91   | 114  | 346  | 757  | xxxx | xxxxxx | 999  | xxxx | xxxxxx |
| Move Cap.:   | 80   | 106  | 517  | 82   | 109  | 346  | 757  | xxxx | xxxxxx | 999  | xxxx | xxxxxx |
| Volume/Cap:  | 0.14 | 0.01 | 0.06 | 0.57 | 0.00 | 0.08 | 0.02 | xxxx | xxxx   | 0.02 | xxxx | xxxx   |

Level Of Service Module:

|              |               |      |        |               |      |        |               |      |        |               |      |        |
|--------------|---------------|------|--------|---------------|------|--------|---------------|------|--------|---------------|------|--------|
| 2Way95thQ:   | 0.5           | xxxx | xxxxxx | 2.6           | xxxx | xxxxxx | 0.1           | xxxx | xxxxxx | 0.1           | xxxx | xxxxxx |
| Control Del: | 57.4          | xxxx | xxxxxx | 96.0          | xxxx | xxxxxx | 9.9           | xxxx | xxxxxx | 8.7           | xxxx | xxxxxx |
| LOS by Move: | F             | *    | *      | F             | *    | *      | A             | *    | *      | A             | *    | *      |
| Movement:    | LT - LTR - RT |      |        | LT - LTR - RT |      |        | LT - LTR - RT |      |        | LT - LTR - RT |      |        |
| Shared Cap.: | xxxx          | xxxx | 452    | xxxx          | xxxx | 346    | xxxx          | xxxx | xxxxxx | xxxx          | xxxx | xxxxxx |
| SharedQueue: | xxxxxx        | xxxx | 0.2    | xxxxxx        | xxxx | 0.3    | xxxxxx        | xxxx | xxxxxx | xxxxxx        | xxxx | xxxxxx |
| Shrd ConDel: | xxxxxx        | xxxx | 13.5   | xxxxxx        | xxxx | 16.3   | xxxxxx        | xxxx | xxxxxx | xxxxxx        | xxxx | xxxxxx |
| Shared LOS:  | *             | *    | B      | *             | *    | C      | *             | *    | *      | *             | *    | *      |
| ApproachDel: | 25.2          |      |        | 65.8          |      |        | xxxxxx        |      |        | xxxxxx        |      |        |
| ApproachLOS: | D             |      |        | F             |      |        | *             |      |        | *             |      |        |

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

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Year 2020 With Related Projects Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #16 Palos Verdes Drive East/Palos Verdes Drive South

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Average Delay (sec/veh): 3.6 Worst Case Level Of Service: D[ 25.5]

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|              |                         |                          |              |
|--------------|-------------------------|--------------------------|--------------|
| Street Name: | Palos Verdes Drive East | Palos Verdes Drive South |              |
| Approach:    | North Bound             | South Bound              | East Bound   |
| Movement:    | L - T - R               | L - T - R                | L - T - R    |
| Control:     | Stop Sign               | Stop Sign                | Uncontrolled |
| Rights:      | 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    | 16   | 0    | 119  | 126  | 336  | 0    | 0    | 591  | 40   |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 0    | 0    | 0    | 17   | 0    | 126  | 134  | 356  | 0    | 0    | 626  | 42   |
| Added Vol:   | 0    | 0    | 0    | 11   | 0    | 6    | 10   | 87   | 0    | 0    | 102  | 31   |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 0    | 0    | 0    | 28   | 0    | 132  | 144  | 443  | 0    | 0    | 728  | 73   |
| User Adj:    | 1.00 | 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    | 144  | 156  | 482  | 0    | 0    | 792  | 80   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 0    | 0    | 0    | 30   | 0    | 144  | 156  | 482  | 0    | 0    | 792  | 80   |

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:

|              |      |      |       |      |      |      |      |      |       |      |      |       |
|--------------|------|------|-------|------|------|------|------|------|-------|------|------|-------|
| Cnflct Vol:  | xxxx | xxxx | xxxxx | 1586 | xxxx | 792  | 872  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 120  | xxxx | 392  | 782  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Move Cap.:   | xxxx | xxxx | xxxxx | 102  | xxxx | 392  | 782  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Volume/Cap:  | xxxx | xxxx | xxxx  | 0.30 | xxxx | 0.37 | 0.20 | xxxx | xxxx  | xxxx | xxxx | xxxx  |

Level Of Service Module:

|              |               |               |               |               |               |               |               |               |               |               |               |               |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2Way95thQ:   | xxxx          | xxxx          | xxxxx         | 1.1           | xxxx          | 1.6           | 0.7           | xxxx          | xxxxx         | xxxx          | xxxx          | xxxxx         |
| Control Del: | xxxxx         | xxxx          | xxxxx         | 54.7          | xxxx          | 19.4          | 10.7          | xxxx          | xxxxx         | xxxxx         | xxxx          | xxxxx         |
| LOS by Move: | *             | *             | *             | F             | *             | C             | B             | *             | *             | *             | *             | *             |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | 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        |               |               | 25.5          |               |               | xxxxxx        |               |               | xxxxxx        |               |               |
| ApproachLOS: | *             |               |               | D             |               |               | *             |               |               | *             |               |               |

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

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Year 2020 With Related Projects Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #6 Via Rivera/Hawthorne Boulevard

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Average Delay (sec/veh): 4.8 Worst Case Level Of Service: F[ 89.5]

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| Street Name: | Via Rivera  |     |     |             |     |     | Hawthorne Boulevard |     |     |              |     |     |
|--------------|-------------|-----|-----|-------------|-----|-----|---------------------|-----|-----|--------------|-----|-----|
| 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   | 1   | 1            | 0   | 1   |

|                |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Volume Module: |      |      |      |      |      |      |      |      |      |      |      |      |
| Base Vol:      | 0    | 0    | 12   | 58   | 0    | 24   | 35   | 512  | 5    | 20   | 563  | 74   |
| Growth Adj:    | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse:   | 0    | 0    | 13   | 61   | 0    | 25   | 37   | 543  | 5    | 21   | 597  | 78   |
| Added Vol:     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 196  | 0    | 0    | 192  | 0    |
| PasserByVol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut:   | 0    | 0    | 13   | 61   | 0    | 25   | 37   | 739  | 5    | 21   | 789  | 78   |
| User Adj:      | 1.00 | 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    | 14   | 67   | 0    | 28   | 40   | 803  | 6    | 23   | 857  | 85   |
| Reduct Vol:    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume:   | 0    | 0    | 14   | 67   | 0    | 28   | 40   | 803  | 6    | 23   | 857  | 85   |

|                      |       |      |     |     |     |     |     |      |        |     |      |        |
|----------------------|-------|------|-----|-----|-----|-----|-----|------|--------|-----|------|--------|
| Critical Gap Module: |       |      |     |     |     |     |     |      |        |     |      |        |
| Critical Gp:         | xxxxx | xxxx | 6.9 | 7.5 | 6.5 | 6.9 | 4.1 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx |
| FollowUpTim:         | xxxxx | xxxx | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx |

|                  |      |      |      |      |      |      |      |      |        |      |      |        |
|------------------|------|------|------|------|------|------|------|------|--------|------|------|--------|
| Capacity Module: |      |      |      |      |      |      |      |      |        |      |      |        |
| Cnflct Vol:      | xxxx | xxxx | 404  | 1386 | 1793 | 429  | 943  | xxxx | xxxxxx | 809  | xxxx | xxxxxx |
| Potent Cap.:     | xxxx | xxxx | 601  | 104  | 82   | 580  | 736  | xxxx | xxxxxx | 826  | xxxx | xxxxxx |
| Move Cap.:       | xxxx | xxxx | 601  | 96   | 75   | 580  | 736  | xxxx | xxxxxx | 826  | xxxx | xxxxxx |
| Volume/Cap:      | xxxx | xxxx | 0.02 | 0.70 | 0.00 | 0.05 | 0.05 | xxxx | xxxx   | 0.03 | xxxx | xxxx   |

|                          |       |       |        |       |       |        |       |        |        |       |        |        |
|--------------------------|-------|-------|--------|-------|-------|--------|-------|--------|--------|-------|--------|--------|
| Level Of Service Module: |       |       |        |       |       |        |       |        |        |       |        |        |
| 2Way95thQ:               | xxxx  | xxxx  | 0.1    | xxxx  | xxxx  | xxxxxx | 0.2   | xxxx   | xxxxxx | 0.1   | xxxx   | xxxxxx |
| Control Del:             | xxxxx | xxxx  | 11.1   | xxxxx | xxxx  | xxxxxx | 10.2  | xxxx   | xxxxxx | 9.5   | xxxx   | xxxxxx |
| LOS by Move:             | *     | *     | B      | *     | *     | *      | B     | *      | *      | A     | *      | *      |
| Movement:                | LT    | - LTR | - RT   | LT    | - LTR | - RT   | LT    | - LTR  | - RT   | LT    | - LTR  | - RT   |
| Shared Cap.:             | xxxx  | xxxx  | xxxxxx | xxxx  | 127   | xxxxxx | xxxx  | xxxx   | xxxxxx | xxxx  | xxxx   | xxxxxx |
| SharedQueue:             | xxxxx | xxxx  | xxxxxx | xxxxx | 4.3   | xxxxxx | xxxxx | xxxx   | xxxxxx | xxxxx | xxxx   | xxxxxx |
| Shrd ConDel:             | xxxxx | xxxx  | xxxxxx | xxxxx | 89.5  | xxxxxx | xxxxx | xxxx   | xxxxxx | xxxxx | xxxx   | xxxxxx |
| Shared LOS:              | *     | *     | *      | *     | *     | *      | *     | *      | *      | *     | *      | *      |
| ApproachDel:             | 11.1  |       |        |       |       |        | 89.5  | xxxxxx |        |       | xxxxxx |        |
| ApproachLOS:             | B     |       |        |       |       |        | F     | *      |        |       | *      |        |

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

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Year 2020 With Related Projects Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #11 Tramonto Drive-Seahill Drive/Palos Verdes Drive South  
\*\*\*\*\*

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: E[ 43.8]  
\*\*\*\*\*

|              |                              |                          |              |
|--------------|------------------------------|--------------------------|--------------|
| Street Name: | Tramonto Drive-Seahill Drive | Palos Verdes Drive South |              |
| Approach:    | North Bound                  | South Bound              | East Bound   |
| Movement:    | L - T - R                    | L - T - R                | L - T - R    |
| Control:     | Stop Sign                    | Stop Sign                | Uncontrolled |
| Rights:      | Include                      | Include                  | Include      |
| Lanes:       | 0 1 0 0 1                    | 1 0 0 0 0                | 1 0 1 1 0    |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 48   | 0    | 27   | 2    | 0    | 0    | 30   | 535  | 61   | 40   | 422  | 5    |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 51   | 0    | 29   | 2    | 0    | 0    | 32   | 567  | 65   | 42   | 447  | 5    |
| Added Vol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 141  | 0    | 0    | 136  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 51   | 0    | 29   | 2    | 0    | 0    | 32   | 708  | 65   | 42   | 583  | 5    |
| User Adj:    | 1.00 | 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:  | 55   | 0    | 31   | 2    | 0    | 0    | 35   | 770  | 70   | 46   | 634  | 6    |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 55   | 0    | 31   | 2    | 0    | 0    | 35   | 770  | 70   | 46   | 634  | 6    |

Critical Gap Module:

|              |     |     |     |     |      |        |     |      |        |     |      |        |
|--------------|-----|-----|-----|-----|------|--------|-----|------|--------|-----|------|--------|
| Critical Gp: | 7.5 | 6.5 | 6.9 | 7.5 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |        |      |      |        |      |      |        |
|--------------|------|------|------|------|------|--------|------|------|--------|------|------|--------|
| Cnflct Vol:  | 1283 | 1606 | 420  | 1180 | xxxx | xxxxxx | 640  | xxxx | xxxxxx | 840  | xxxx | xxxxxx |
| Potent Cap.: | 124  | 106  | 588  | 148  | xxxx | xxxxxx | 954  | xxxx | xxxxxx | 804  | xxxx | xxxxxx |
| Move Cap.:   | 116  | 97   | 588  | 130  | xxxx | xxxxxx | 954  | xxxx | xxxxxx | 804  | xxxx | xxxxxx |
| Volume/Cap:  | 0.48 | 0.00 | 0.05 | 0.02 | xxxx | xxxx   | 0.04 | xxxx | xxxx   | 0.06 | xxxx | xxxx   |

Level Of Service Module:

|              |               |               |               |               |               |               |               |               |               |               |               |               |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2Way95thQ:   | xxxx          | xxxx          | 0.2           | 0.1           | xxxx          | xxxxxx        | 0.1           | xxxx          | xxxxxx        | 0.2           | xxxx          | xxxxxx        |
| Control Del: | xxxxx         | xxxx          | 11.5          | 33.1          | xxxx          | xxxxxx        | 8.9           | xxxx          | xxxxxx        | 9.8           | xxxx          | xxxxxx        |
| LOS by Move: | *             | *             | B             | D             | *             | *             | A             | *             | *             | A             | *             | *             |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |
| Shared Cap.: | 116           | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        |
| SharedQueue: | 2.1           | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        |
| Shrd ConDel: | 61.9          | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        |
| Shared LOS:  | F             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             |
| ApproachDel: | 43.8          |               |               | 33.1          |               |               | xxxxxx        |               |               | xxxxxx        |               |               |
| ApproachLOS: | E             |               |               | D             |               |               | *             |               |               | *             |               |               |

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
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Year 2020 With Related Projects Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #12 Barkentine Road/Palos Verdes Drive South

\*\*\*\*\*

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: D[ 27.6]

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|              |                 |                          |              |
|--------------|-----------------|--------------------------|--------------|
| Street Name: | Barkentine Road | Palos Verdes Drive South |              |
| Approach:    | North Bound     | South Bound              | East Bound   |
| Movement:    | L - T - R       | L - T - R                | L - T - R    |
| Control:     | Stop Sign       | Stop Sign                | Uncontrolled |
| Rights:      | Include         | Include                  | Include      |
| Lanes:       | 0 0 1! 0 0      | 0 0 0 0 1                | 1 0 1 1 0    |
|              |                 |                          | 1 0 2 0 1    |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 14   | 0    | 6    | 0    | 0    | 3    | 19   | 561  | 12   | 7    | 437  | 2    |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 15   | 0    | 6    | 0    | 0    | 3    | 20   | 595  | 13   | 7    | 463  | 2    |
| Added Vol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 141  | 0    | 0    | 136  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 15   | 0    | 6    | 0    | 0    | 3    | 20   | 736  | 13   | 7    | 599  | 2    |
| User Adj:    | 1.00 | 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   | 0    | 7    | 0    | 0    | 3    | 22   | 800  | 14   | 8    | 651  | 2    |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 16   | 0    | 7    | 0    | 0    | 3    | 22   | 800  | 14   | 8    | 651  | 2    |

Critical Gap Module:

|              |     |     |     |       |      |     |     |      |       |     |      |       |
|--------------|-----|-----|-----|-------|------|-----|-----|------|-------|-----|------|-------|
| Critical Gp: | 7.5 | 6.5 | 6.9 | xxxxx | xxxx | 6.9 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |       |      |      |       |
|--------------|------|------|------|------|------|------|------|------|-------|------|------|-------|
| Cnflct Vol:  | 1192 | 1520 | 407  | xxxx | xxxx | 326  | 654  | xxxx | xxxxx | 813  | xxxx | xxxxx |
| Potent Cap.: | 145  | 120  | 599  | xxxx | xxxx | 676  | 943  | xxxx | xxxxx | 822  | xxxx | xxxxx |
| Move Cap.:   | 141  | 116  | 599  | xxxx | xxxx | 676  | 943  | xxxx | xxxxx | 822  | xxxx | xxxxx |
| Volume/Cap:  | 0.11 | 0.00 | 0.01 | xxxx | xxxx | 0.01 | 0.02 | xxxx | xxxx  | 0.01 | xxxx | xxxx  |

Level Of Service Module:

|              |               |               |               |               |               |       |        |      |       |        |      |       |
|--------------|---------------|---------------|---------------|---------------|---------------|-------|--------|------|-------|--------|------|-------|
| 2Way95thQ:   | xxxx          | xxxx          | xxxxx         | xxxx          | xxxx          | 0.0   | 0.1    | xxxx | xxxxx | 0.0    | xxxx | xxxxx |
| Control Del: | xxxxx         | xxxx          | xxxxx         | xxxxx         | xxxx          | 10.4  | 8.9    | xxxx | xxxxx | 9.4    | xxxx | xxxxx |
| LOS by Move: | *             | *             | *             | *             | *             | B     | A      | *    | *     | A      | *    | *     |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |       |        |      |       |        |      |       |
| Shared Cap.: | xxxx          | 183           | xxxxx         | xxxx          | xxxx          | xxxxx | xxxx   | xxxx | xxxxx | xxxx   | xxxx | xxxxx |
| SharedQueue: | xxxxx         | 0.4           | xxxxx         | xxxxx         | xxxx          | xxxxx | xxxxx  | xxxx | xxxxx | xxxxx  | xxxx | xxxxx |
| Shrd ConDel: | xxxxx         | 27.6          | xxxxx         | xxxxx         | xxxx          | xxxxx | xxxxx  | xxxx | xxxxx | xxxxx  | xxxx | xxxxx |
| Shared LOS:  | *             | D             | *             | *             | *             | *     | *      | *    | *     | *      | *    | *     |
| ApproachDel: | 27.6          |               |               |               |               | 10.4  | xxxxxx |      |       | xxxxxx |      |       |
| ApproachLOS: | D             |               |               |               |               | B     | *      |      |       | *      |      |       |

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

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Year 2020 With Related Projects Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #48 Narcissa Drive/Palos Verdes Drive South

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Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C[ 23.2]

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|              |                |                          |                                |
|--------------|----------------|--------------------------|--------------------------------|
| Street Name: | Narcissa Drive | Palos Verdes Drive South |                                |
| 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 1! 0 0     | 0 1 0 0 1                | 1 0 0 1 0      1 0 1 0 1       |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 0    | 0    | 0    | 15   | 0    | 15   | 21   | 547  | 0    | 0    | 410  | 6    |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 0    | 0    | 0    | 16   | 0    | 16   | 22   | 580  | 0    | 0    | 435  | 6    |
| Added Vol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 141  | 0    | 0    | 136  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 0    | 0    | 0    | 16   | 0    | 16   | 22   | 721  | 0    | 0    | 571  | 6    |
| User Adj:    | 1.00 | 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    | 17   | 0    | 17   | 24   | 784  | 0    | 0    | 620  | 7    |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 0    | 0    | 0    | 17   | 0    | 17   | 24   | 784  | 0    | 0    | 620  | 7    |

Critical Gap Module:

|              |     |     |     |     |     |     |     |      |        |        |      |        |
|--------------|-----|-----|-----|-----|-----|-----|-----|------|--------|--------|------|--------|
| Critical Gp: | 7.1 | 6.5 | 6.2 | 6.4 | 6.5 | 6.2 | 4.1 | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |        |      |      |        |
|--------------|------|------|------|------|------|------|------|------|--------|------|------|--------|
| Cnflct Vol:  | 1464 | 1459 | 784  | 1452 | 1452 | 620  | 627  | xxxx | xxxxxx | xxxx | xxxx | xxxxxx |
| Potent Cap.: | 107  | 131  | 397  | 145  | 132  | 491  | 964  | xxxx | xxxxxx | xxxx | xxxx | xxxxxx |
| Move Cap.:   | 102  | 127  | 397  | 142  | 128  | 491  | 964  | xxxx | xxxxxx | xxxx | xxxx | xxxxxx |
| Volume/Cap:  | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 | 0.04 | 0.03 | xxxx | xxxx   | xxxx | xxxx | xxxx   |

Level Of Service Module:

|              |               |               |               |               |               |        |        |      |        |        |      |        |
|--------------|---------------|---------------|---------------|---------------|---------------|--------|--------|------|--------|--------|------|--------|
| 2Way95thQ:   | xxxx          | xxxx          | xxxxxx        | xxxx          | xxxx          | 0.1    | 0.1    | xxxx | xxxxxx | xxxx   | xxxx | xxxxxx |
| Control Del: | xxxxx         | xxxx          | xxxxxx        | xxxxx         | xxxx          | 12.6   | 8.8    | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| LOS by Move: | *             | *             | *             | *             | *             | B      | A      | *    | *      | *      | *    | *      |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |        |        |      |        |        |      |        |
| Shared Cap.: | xxxx          | 0             | xxxxxx        | 142           | xxxx          | xxxxxx | xxxx   | xxxx | xxxxxx | xxxx   | xxxx | xxxxxx |
| SharedQueue: | xxxxx         | xxxx          | xxxxxx        | 0.4           | xxxx          | xxxxxx | xxxxxx | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| Shrd ConDel: | xxxxx         | xxxx          | xxxxxx        | 33.7          | xxxx          | xxxxxx | xxxxxx | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| Shared LOS:  | *             | *             | *             | D             | *             | *      | *      | *    | *      | *      | *    | *      |
| ApproachDel: | xxxxxx        |               |               | 23.2          |               |        | xxxxxx |      |        | xxxxxx |      |        |
| ApproachLOS: | *             |               |               | C             |               |        | *      |      |        | *      |      |        |

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

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Year 2020 With Related Projects Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #74 Peppertree Drive/Palos Verdes Drive South  
\*\*\*\*\*

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: D[ 27.7]  
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|              |                  |                          |                                |
|--------------|------------------|--------------------------|--------------------------------|
| Street Name: | Peppertree Drive | Palos Verdes Drive South |                                |
| 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          | 15 0 6         | 9 562 0      0 427 13              |
| Growth Adj:    | 1.06 1.06 1.06 | 1.06 1.06 1.06 | 1.06 1.06 1.06      1.06 1.06 1.06 |
| Initial Bse:   | 0 0 0          | 16 0 6         | 10 596 0      0 453 14             |
| Added Vol:     | 0 0 0          | 0 0 0          | 0 141 0      0 136 0               |
| PasserByVol:   | 0 0 0          | 0 0 0          | 0 0 0      0 0 0                   |
| Initial Fut:   | 0 0 0          | 16 0 6         | 10 737 0      0 589 14             |
| User Adj:      | 1.00 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          | 17 0 7         | 10 801 0      0 640 15             |
| Reduct Vol:    | 0 0 0          | 0 0 0          | 0 0 0      0 0 0                   |
| FinalVolume:   | 0 0 0          | 17 0 7         | 10 801 0      0 640 15             |

|                      |                  |              |                                 |
|----------------------|------------------|--------------|---------------------------------|
| 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: |                 |                |                                  |
| Cnflct Vol:      | xxxx xxxx xxxxx | 1461 xxxx 640  | 655 xxxx xxxxx xxxxx xxxx xxxxx  |
| Potent Cap.:     | xxxx xxxx xxxxx | 143 xxxx 479   | 942 xxxx xxxxx xxxxx xxxx xxxxx  |
| Move Cap.:       | xxxx xxxx xxxxx | 142 xxxx 479   | 942 xxxx xxxxx xxxxx xxxx xxxxx  |
| Volume/Cap:      | xxxx xxxx xxxxx | 0.12 xxxx 0.01 | 0.01 xxxx xxxxx xxxxx xxxx xxxxx |

|                          |                  |                  |                                        |
|--------------------------|------------------|------------------|----------------------------------------|
| Level Of Service Module: |                  |                  |                                        |
| 2Way95thQ:               | xxxx xxxx xxxxx  | 0.4 xxxx 0.0     | 0.0 xxxx xxxxx xxxxx xxxx xxxxx        |
| Control Del:             | xxxxx xxxx xxxxx | 33.8 xxxx 12.6   | 8.9 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           | 27.7             | xxxxxx      xxxxxx                     |
| ApproachLOS:             | *                | D                | * * *                                  |

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
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Year 2020 With Related Projects Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #15 Forrestal Drive/Palos Verdes Drive South

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Average Delay (sec/veh): 5.1 Worst Case Level Of Service: F[ 75.6]

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|              |                 |                          |                                |
|--------------|-----------------|--------------------------|--------------------------------|
| Street Name: | Forrestal Drive | Palos Verdes Drive South |                                |
| 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:       | 1 0 0 1 0       | 1 0 0 1 0                | 1 0 1 0 1      1 0 1 0 1       |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 17   | 0    | 29   | 34   | 1    | 24   | 23   | 557  | 13   | 27   | 425  | 46   |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 18   | 0    | 31   | 36   | 1    | 25   | 24   | 590  | 14   | 29   | 451  | 49   |
| Added Vol:   | 4    | 0    | 17   | 0    | 0    | 0    | 0    | 131  | 8    | 30   | 129  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 22   | 0    | 48   | 36   | 1    | 25   | 24   | 721  | 22   | 59   | 580  | 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:  | 24   | 0    | 52   | 39   | 1    | 28   | 27   | 784  | 24   | 64   | 630  | 53   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 24   | 0    | 52   | 39   | 1    | 28   | 27   | 784  | 24   | 64   | 630  | 53   |

Critical Gap Module:

|              |     |     |     |     |     |     |     |      |        |     |      |        |
|--------------|-----|-----|-----|-----|-----|-----|-----|------|--------|-----|------|--------|
| Critical Gp: | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |        |      |      |        |
|--------------|------|------|------|------|------|------|------|------|--------|------|------|--------|
| Cnflct Vol:  | 1635 | 1647 | 784  | 1632 | 1618 | 630  | 683  | xxxx | xxxxxx | 808  | xxxx | xxxxxx |
| Potent Cap.: | 82   | 100  | 396  | 82   | 104  | 485  | 920  | xxxx | xxxxxx | 826  | xxxx | xxxxxx |
| Move Cap.:   | 70   | 90   | 396  | 66   | 94   | 485  | 920  | xxxx | xxxxxx | 826  | xxxx | xxxxxx |
| Volume/Cap:  | 0.34 | 0.00 | 0.13 | 0.60 | 0.01 | 0.06 | 0.03 | xxxx | xxxx   | 0.08 | xxxx | xxxx   |

Level Of Service Module:

|              |               |      |        |               |      |        |               |      |        |               |      |        |
|--------------|---------------|------|--------|---------------|------|--------|---------------|------|--------|---------------|------|--------|
| 2Way95thQ:   | 1.3           | xxxx | xxxxxx | 2.5           | xxxx | xxxxxx | 0.1           | xxxx | xxxxxx | 0.3           | xxxx | xxxxxx |
| Control Del: | 80.8          | xxxx | xxxxxx | 120.6         | xxxx | xxxxxx | 9.0           | xxxx | xxxxxx | 9.7           | xxxx | xxxxxx |
| LOS by Move: | F             | *    | *      | F             | *    | *      | A             | *    | *      | A             | *    | *      |
| Movement:    | LT - LTR - RT |      |        | LT - LTR - RT |      |        | LT - LTR - RT |      |        | LT - LTR - RT |      |        |
| Shared Cap.: | xxxx          | xxxx | 396    | xxxx          | xxxx | 416    | xxxx          | xxxx | xxxxxx | xxxx          | xxxx | xxxxxx |
| SharedQueue: | xxxxxx        | xxxx | 0.4    | xxxxxx        | xxxx | 0.2    | xxxxxx        | xxxx | xxxxxx | xxxxxx        | xxxx | xxxxxx |
| Shrd ConDel: | xxxxxx        | xxxx | 15.4   | xxxxxx        | xxxx | 14.3   | xxxxxx        | xxxx | xxxxxx | xxxxxx        | xxxx | xxxxxx |
| Shared LOS:  | *             | *    | C      | *             | *    | B      | *             | *    | *      | *             | *    | *      |
| ApproachDel: | 36.1          |      |        | 75.6          |      |        | xxxxxx        |      |        | xxxxxx        |      |        |
| ApproachLOS: | E             |      |        | F             |      |        | *             |      |        | *             |      |        |

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

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Year 2020 With Related Projects Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #16 Palos Verdes Drive East/Palos Verdes Drive South

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Average Delay (sec/veh): 3.6 Worst Case Level Of Service: D[ 33.8]

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|              |                         |                          |              |
|--------------|-------------------------|--------------------------|--------------|
| Street Name: | Palos Verdes Drive East | Palos Verdes Drive South |              |
| Approach:    | North Bound             | South Bound              | East Bound   |
| Movement:    | L - T - R               | L - T - R                | L - T - R    |
| Control:     | Stop Sign               | Stop Sign                | Uncontrolled |
| Rights:      | 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    | 36   | 0    | 66   | 61   | 466  | 0    | 0    | 432  | 31   |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 0    | 0    | 0    | 38   | 0    | 70   | 65   | 494  | 0    | 0    | 458  | 33   |
| Added Vol:   | 0    | 0    | 0    | 20   | 0    | 10   | 10   | 137  | 0    | 0    | 150  | 19   |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 0    | 0    | 0    | 58   | 0    | 80   | 75   | 631  | 0    | 0    | 608  | 52   |
| User Adj:    | 1.00 | 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    | 63   | 0    | 87   | 81   | 686  | 0    | 0    | 661  | 56   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 0    | 0    | 0    | 63   | 0    | 87   | 81   | 686  | 0    | 0    | 661  | 56   |

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:

|              |      |      |       |      |      |      |      |      |       |      |      |       |
|--------------|------|------|-------|------|------|------|------|------|-------|------|------|-------|
| Cnflct Vol:  | xxxx | xxxx | xxxxx | 1509 | xxxx | 661  | 717  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 134  | xxxx | 466  | 893  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Move Cap.:   | xxxx | xxxx | xxxxx | 125  | xxxx | 466  | 893  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Volume/Cap:  | xxxx | xxxx | xxxx  | 0.51 | xxxx | 0.19 | 0.09 | xxxx | xxxx  | xxxx | xxxx | xxxx  |

Level Of Service Module:

|              |               |               |               |               |               |               |               |               |               |               |               |               |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2Way95thQ:   | xxxx          | xxxx          | xxxxx         | 2.4           | xxxx          | 0.7           | 0.3           | xxxx          | xxxxx         | xxxx          | xxxx          | xxxxx         |
| Control Del: | xxxxx         | xxxx          | xxxxx         | 60.3          | xxxx          | 14.5          | 9.4           | xxxx          | xxxxx         | xxxxx         | xxxx          | xxxxx         |
| LOS by Move: | *             | *             | *             | F             | *             | B             | A             | *             | *             | *             | *             | *             |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | 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        |               |               | 33.8          |               |               | xxxxxx        |               |               | xxxxxx        |               |               |
| ApproachLOS: | *             |               |               | D             |               |               | *             |               |               | *             |               |               |

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

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Year 2020 With Project Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #6 Via Rivera/Hawthorne Boulevard

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Average Delay (sec/veh): 13.3 Worst Case Level Of Service: F[127.1]

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| Street Name: | Via Rivera  |     |     |             |     |     | Hawthorne Boulevard |     |     |              |     |     |
|--------------|-------------|-----|-----|-------------|-----|-----|---------------------|-----|-----|--------------|-----|-----|
| 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   | 1   | 1            | 0   | 1   |

|                |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Volume Module: |      |      |      |      |      |      |      |      |      |      |      |      |
| Base Vol:      | 0    | 0    | 0    | 122  | 2    | 51   | 46   | 641  | 1    | 32   | 429  | 171  |
| Growth Adj:    | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse:   | 0    | 0    | 0    | 129  | 2    | 54   | 49   | 679  | 1    | 34   | 455  | 181  |
| Added Vol:     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 101  | 0    | 0    | 148  | 0    |
| PasserByVol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut:   | 0    | 0    | 0    | 129  | 2    | 54   | 49   | 780  | 1    | 34   | 603  | 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    | 0    | 0    | 141  | 2    | 59   | 53   | 848  | 1    | 37   | 655  | 197  |
| Reduct Vol:    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume:   | 0    | 0    | 0    | 141  | 2    | 59   | 53   | 848  | 1    | 37   | 655  | 197  |

|                      |       |       |     |     |     |     |     |       |       |     |       |       |
|----------------------|-------|-------|-----|-----|-----|-----|-----|-------|-------|-----|-------|-------|
| Critical Gap Module: |       |       |     |     |     |     |     |       |       |     |       |       |
| Critical Gp:         | xxxxx | xxxxx | 6.9 | 6.8 | 6.5 | 6.9 | 4.1 | xxxxx | xxxxx | 4.1 | xxxxx | xxxxx |
| FollowUpTim:         | xxxxx | xxxxx | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxxx | xxxxx | 2.2 | xxxxx | xxxxx |

|                  |       |       |      |      |      |      |      |       |       |      |       |       |
|------------------|-------|-------|------|------|------|------|------|-------|-------|------|-------|-------|
| Capacity Module: |       |       |      |      |      |      |      |       |       |      |       |       |
| Cnflct Vol:      | xxxxx | xxxxx | 425  | 1259 | 1684 | 328  | 852  | xxxxx | xxxxx | 849  | xxxxx | xxxxx |
| Potent Cap.:     | xxxxx | xxxxx | 584  | 165  | 95   | 674  | 795  | xxxxx | xxxxx | 797  | xxxxx | xxxxx |
| Move Cap.:       | xxxxx | xxxxx | 584  | 151  | 85   | 674  | 795  | xxxxx | xxxxx | 797  | xxxxx | xxxxx |
| Volume/Cap:      | xxxxx | xxxxx | 0.00 | 0.93 | 0.03 | 0.09 | 0.07 | xxxxx | xxxxx | 0.05 | xxxxx | xxxxx |

|                          |         |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Level Of Service Module: |         |       |       |       |       |       |       |       |       |       |       |       |
| 2Way95thQ:               | xxxxx   | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx | 0.2   | xxxxx | xxxxx | 0.1   | xxxxx | xxxxx |
| Control Del:             | xxxxx   | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx | 9.8   | xxxxx | xxxxx | 9.7   | xxxxx | xxxxx |
| LOS by Move:             | *       | *     | *     | *     | *     | *     | A     | *     | *     | A     | *     | *     |
| Movement:                | LT      | - LTR | - RT  | LT    | - LTR | - RT  | LT    | - LTR | - RT  | LT    | - LTR | - RT  |
| Shared Cap.:             | xxxxx   | xxxxx | xxxxx | xxxxx | 193   | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx |
| SharedQueue:             | xxxxx   | xxxxx | xxxxx | xxxxx | 9.2   | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx |
| Shrd ConDel:             | xxxxx   | xxxxx | xxxxx | xxxxx | 127   | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx |
| Shared LOS:              | *       | *     | *     | *     | *     | *     | *     | *     | *     | *     | *     | *     |
| ApproachDel:             | xxxxxxx |       |       |       |       |       | 127.1 |       |       |       |       |       |
| ApproachLOS:             | *       |       |       |       |       |       | F     |       |       |       |       |       |

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

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Year 2020 With Project Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #11 Tramonto Drive-Seahill Drive/Palos Verdes Drive South  
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Average Delay (sec/veh): 3.9 Worst Case Level Of Service: E[ 41.7]  
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|              |                              |                          |              |
|--------------|------------------------------|--------------------------|--------------|
| Street Name: | Tramonto Drive-Seahill Drive | Palos Verdes Drive South |              |
| Approach:    | North Bound                  | South Bound              | East Bound   |
| Movement:    | L - T - R                    | L - T - R                | L - T - R    |
| Control:     | Stop Sign                    | Stop Sign                | Uncontrolled |
| Rights:      | Include                      | Include                  | Include      |
| Lanes:       | 0 1 0 0 1                    | 1 0 0 0 0                | 1 0 1 1 0    |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 94   | 1    | 28   | 9    | 0    | 0    | 3    | 328  | 17   | 23   | 763  | 2    |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 100  | 1    | 30   | 10   | 0    | 0    | 3    | 348  | 18   | 24   | 809  | 2    |
| Added Vol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 79   | 0    | 0    | 125  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 100  | 1    | 30   | 10   | 0    | 0    | 3    | 427  | 18   | 24   | 934  | 2    |
| User Adj:    | 1.00 | 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:  | 108  | 1    | 32   | 10   | 0    | 0    | 3    | 464  | 20   | 27   | 1015 | 2    |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 108  | 1    | 32   | 10   | 0    | 0    | 3    | 464  | 20   | 27   | 1015 | 2    |

Critical Gap Module:

|              |     |     |     |     |      |        |     |      |        |     |      |        |
|--------------|-----|-----|-----|-----|------|--------|-----|------|--------|-----|------|--------|
| Critical Gp: | 7.5 | 6.5 | 6.9 | 7.5 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |        |      |      |        |      |      |        |
|--------------|------|------|------|------|------|--------|------|------|--------|------|------|--------|
| Cnflct Vol:  | 1041 | 1551 | 242  | 1307 | xxxx | xxxxxx | 1017 | xxxx | xxxxxx | 483  | xxxx | xxxxxx |
| Potent Cap.: | 187  | 115  | 765  | 119  | xxxx | xxxxxx | 690  | xxxx | xxxxxx | 1090 | xxxx | xxxxxx |
| Move Cap.:   | 183  | 111  | 765  | 111  | xxxx | xxxxxx | 690  | xxxx | xxxxxx | 1090 | xxxx | xxxxxx |
| Volume/Cap:  | 0.59 | 0.01 | 0.04 | 0.09 | xxxx | xxxx   | 0.01 | xxxx | xxxx   | 0.02 | xxxx | xxxx   |

Level Of Service Module:

|              |               |               |               |               |               |               |               |               |               |               |               |               |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2Way95thQ:   | xxxx          | xxxx          | 0.1           | 0.3           | xxxx          | xxxxxx        | 0.0           | xxxx          | xxxxxx        | 0.1           | xxxx          | xxxxxx        |
| Control Del: | xxxxx         | xxxx          | 9.9           | 40.8          | xxxx          | xxxxxx        | 10.2          | xxxx          | xxxxxx        | 8.4           | xxxx          | xxxxxx        |
| LOS by Move: | *             | *             | A             | E             | *             | *             | B             | *             | *             | A             | *             | *             |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |
| Shared Cap.: | 182           | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        |
| SharedQueue: | 3.3           | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        |
| Shrd ConDel: | 51.1          | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        |
| Shared LOS:  | F             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             |
| ApproachDel: | 41.7          |               |               | 40.8          |               |               | xxxxxx        |               |               | xxxxxx        |               |               |
| ApproachLOS: | E             |               |               | E             |               |               | *             |               |               | *             |               |               |

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

Year 2020 With Project Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #12 Barkentine Road/Palos Verdes Drive South

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Average Delay (sec/veh): 0.8 Worst Case Level Of Service: D[ 25.5]

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|              |                 |                          |              |
|--------------|-----------------|--------------------------|--------------|
| Street Name: | Barkentine Road | Palos Verdes Drive South |              |
| Approach:    | North Bound     | South Bound              | East Bound   |
| Movement:    | L - T - R       | L - T - R                | L - T - R    |
| Control:     | Stop Sign       | Stop Sign                | Uncontrolled |
| Rights:      | Include         | Include                  | Include      |
| Lanes:       | 0 0 1! 0 0      | 0 0 1! 0 0               | 1 0 1 1 0    |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 22   | 0    | 3    | 5    | 0    | 10   | 6    | 369  | 5    | 3    | 735  | 1    |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 23   | 0    | 3    | 5    | 0    | 11   | 6    | 391  | 5    | 3    | 779  | 1    |
| Added Vol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 79   | 0    | 0    | 125  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 23   | 0    | 3    | 5    | 0    | 11   | 6    | 470  | 5    | 3    | 904  | 1    |
| User Adj:    | 1.00 | 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   | 0    | 3    | 6    | 0    | 12   | 7    | 511  | 6    | 3    | 983  | 1    |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 25   | 0    | 3    | 6    | 0    | 12   | 7    | 511  | 6    | 3    | 983  | 1    |

Critical Gap Module:

|              |     |     |     |     |     |     |     |      |       |     |      |       |
|--------------|-----|-----|-----|-----|-----|-----|-----|------|-------|-----|------|-------|
| Critical Gp: | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |       |      |      |       |
|--------------|------|------|------|------|------|------|------|------|-------|------|------|-------|
| Cnflct Vol:  | 1026 | 1519 | 258  | 1259 | 1520 | 491  | 984  | xxxx | xxxxx | 517  | xxxx | xxxxx |
| Potent Cap.: | 192  | 120  | 747  | 129  | 120  | 528  | 710  | xxxx | xxxxx | 1059 | xxxx | xxxxx |
| Move Cap.:   | 186  | 119  | 747  | 128  | 118  | 528  | 710  | xxxx | xxxxx | 1059 | xxxx | xxxxx |
| Volume/Cap:  | 0.14 | 0.00 | 0.00 | 0.05 | 0.00 | 0.02 | 0.01 | xxxx | xxxx  | 0.00 | xxxx | xxxx  |

Level Of Service Module:

|              |               |               |               |               |               |               |               |               |               |               |               |               |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2Way95thQ:   | xxxx          | xxxx          | xxxxx         | xxxx          | xxxx          | xxxxx         | 0.0           | xxxx          | xxxxx         | 0.0           | xxxx          | xxxxx         |
| Control Del: | xxxxx         | xxxx          | xxxxx         | xxxxx         | xxxx          | xxxxx         | 10.1          | xxxx          | xxxxx         | 8.4           | xxxx          | xxxxx         |
| LOS by Move: | *             | *             | *             | *             | *             | *             | B             | *             | *             | A             | *             | *             |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |
| Shared Cap.: | xxxx          | 204           | xxxxx         | xxxx          | 258           | xxxxx         | xxxx          | xxxx          | xxxxx         | xxxx          | xxxx          | xxxxx         |
| SharedQueue: | xxxxx         | 0.5           | xxxxx         | xxxxx         | 0.2           | xxxxx         | xxxxx         | xxxx          | xxxxx         | xxxxx         | xxxx          | xxxxx         |
| Shrd ConDel: | xxxxx         | 25.5          | xxxxx         | xxxxx         | 19.9          | xxxxx         | xxxxx         | xxxx          | xxxxx         | xxxxx         | xxxx          | xxxxx         |
| Shared LOS:  | *             | D             | *             | *             | C             | *             | *             | *             | *             | *             | *             | *             |
| ApproachDel: | 25.5          |               |               | 19.9          |               |               | xxxxxx        |               |               | xxxxxx        |               |               |
| ApproachLOS: | D             |               |               | C             |               |               | *             |               |               | *             |               |               |

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

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Year 2020 With Project Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #48 Narcissa Drive/Palos Verdes Drive South

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Average Delay (sec/veh): 1.3 Worst Case Level Of Service: D[ 25.7]

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|              |                |                          |                                |
|--------------|----------------|--------------------------|--------------------------------|
| Street Name: | Narcissa Drive | Palos Verdes Drive South |                                |
| 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 1 0      | 0 1 0 0 1                | 1 0 0 1 0      1 0 1 0 1       |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 0    | 1    | 2    | 10   | 0    | 32   | 12   | 359  | 0    | 0    | 696  | 6    |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 0    | 1    | 2    | 11   | 0    | 34   | 13   | 381  | 0    | 0    | 738  | 6    |
| Added Vol:   | 0    | 0    | 0    | 6    | 0    | 9    | 3    | 76   | 0    | 0    | 116  | 2    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 0    | 1    | 2    | 17   | 0    | 43   | 16   | 457  | 0    | 0    | 854  | 8    |
| User Adj:    | 1.00 | 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    | 1    | 2    | 18   | 0    | 47   | 17   | 496  | 0    | 0    | 928  | 9    |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 0    | 1    | 2    | 18   | 0    | 47   | 17   | 496  | 0    | 0    | 928  | 9    |

Critical Gap Module:

|              |       |     |     |     |     |     |     |      |        |        |      |        |
|--------------|-------|-----|-----|-----|-----|-----|-----|------|--------|--------|------|--------|
| Critical Gp: | xxxxx | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| FollowUpTim: | xxxxx | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |        |      |      |        |
|--------------|------|------|------|------|------|------|------|------|--------|------|------|--------|
| Cnflct Vol:  | xxxx | 1468 | 496  | 1460 | 1458 | 928  | 937  | xxxx | xxxxxx | xxxx | xxxx | xxxxxx |
| Potent Cap.: | xxxx | 129  | 578  | 108  | 131  | 328  | 739  | xxxx | xxxxxx | xxxx | xxxx | xxxxxx |
| Move Cap.:   | xxxx | 126  | 578  | 105  | 128  | 328  | 739  | xxxx | xxxxxx | xxxx | xxxx | xxxxxx |
| Volume/Cap:  | xxxx | 0.01 | 0.00 | 0.17 | 0.00 | 0.14 | 0.02 | xxxx | xxxx   | xxxx | xxxx | xxxx   |

Level Of Service Module:

|              |               |      |        |               |      |        |               |      |        |               |      |        |
|--------------|---------------|------|--------|---------------|------|--------|---------------|------|--------|---------------|------|--------|
| 2Way95thQ:   | xxxx          | xxxx | xxxxxx | xxxx          | xxxx | 0.5    | 0.1           | xxxx | xxxxxx | xxxx          | xxxx | xxxxxx |
| Control Del: | xxxxx         | xxxx | xxxxxx | xxxxx         | xxxx | 17.8   | 10.0          | xxxx | xxxxxx | xxxxxx        | xxxx | xxxxxx |
| LOS by Move: | *             | *    | *      | *             | *    | C      | A             | *    | *      | *             | *    | *      |
| Movement:    | LT - LTR - RT |      |        | LT - LTR - RT |      |        | LT - LTR - RT |      |        | LT - LTR - RT |      |        |
| Shared Cap.: | xxxx          | xxxx | 263    | 105           | xxxx | xxxxxx | xxxx          | xxxx | xxxxxx | xxxx          | xxxx | xxxxxx |
| SharedQueue: | xxxxxx        | xxxx | 0.0    | 0.6           | xxxx | xxxxxx | xxxxxx        | xxxx | xxxxxx | xxxxxx        | xxxx | xxxxxx |
| Shrd ConDel: | xxxxxx        | xxxx | 18.9   | 46.2          | xxxx | xxxxxx | xxxxxx        | xxxx | xxxxxx | xxxxxx        | xxxx | xxxxxx |
| Shared LOS:  | *             | *    | C      | E             | *    | *      | *             | *    | *      | *             | *    | *      |
| ApproachDel: | 18.9          |      |        | 25.7          |      |        | xxxxxx        |      |        | xxxxxx        |      |        |
| ApproachLOS: | C             |      |        | D             |      |        | *             |      |        | *             |      |        |

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

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Year 2020 With Project Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #74 Peppertree Drive/Palos Verdes Drive South  
\*\*\*\*\*

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: D[ 25.6]  
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|              |                  |                          |                                |
|--------------|------------------|--------------------------|--------------------------------|
| Street Name: | Peppertree Drive | Palos Verdes Drive South |                                |
| 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          | 13 0 8         | 6 370 0      0 712 5               |
| Growth Adj:    | 1.06 1.06 1.06 | 1.06 1.06 1.06 | 1.06 1.06 1.06      1.06 1.06 1.06 |
| Initial Bse:   | 0 0 0          | 14 0 8         | 6 392 0      0 755 5               |
| Added Vol:     | 0 0 0          | 3 0 9          | 3 79 0      0 110 1                |
| PasserByVol:   | 0 0 0          | 0 0 0          | 0 0 0      0 0 0                   |
| Initial Fut:   | 0 0 0          | 17 0 17        | 9 471 0      0 865 6               |
| User Adj:      | 1.00 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          | 18 0 19        | 10 512 0      0 940 7              |
| Reduct Vol:    | 0 0 0          | 0 0 0          | 0 0 0      0 0 0                   |
| FinalVolume:   | 0 0 0          | 18 0 19        | 10 512 0      0 940 7              |

|                      |                  |              |                                 |
|----------------------|------------------|--------------|---------------------------------|
| 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: |                 |                |                                  |
| Cnflct Vol:      | xxxx xxxx xxxxx | 1472 xxxx 940  | 947 xxxx xxxxx xxxxx xxxx xxxxx  |
| Potent Cap.:     | xxxx xxxx xxxxx | 141 xxxx 322   | 733 xxxx xxxxx xxxxx xxxx xxxxx  |
| Move Cap.:       | xxxx xxxx xxxxx | 140 xxxx 322   | 733 xxxx xxxxx xxxxx xxxx xxxxx  |
| Volume/Cap:      | xxxx xxxx xxxxx | 0.13 xxxx 0.06 | 0.01 xxxx xxxxx xxxxx xxxx xxxxx |

|                          |                  |                  |                                        |
|--------------------------|------------------|------------------|----------------------------------------|
| Level Of Service Module: |                  |                  |                                        |
| 2Way95thQ:               | xxxx xxxx xxxxx  | 0.4 xxxx 0.2     | 0.0 xxxx xxxxx xxxxx xxxx xxxxx        |
| Control Del:             | xxxxx xxxx xxxxx | 34.6 xxxx 16.9   | 10.0 xxxx xxxxx xxxxx xxxx xxxxx       |
| LOS by Move:             | * * *            | D * 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           | 25.6             | xxxxxx      xxxxxx                     |
| ApproachLOS:             | *                | D                | * * *                                  |

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Note: Queue reported is the number of cars per lane.  
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Year 2020 With Project Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #15 Forrestal Drive/Palos Verdes Drive South

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Average Delay (sec/veh): 4.0 Worst Case Level Of Service: F[ 68.2]

\*\*\*\*\*

| Street Name: | Forrestal Drive |   |   |             |   |   | Palos Verdes Drive South |   |   |              |   |   |
|--------------|-----------------|---|---|-------------|---|---|--------------------------|---|---|--------------|---|---|
| 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:       | 1               | 0 | 0 | 1           | 0 | 0 | 1                        | 0 | 1 | 0            | 1 | 0 |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 3    | 1    | 1    | 41   | 0    | 25   | 15   | 438  | 2    | 12   | 676  | 20   |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 3    | 1    | 1    | 43   | 0    | 27   | 16   | 464  | 2    | 13   | 717  | 21   |
| Added Vol:   | 7    | 0    | 26   | 0    | 0    | 0    | 0    | 79   | 2    | 9    | 102  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 10   | 1    | 27   | 43   | 0    | 27   | 16   | 543  | 4    | 22   | 819  | 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:  | 11   | 1    | 29   | 47   | 0    | 29   | 17   | 591  | 4    | 24   | 890  | 23   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 11   | 1    | 29   | 47   | 0    | 29   | 17   | 591  | 4    | 24   | 890  | 23   |

Critical Gap Module:

|              |     |     |     |     |     |     |     |      |        |     |      |        |
|--------------|-----|-----|-----|-----|-----|-----|-----|------|--------|-----|------|--------|
| Critical Gp: | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |        |      |      |        |
|--------------|------|------|------|------|------|------|------|------|--------|------|------|--------|
| Cnflct Vol:  | 1588 | 1585 | 591  | 1580 | 1567 | 890  | 913  | xxxx | xxxxxx | 595  | xxxx | xxxxxx |
| Potent Cap.: | 88   | 109  | 511  | 89   | 112  | 345  | 755  | xxxx | xxxxxx | 991  | xxxx | xxxxxx |
| Move Cap.:   | 78   | 104  | 511  | 81   | 107  | 345  | 755  | xxxx | xxxxxx | 991  | xxxx | xxxxxx |
| Volume/Cap:  | 0.14 | 0.01 | 0.06 | 0.59 | 0.00 | 0.08 | 0.02 | xxxx | xxxx   | 0.02 | xxxx | xxxx   |

Level Of Service Module:

|              |        |      |        |        |      |        |        |      |        |        |      |        |
|--------------|--------|------|--------|--------|------|--------|--------|------|--------|--------|------|--------|
| 2Way95thQ:   | 0.5    | xxxx | xxxxxx | 2.6    | xxxx | xxxxxx | 0.1    | xxxx | xxxxxx | 0.1    | xxxx | xxxxxx |
| Control Del: | 58.7   | xxxx | xxxxxx | 99.7   | xxxx | xxxxxx | 9.9    | xxxx | xxxxxx | 8.7    | xxxx | xxxxxx |
| LOS by Move: | F      | *    | *      | F      | *    | *      | A      | *    | *      | A      | *    | *      |
| Movement:    | LT     | LTR  | RT     | LT     | LTR  | RT     | LT     | LTR  | RT     | LT     | LTR  | RT     |
| Shared Cap.: | xxxx   | xxxx | 445    | xxxx   | xxxx | 345    | xxxx   | xxxx | xxxxxx | xxxx   | xxxx | xxxxxx |
| SharedQueue: | xxxxxx | xxxx | 0.2    | xxxxxx | xxxx | 0.3    | xxxxxx | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| Shrd ConDel: | xxxxxx | xxxx | 13.7   | xxxxxx | xxxx | 16.4   | xxxxxx | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| Shared LOS:  | *      | *    | B      | *      | *    | C      | *      | *    | *      | *      | *    | *      |
| ApproachDel: | 25.6   |      |        | 68.2   |      |        | xxxxxx |      |        | xxxxxx |      |        |
| ApproachLOS: | D      |      |        | F      |      |        | *      |      |        | *      |      |        |

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

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Year 2020 With Project Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #16 Palos Verdes Drive East/Palos Verdes Drive South

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Average Delay (sec/veh): 3.7 Worst Case Level Of Service: D[ 25.9]

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|              |                         |                          |              |
|--------------|-------------------------|--------------------------|--------------|
| Street Name: | Palos Verdes Drive East | Palos Verdes Drive South |              |
| Approach:    | North Bound             | South Bound              | East Bound   |
| Movement:    | L - T - R               | L - T - R                | L - T - R    |
| Control:     | Stop Sign               | Stop Sign                | Uncontrolled |
| Rights:      | 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    | 16   | 0    | 119  | 126  | 336  | 0    | 0    | 591  | 40   |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 0    | 0    | 0    | 17   | 0    | 126  | 134  | 356  | 0    | 0    | 626  | 42   |
| Added Vol:   | 0    | 0    | 0    | 11   | 0    | 7    | 12   | 94   | 0    | 0    | 104  | 31   |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 0    | 0    | 0    | 28   | 0    | 133  | 146  | 450  | 0    | 0    | 730  | 73   |
| User Adj:    | 1.00 | 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    | 145  | 158  | 489  | 0    | 0    | 794  | 80   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 0    | 0    | 0    | 30   | 0    | 145  | 158  | 489  | 0    | 0    | 794  | 80   |

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:

|              |      |      |       |      |      |      |      |      |       |      |      |       |
|--------------|------|------|-------|------|------|------|------|------|-------|------|------|-------|
| Cnflct Vol:  | xxxx | xxxx | xxxxx | 1600 | xxxx | 794  | 874  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 118  | xxxx | 391  | 781  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Move Cap.:   | xxxx | xxxx | xxxxx | 100  | xxxx | 391  | 781  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Volume/Cap:  | xxxx | xxxx | xxxx  | 0.31 | xxxx | 0.37 | 0.20 | xxxx | xxxx  | xxxx | xxxx | xxxx  |

Level Of Service Module:

|              |               |               |               |               |               |               |               |               |               |               |               |               |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2Way95thQ:   | xxxx          | xxxx          | xxxxx         | 1.2           | xxxx          | 1.7           | 0.8           | xxxx          | xxxxx         | xxxx          | xxxx          | xxxxx         |
| Control Del: | xxxxx         | xxxx          | xxxxx         | 56.3          | xxxx          | 19.5          | 10.8          | xxxx          | xxxxx         | xxxxx         | xxxx          | xxxxx         |
| LOS by Move: | *             | *             | *             | F             | *             | C             | B             | *             | *             | *             | *             | *             |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | 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        |               |               | 25.9          |               |               | xxxxxx        |               |               | xxxxxx        |               |               |
| ApproachLOS: | *             |               |               | D             |               |               | *             |               |               | *             |               |               |

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

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Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #6 Via Rivera/Hawthorne Boulevard

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Average Delay (sec/veh): 5.0 Worst Case Level Of Service: F[ 94.1]

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| Street Name: | Via Rivera  |     |     |             |     |     | Hawthorne Boulevard |     |     |              |     |     |
|--------------|-------------|-----|-----|-------------|-----|-----|---------------------|-----|-----|--------------|-----|-----|
| 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   | 1   | 1            | 0   | 1   |

|                |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Volume Module: |      |      |      |      |      |      |      |      |      |      |      |      |
| Base Vol:      | 0    | 0    | 12   | 58   | 0    | 24   | 35   | 512  | 5    | 20   | 563  | 74   |
| Growth Adj:    | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse:   | 0    | 0    | 13   | 61   | 0    | 25   | 37   | 543  | 5    | 21   | 597  | 78   |
| Added Vol:     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 201  | 0    | 0    | 202  | 0    |
| PasserByVol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut:   | 0    | 0    | 13   | 61   | 0    | 25   | 37   | 744  | 5    | 21   | 799  | 78   |
| User Adj:      | 1.00 | 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    | 14   | 67   | 0    | 28   | 40   | 808  | 6    | 23   | 868  | 85   |
| Reduct Vol:    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume:   | 0    | 0    | 14   | 67   | 0    | 28   | 40   | 808  | 6    | 23   | 868  | 85   |

|                      |       |       |     |     |     |     |     |       |        |     |       |        |
|----------------------|-------|-------|-----|-----|-----|-----|-----|-------|--------|-----|-------|--------|
| Critical Gap Module: |       |       |     |     |     |     |     |       |        |     |       |        |
| Critical Gp:         | xxxxx | xxxxx | 6.9 | 7.5 | 6.5 | 6.9 | 4.1 | xxxxx | xxxxxx | 4.1 | xxxxx | xxxxxx |
| FollowUpTim:         | xxxxx | xxxxx | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxxx | xxxxxx | 2.2 | xxxxx | xxxxxx |

|                  |       |       |      |      |      |      |      |       |        |      |       |        |
|------------------|-------|-------|------|------|------|------|------|-------|--------|------|-------|--------|
| Capacity Module: |       |       |      |      |      |      |      |       |        |      |       |        |
| Cnflct Vol:      | xxxxx | xxxxx | 407  | 1399 | 1809 | 434  | 954  | xxxxx | xxxxxx | 814  | xxxxx | xxxxxx |
| Potent Cap.:     | xxxxx | xxxxx | 599  | 102  | 80   | 575  | 729  | xxxxx | xxxxxx | 822  | xxxxx | xxxxxx |
| Move Cap.:       | xxxxx | xxxxx | 599  | 93   | 73   | 575  | 729  | xxxxx | xxxxxx | 822  | xxxxx | xxxxxx |
| Volume/Cap:      | xxxxx | xxxxx | 0.02 | 0.72 | 0.00 | 0.05 | 0.06 | xxxxx | xxxxxx | 0.03 | xxxxx | xxxxxx |

|                          |        |       |        |        |       |        |        |       |        |        |       |        |
|--------------------------|--------|-------|--------|--------|-------|--------|--------|-------|--------|--------|-------|--------|
| Level Of Service Module: |        |       |        |        |       |        |        |       |        |        |       |        |
| 2Way95thQ:               | xxxxx  | xxxxx | 0.1    | xxxxx  | xxxxx | xxxxxx | 0.2    | xxxxx | xxxxxx | 0.1    | xxxxx | xxxxxx |
| Control Del:             | xxxxx  | xxxxx | 11.2   | xxxxxx | xxxxx | xxxxxx | 10.2   | xxxxx | xxxxxx | 9.5    | xxxxx | xxxxxx |
| LOS by Move:             | *      | *     | B      | *      | *     | *      | B      | *     | *      | A      | *     | *      |
| Movement:                | LT     | - LTR | - RT   | LT     | - LTR | - RT   | LT     | - LTR | - RT   | LT     | - LTR | - RT   |
| Shared Cap.:             | xxxxx  | xxxxx | xxxxxx | xxxxx  | 124   | xxxxxx | xxxxx  | xxxxx | xxxxxx | xxxxx  | xxxxx | xxxxxx |
| SharedQueue:             | xxxxxx | xxxxx | xxxxxx | xxxxxx | 4.4   | xxxxxx | xxxxxx | xxxxx | xxxxxx | xxxxxx | xxxxx | xxxxxx |
| Shrd ConDel:             | xxxxxx | xxxxx | xxxxxx | xxxxxx | 94.1  | xxxxxx | xxxxxx | xxxxx | xxxxxx | xxxxxx | xxxxx | xxxxxx |
| Shared LOS:              | *      | *     | *      | *      | *     | *      | *      | *     | *      | *      | *     | *      |
| ApproachDel:             | 11.2   |       |        |        |       |        | 94.1   |       |        |        |       |        |
| ApproachLOS:             | B      |       |        |        |       |        | F      |       |        |        |       |        |

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

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Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #11 Tramonto Drive-Seahill Drive/Palos Verdes Drive South

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: E[ 46.8]

| Street Name: | Tramonto Drive-Seahill Drive |   |   |             |   |   | Palos Verdes Drive South |   |   |              |   |   |
|--------------|------------------------------|---|---|-------------|---|---|--------------------------|---|---|--------------|---|---|
| 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                            | 1 | 0 | 0           | 0 | 1 | 1                        | 0 | 1 | 1            | 0 | 1 |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 48   | 0    | 27   | 2    | 0    | 0    | 30   | 535  | 61   | 40   | 422  | 5    |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 51   | 0    | 29   | 2    | 0    | 0    | 32   | 567  | 65   | 42   | 447  | 5    |
| Added Vol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 160  | 0    | 0    | 147  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 51   | 0    | 29   | 2    | 0    | 0    | 32   | 727  | 65   | 42   | 594  | 5    |
| User Adj:    | 1.00 | 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:  | 55   | 0    | 31   | 2    | 0    | 0    | 35   | 790  | 70   | 46   | 646  | 6    |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 55   | 0    | 31   | 2    | 0    | 0    | 35   | 790  | 70   | 46   | 646  | 6    |

Critical Gap Module:

|              |     |     |     |     |      |        |     |      |        |     |      |        |
|--------------|-----|-----|-----|-----|------|--------|-----|------|--------|-----|------|--------|
| Critical Gp: | 7.5 | 6.5 | 6.9 | 7.5 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |        |      |      |        |      |      |        |
|--------------|------|------|------|------|------|--------|------|------|--------|------|------|--------|
| Cnflct Vol:  | 1310 | 1639 | 430  | 1202 | xxxx | xxxxxx | 652  | xxxx | xxxxxx | 861  | xxxx | xxxxxx |
| Potent Cap.: | 119  | 101  | 579  | 142  | xxxx | xxxxxx | 944  | xxxx | xxxxxx | 790  | xxxx | xxxxxx |
| Move Cap.:   | 110  | 92   | 579  | 125  | xxxx | xxxxxx | 944  | xxxx | xxxxxx | 790  | xxxx | xxxxxx |
| Volume/Cap:  | 0.50 | 0.00 | 0.05 | 0.02 | xxxx | xxxx   | 0.04 | xxxx | xxxx   | 0.06 | xxxx | xxxx   |

Level Of Service Module:

|              |       |      |        |        |      |        |        |      |        |        |      |        |
|--------------|-------|------|--------|--------|------|--------|--------|------|--------|--------|------|--------|
| 2Way95thQ:   | xxxx  | xxxx | 0.2    | 0.1    | xxxx | xxxxxx | 0.1    | xxxx | xxxxxx | 0.2    | xxxx | xxxxxx |
| Control Del: | xxxxx | xxxx | 11.6   | 34.3   | xxxx | xxxxxx | 9.0    | xxxx | xxxxxx | 9.8    | xxxx | xxxxxx |
| LOS by Move: | *     | *    | B      | D      | *    | *      | A      | *    | *      | A      | *    | *      |
| Movement:    | LT    | LTR  | RT     | LT     | LTR  | RT     | LT     | LTR  | RT     | LT     | LTR  | RT     |
| Shared Cap.: | 110   | xxxx | xxxxxx | xxxx   | xxxx | xxxxxx | xxxx   | xxxx | xxxxxx | xxxx   | xxxx | xxxxxx |
| SharedQueue: | 2.3   | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| Shrd ConDel: | 66.7  | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| Shared LOS:  | F     | *    | *      | *      | *    | *      | *      | *    | *      | *      | *    | *      |
| ApproachDel: | 46.8  |      |        | 34.3   |      |        | xxxxxx |      |        | xxxxxx |      |        |
| ApproachLOS: | E     |      |        | D      |      |        | *      |      |        | *      |      |        |

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

Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #12 Barkentine Road/Palos Verdes Drive South

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Average Delay (sec/veh): 0.6 Worst Case Level Of Service: D[ 28.7]

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|              |                 |                          |                                |
|--------------|-----------------|--------------------------|--------------------------------|
| Street Name: | Barkentine Road | Palos Verdes Drive South |                                |
| 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 1! 0 0      | 0 0 0 0 1                | 1 0 1 1 0      1 0 2 0 1       |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 14   | 0    | 6    | 0    | 0    | 3    | 19   | 561  | 12   | 7    | 437  | 2    |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 15   | 0    | 6    | 0    | 0    | 3    | 20   | 595  | 13   | 7    | 463  | 2    |
| Added Vol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 160  | 0    | 0    | 147  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 15   | 0    | 6    | 0    | 0    | 3    | 20   | 755  | 13   | 7    | 610  | 2    |
| User Adj:    | 1.00 | 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   | 0    | 7    | 0    | 0    | 3    | 22   | 820  | 14   | 8    | 663  | 2    |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 16   | 0    | 7    | 0    | 0    | 3    | 22   | 820  | 14   | 8    | 663  | 2    |

Critical Gap Module:

|              |     |     |     |       |      |     |     |      |       |     |      |       |
|--------------|-----|-----|-----|-------|------|-----|-----|------|-------|-----|------|-------|
| Critical Gp: | 7.5 | 6.5 | 6.9 | xxxxx | xxxx | 6.9 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |

Capacity Module:

|              |      |      |      |       |      |      |      |      |       |      |      |       |
|--------------|------|------|------|-------|------|------|------|------|-------|------|------|-------|
| Cnflct Vol:  | 1219 | 1553 | 417  | xxxxx | xxxx | 332  | 666  | xxxx | xxxxx | 834  | xxxx | xxxxx |
| Potent Cap.: | 139  | 114  | 590  | xxxxx | xxxx | 670  | 933  | xxxx | xxxxx | 808  | xxxx | xxxxx |
| Move Cap.:   | 134  | 111  | 590  | xxxxx | xxxx | 670  | 933  | xxxx | xxxxx | 808  | xxxx | xxxxx |
| Volume/Cap:  | 0.12 | 0.00 | 0.01 | xxxxx | xxxx | 0.01 | 0.02 | xxxx | xxxx  | 0.01 | xxxx | xxxx  |

Level Of Service Module:

|              |               |               |               |               |               |       |        |      |       |        |      |       |
|--------------|---------------|---------------|---------------|---------------|---------------|-------|--------|------|-------|--------|------|-------|
| 2Way95thQ:   | xxxx          | xxxx          | xxxxx         | xxxx          | xxxx          | 0.0   | 0.1    | xxxx | xxxxx | 0.0    | xxxx | xxxxx |
| Control Del: | xxxxx         | xxxx          | xxxxx         | xxxxx         | xxxx          | 10.4  | 9.0    | xxxx | xxxxx | 9.5    | xxxx | xxxxx |
| LOS by Move: | *             | *             | *             | *             | *             | B     | A      | *    | *     | A      | *    | *     |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |       |        |      |       |        |      |       |
| Shared Cap.: | xxxx          | 175           | xxxxx         | xxxx          | xxxx          | xxxxx | xxxx   | xxxx | xxxxx | xxxx   | xxxx | xxxxx |
| SharedQueue: | xxxxx         | 0.4           | xxxxx         | xxxxx         | xxxx          | xxxxx | xxxxx  | xxxx | xxxxx | xxxxx  | xxxx | xxxxx |
| Shrd ConDel: | xxxxx         | 28.7          | xxxxx         | xxxxx         | xxxx          | xxxxx | xxxxx  | xxxx | xxxxx | xxxxx  | xxxx | xxxxx |
| Shared LOS:  | *             | D             | *             | *             | *             | *     | *      | *    | *     | *      | *    | *     |
| ApproachDel: | 28.7          |               |               |               |               | 10.4  | xxxxxx |      |       | xxxxxx |      |       |
| ApproachLOS: | D             |               |               |               |               | B     | *      |      |       | *      |      |       |

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

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Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #48 Narcissa Drive/Palos Verdes Drive South  
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Average Delay (sec/veh): 0.9 Worst Case Level Of Service: C[ 24.3]  
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| Street Name: | Narcissa Drive |   |        |             |   |       | Palos Verdes Drive South |   |       |              |   |       |
|--------------|----------------|---|--------|-------------|---|-------|--------------------------|---|-------|--------------|---|-------|
| 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 | 1! 0 0 | 0           | 1 | 0 0 1 | 1                        | 0 | 0 1 0 | 1            | 0 | 1 0 1 |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 0    | 0    | 0    | 15   | 0    | 15   | 21   | 547  | 0    | 0    | 410  | 6    |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 0    | 0    | 0    | 16   | 0    | 16   | 22   | 580  | 0    | 0    | 435  | 6    |
| Added Vol:   | 0    | 0    | 0    | 4    | 0    | 6    | 10   | 151  | 0    | 0    | 141  | 7    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 0    | 0    | 0    | 20   | 0    | 22   | 32   | 731  | 0    | 0    | 576  | 13   |
| User Adj:    | 1.00 | 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    | 22   | 0    | 24   | 35   | 794  | 0    | 0    | 626  | 15   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 0    | 0    | 0    | 22   | 0    | 24   | 35   | 794  | 0    | 0    | 626  | 15   |

Critical Gap Module:

|              |     |     |     |     |     |     |     |      |        |        |      |        |
|--------------|-----|-----|-----|-----|-----|-----|-----|------|--------|--------|------|--------|
| Critical Gp: | 7.1 | 6.5 | 6.2 | 6.4 | 6.5 | 6.2 | 4.1 | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |        |        |      |        |
|--------------|------|------|------|------|------|------|------|------|--------|--------|------|--------|
| Cnflct Vol:  | 1509 | 1505 | 794  | 1490 | 1490 | 626  | 640  | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| Potent Cap.: | 100  | 122  | 391  | 138  | 125  | 488  | 954  | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| Move Cap.:   | 92   | 118  | 391  | 134  | 120  | 488  | 954  | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| Volume/Cap:  | 0.00 | 0.00 | 0.00 | 0.16 | 0.00 | 0.05 | 0.04 | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |

Level Of Service Module:

|              |        |       |        |       |       |        |        |       |        |        |       |        |
|--------------|--------|-------|--------|-------|-------|--------|--------|-------|--------|--------|-------|--------|
| 2Way95thQ:   | xxxx   | xxxx  | xxxxxx | xxxx  | xxxx  | 0.2    | 0.1    | xxxx  | xxxxxx | xxxxxx | xxxx  | xxxxxx |
| Control Del: | xxxxx  | xxxx  | xxxxxx | xxxxx | xxxx  | 12.8   | 8.9    | xxxx  | xxxxxx | xxxxxx | xxxx  | xxxxxx |
| LOS by Move: | *      | *     | *      | *     | *     | B      | A      | *     | *      | *      | *     | *      |
| Movement:    | LT     | - LTR | - RT   | LT    | - LTR | - RT   | LT     | - LTR | - RT   | LT     | - LTR | - RT   |
| Shared Cap.: | xxxx   | 0     | xxxxxx | 134   | xxxx  | xxxxxx | xxxx   | xxxx  | xxxxxx | xxxx   | xxxx  | xxxxxx |
| SharedQueue: | xxxxx  | xxxx  | xxxxxx | 0.6   | xxxx  | xxxxxx | xxxxxx | xxxx  | xxxxxx | xxxxxx | xxxx  | xxxxxx |
| Shrd ConDel: | xxxxx  | xxxx  | xxxxxx | 37.0  | xxxx  | xxxxxx | xxxxxx | xxxx  | xxxxxx | xxxxxx | xxxx  | xxxxxx |
| Shared LOS:  | *      | *     | *      | E     | *     | *      | *      | *     | *      | *      | *     | *      |
| ApproachDel: | xxxxxx |       |        | 24.3  |       |        | xxxxxx |       |        | xxxxxx |       |        |
| ApproachLOS: | *      |       |        | C     |       |        | *      |       |        | *      |       |        |

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Note: Queue reported is the number of cars per lane.  
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Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #74 Peppertree Drive/Palos Verdes Drive South

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Average Delay (sec/veh): 0.7 Worst Case Level Of Service: D[ 26.7]

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|              |                  |                          |              |
|--------------|------------------|--------------------------|--------------|
| Street Name: | Peppertree Drive | Palos Verdes Drive South |              |
| Approach:    | North Bound      | South Bound              | East Bound   |
| Movement:    | L - T - R        | L - T - R                | L - T - R    |
| Control:     | Stop Sign        | Stop Sign                | Uncontrolled |
| Rights:      | 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    | 15   | 0    | 6    | 9    | 562  | 0    | 0    | 427  | 13   |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 0    | 0    | 0    | 16   | 0    | 6    | 10   | 596  | 0    | 0    | 453  | 14   |
| Added Vol:   | 0    | 0    | 0    | 2    | 0    | 6    | 10   | 145  | 0    | 0    | 143  | 3    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 0    | 0    | 0    | 18   | 0    | 12   | 20   | 741  | 0    | 0    | 596  | 17   |
| User Adj:    | 1.00 | 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    | 19   | 0    | 13   | 21   | 805  | 0    | 0    | 647  | 18   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 0    | 0    | 0    | 19   | 0    | 13   | 21   | 805  | 0    | 0    | 647  | 18   |

Critical Gap Module:

|              |       |      |       |     |      |     |     |      |        |        |      |        |
|--------------|-------|------|-------|-----|------|-----|-----|------|--------|--------|------|--------|
| Critical Gp: | xxxxx | xxxx | xxxxx | 6.4 | xxxx | 6.2 | 4.1 | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 3.5 | xxxx | 3.3 | 2.2 | xxxx | xxxxxx | xxxxxx | xxxx | xxxxxx |

Capacity Module:

|              |      |      |       |      |      |      |      |      |        |      |      |        |
|--------------|------|------|-------|------|------|------|------|------|--------|------|------|--------|
| Cnflct Vol:  | xxxx | xxxx | xxxxx | 1495 | xxxx | 647  | 666  | xxxx | xxxxxx | xxxx | xxxx | xxxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 137  | xxxx | 474  | 933  | xxxx | xxxxxx | xxxx | xxxx | xxxxxx |
| Move Cap.:   | xxxx | xxxx | xxxxx | 134  | xxxx | 474  | 933  | xxxx | xxxxxx | xxxx | xxxx | xxxxxx |
| Volume/Cap:  | xxxx | xxxx | xxxx  | 0.14 | xxxx | 0.03 | 0.02 | xxxx | xxxx   | xxxx | xxxx | xxxx   |

Level Of Service Module:

|              |               |               |               |               |               |               |               |               |               |               |               |               |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2Way95thQ:   | xxxx          | xxxx          | xxxxx         | 0.5           | xxxx          | 0.1           | 0.1           | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        |
| Control Del: | xxxxx         | xxxx          | xxxxx         | 36.3          | xxxx          | 12.8          | 8.9           | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        |
| LOS by Move: | *             | *             | *             | E             | *             | B             | A             | *             | *             | *             | *             | *             |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |
| Shared Cap.: | xxxx          | xxxx          | xxxxx         | xxxx          | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        | xxxx          | xxxx          | xxxxxx        |
| SharedQueue: | xxxxx         | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        |
| Shrd ConDel: | xxxxx         | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        | xxxxxx        | xxxx          | xxxxxx        |
| Shared LOS:  | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             |
| ApproachDel: | xxxxxx        |               |               | 26.7          |               |               | xxxxxx        |               |               | xxxxxx        |               |               |
| ApproachLOS: | *             |               |               | D             |               |               | *             |               |               | *             |               |               |

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

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Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #15 Forrestal Drive/Palos Verdes Drive South

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Average Delay (sec/veh): 5.2 Worst Case Level Of Service: F[ 79.3]

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|              |                 |                          |              |
|--------------|-----------------|--------------------------|--------------|
| Street Name: | Forrestal Drive | Palos Verdes Drive South |              |
| Approach:    | North Bound     | South Bound              | East Bound   |
| Movement:    | L - T - R       | L - T - R                | L - T - R    |
| Control:     | Stop Sign       | Stop Sign                | Uncontrolled |
| Rights:      | Include         | Include                  | Include      |
| Lanes:       | 1 0 0 1 0       | 1 0 0 1 0                | 1 0 1 0 1    |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 17   | 0    | 29   | 34   | 1    | 24   | 23   | 557  | 13   | 27   | 425  | 46   |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 18   | 0    | 31   | 36   | 1    | 25   | 24   | 590  | 14   | 29   | 451  | 49   |
| Added Vol:   | 4    | 0    | 17   | 0    | 0    | 0    | 0    | 137  | 8    | 30   | 139  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 22   | 0    | 48   | 36   | 1    | 25   | 24   | 727  | 22   | 59   | 590  | 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:  | 24   | 0    | 52   | 39   | 1    | 28   | 27   | 791  | 24   | 64   | 641  | 53   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 24   | 0    | 52   | 39   | 1    | 28   | 27   | 791  | 24   | 64   | 641  | 53   |

Critical Gap Module:

|              |     |     |     |     |     |     |     |      |        |     |      |        |
|--------------|-----|-----|-----|-----|-----|-----|-----|------|--------|-----|------|--------|
| Critical Gp: | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxxx | 4.1 | xxxx | xxxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxxx | 2.2 | xxxx | xxxxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |        |      |      |        |
|--------------|------|------|------|------|------|------|------|------|--------|------|------|--------|
| Cnflct Vol:  | 1653 | 1665 | 791  | 1650 | 1636 | 641  | 694  | xxxx | xxxxxx | 814  | xxxx | xxxxxx |
| Potent Cap.: | 79   | 98   | 393  | 80   | 102  | 478  | 911  | xxxx | xxxxxx | 822  | xxxx | xxxxxx |
| Move Cap.:   | 68   | 88   | 393  | 64   | 91   | 478  | 911  | xxxx | xxxxxx | 822  | xxxx | xxxxxx |
| Volume/Cap:  | 0.35 | 0.00 | 0.13 | 0.61 | 0.01 | 0.06 | 0.03 | xxxx | xxxx   | 0.08 | xxxx | xxxx   |

Level Of Service Module:

|              |               |      |        |               |      |        |               |      |        |               |      |        |
|--------------|---------------|------|--------|---------------|------|--------|---------------|------|--------|---------------|------|--------|
| 2Way95thQ:   | 1.3           | xxxx | xxxxxx | 2.6           | xxxx | xxxxxx | 0.1           | xxxx | xxxxxx | 0.3           | xxxx | xxxxxx |
| Control Del: | 84.0          | xxxx | xxxxxx | 127.0         | xxxx | xxxxxx | 9.1           | xxxx | xxxxxx | 9.7           | xxxx | xxxxxx |
| LOS by Move: | F             | *    | *      | F             | *    | *      | A             | *    | *      | A             | *    | *      |
| Movement:    | LT - LTR - RT |      |        | LT - LTR - RT |      |        | LT - LTR - RT |      |        | LT - LTR - RT |      |        |
| Shared Cap.: | xxxx          | xxxx | 393    | xxxx          | xxxx | 409    | xxxx          | xxxx | xxxxxx | xxxx          | xxxx | xxxxxx |
| SharedQueue: | xxxxxx        | xxxx | 0.5    | xxxxxx        | xxxx | 0.2    | xxxxxx        | xxxx | xxxxxx | xxxxxx        | xxxx | xxxxxx |
| Shrd ConDel: | xxxxxx        | xxxx | 15.6   | xxxxxx        | xxxx | 14.5   | xxxxxx        | xxxx | xxxxxx | xxxxxx        | xxxx | xxxxxx |
| Shared LOS:  | *             | *    | C      | *             | *    | B      | *             | *    | *      | *             | *    | *      |
| ApproachDel: | 37.2          |      |        | 79.3          |      |        | xxxxxx        |      |        | xxxxxx        |      |        |
| ApproachLOS: | E             |      |        | F             |      |        | *             |      |        | *             |      |        |

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

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Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Palos Verdes Drive East/Palos Verdes Drive South

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: D[ 34.7]

| Street Name: | Palos Verdes Drive East |   |   |             |   |   | Palos Verdes Drive South |   |   |              |   |   |
|--------------|-------------------------|---|---|-------------|---|---|--------------------------|---|---|--------------|---|---|
| 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 | 0 | 1                        | 0 | 1 | 0            | 0 | 1 |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 0    | 0    | 0    | 36   | 0    | 66   | 61   | 466  | 0    | 0    | 432  | 31   |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 0    | 0    | 0    | 38   | 0    | 70   | 65   | 494  | 0    | 0    | 458  | 33   |
| Added Vol:   | 0    | 0    | 0    | 20   | 0    | 12   | 12   | 142  | 0    | 0    | 157  | 19   |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 0    | 0    | 0    | 58   | 0    | 82   | 77   | 636  | 0    | 0    | 615  | 52   |
| User Adj:    | 1.00 | 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    | 63   | 0    | 89   | 83   | 691  | 0    | 0    | 668  | 56   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 0    | 0    | 0    | 63   | 0    | 89   | 83   | 691  | 0    | 0    | 668  | 56   |

Critical Gap Module:

|              |      |      |      |     |      |     |     |      |      |      |      |      |
|--------------|------|------|------|-----|------|-----|-----|------|------|------|------|------|
| Critical Gp: | xxxx | xxxx | xxxx | 6.4 | xxxx | 6.2 | 4.1 | xxxx | xxxx | xxxx | xxxx | xxxx |
| FollowUpTim: | xxxx | xxxx | xxxx | 3.5 | xxxx | 3.3 | 2.2 | xxxx | xxxx | xxxx | xxxx | xxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Cnflct Vol:  | xxxx | xxxx | xxxx | 1526 | xxxx | 668  | 725  | xxxx | xxxx | xxxx | xxxx | xxxx |
| Potent Cap.: | xxxx | xxxx | xxxx | 131  | xxxx | 461  | 887  | xxxx | xxxx | xxxx | xxxx | xxxx |
| Move Cap.:   | xxxx | xxxx | xxxx | 121  | xxxx | 461  | 887  | xxxx | xxxx | xxxx | xxxx | xxxx |
| Volume/Cap:  | xxxx | xxxx | xxxx | 0.52 | xxxx | 0.19 | 0.09 | xxxx | xxxx | xxxx | xxxx | xxxx |

Level Of Service Module:

|              |        |      |      |      |      |      |        |      |      |        |      |      |
|--------------|--------|------|------|------|------|------|--------|------|------|--------|------|------|
| 2Way95thQ:   | xxxx   | xxxx | xxxx | 2.4  | xxxx | 0.7  | 0.3    | xxxx | xxxx | xxxx   | xxxx | xxxx |
| Control Del: | xxxx   | xxxx | xxxx | 63.1 | xxxx | 14.7 | 9.5    | xxxx | xxxx | xxxx   | xxxx | xxxx |
| LOS by Move: | *      | *    | *    | F    | *    | B    | A      | *    | *    | *      | *    | *    |
| Movement:    | LT     | LTR  | RT   | LT   | LTR  | RT   | LT     | LTR  | RT   | LT     | LTR  | RT   |
| Shared Cap.: | xxxx   | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx   | xxxx | xxxx | xxxx   | xxxx | xxxx |
| SharedQueue: | xxxx   | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx   | xxxx | xxxx | xxxx   | xxxx | xxxx |
| Shrd ConDel: | xxxx   | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx   | xxxx | xxxx | xxxx   | xxxx | xxxx |
| Shared LOS:  | *      | *    | *    | *    | *    | *    | *      | *    | *    | *      | *    | *    |
| ApproachDel: | xxxxxx |      |      | 34.7 |      |      | xxxxxx |      |      | xxxxxx |      |      |
| ApproachLOS: | *      |      |      | D    |      |      | *      |      |      | *      |      |      |

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

Year 2020 With Project Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #6 Via Rivera/Hawthorne Boulevard

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Average Delay (sec/veh): 8.8 Worst Case Level Of Service: F[ 83.0]

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| Street Name: | Via Rivera  |   |   |             |   | Hawthorne Boulevard |   |   |              |   |   |   |
|--------------|-------------|---|---|-------------|---|---------------------|---|---|--------------|---|---|---|
| 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           | 1 | 1                   | 0 | 0 | 1            | 0 | 1 | 0 |

| Volume Module: | Via Rivera |      |      |      |      | Hawthorne Boulevard |      |      |      |      |      |      |
|----------------|------------|------|------|------|------|---------------------|------|------|------|------|------|------|
| Base Vol:      | 0          | 0    | 0    | 122  | 2    | 51                  | 46   | 641  | 1    | 32   | 429  | 171  |
| Growth Adj:    | 1.06       | 1.06 | 1.06 | 1.06 | 1.06 | 1.06                | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse:   | 0          | 0    | 0    | 129  | 2    | 54                  | 49   | 679  | 1    | 34   | 455  | 181  |
| Added Vol:     | 0          | 0    | 0    | 0    | 0    | 0                   | 0    | 101  | 0    | 0    | 148  | 0    |
| PasserByVol:   | 0          | 0    | 0    | 0    | 0    | 0                   | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut:   | 0          | 0    | 0    | 129  | 2    | 54                  | 49   | 780  | 1    | 34   | 603  | 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          | 0    | 0    | 141  | 2    | 59                  | 53   | 848  | 1    | 37   | 655  | 197  |
| Reduct Vol:    | 0          | 0    | 0    | 0    | 0    | 0                   | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume:   | 0          | 0    | 0    | 141  | 2    | 59                  | 53   | 848  | 1    | 37   | 655  | 197  |

| Critical Gap Module: | Via Rivera |      |     |     |     | Hawthorne Boulevard |     |      |       |     |      |       |
|----------------------|------------|------|-----|-----|-----|---------------------|-----|------|-------|-----|------|-------|
| Critical Gp:         | xxxxx      | xxxx | 6.9 | 6.8 | 6.5 | 6.9                 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim:         | xxxxx      | xxxx | 3.3 | 3.5 | 4.0 | 3.3                 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |

| Capacity Module: | Via Rivera |      |      |      |      | Hawthorne Boulevard |      |      |       |      |      |       |
|------------------|------------|------|------|------|------|---------------------|------|------|-------|------|------|-------|
| Cnflct Vol:      | xxxx       | xxxx | 425  | 1259 | 1684 | 328                 | 852  | xxxx | xxxxx | 849  | xxxx | xxxxx |
| Potent Cap.:     | xxxx       | xxxx | 584  | 165  | 95   | 674                 | 795  | xxxx | xxxxx | 797  | xxxx | xxxxx |
| Move Cap.:       | xxxx       | xxxx | 584  | 151  | 85   | 674                 | 795  | xxxx | xxxxx | 797  | xxxx | xxxxx |
| Volume/Cap:      | xxxx       | xxxx | 0.00 | 0.93 | 0.03 | 0.09                | 0.07 | xxxx | xxxx  | 0.05 | xxxx | xxxx  |

| Level Of Service Module: | Via Rivera |      |       |       |      | Hawthorne Boulevard |        |      |       |        |      |       |
|--------------------------|------------|------|-------|-------|------|---------------------|--------|------|-------|--------|------|-------|
| 2Way95thQ:               | xxxx       | xxxx | xxxxx | 6.6   | xxxx | xxxxx               | 0.2    | xxxx | xxxxx | 0.1    | xxxx | xxxxx |
| Control Del:             | xxxxx      | xxxx | xxxxx | 113.5 | xxxx | xxxxx               | 9.8    | xxxx | xxxxx | 9.7    | xxxx | xxxxx |
| LOS by Move:             | *          | *    | *     | F     | *    | *                   | A      | *    | *     | A      | *    | *     |
| Movement:                | LT         | LTR  | RT    | LT    | LTR  | RT                  | LT     | LTR  | RT    | LT     | LTR  | RT    |
| Shared Cap.:             | xxxx       | xxxx | xxxxx | xxxx  | xxxx | 534                 | xxxx   | xxxx | xxxxx | xxxx   | xxxx | xxxxx |
| SharedQueue:             | xxxxx      | xxxx | xxxxx | xxxxx | xxxx | 0.4                 | xxxxx  | xxxx | xxxxx | xxxxx  | xxxx | xxxxx |
| Shrd ConDel:             | xxxxx      | xxxx | xxxxx | xxxxx | xxxx | 12.6                | xxxxx  | xxxx | xxxxx | xxxxx  | xxxx | xxxxx |
| Shared LOS:              | *          | *    | *     | *     | *    | B                   | *      | *    | *     | *      | *    | *     |
| ApproachDel:             | xxxxxx     |      |       | 83.0  |      |                     | xxxxxx |      |       | xxxxxx |      |       |
| ApproachLOS:             | *          |      |       | F     |      |                     | *      |      |       | *      |      |       |

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

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Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #6 Via Rivera/Hawthorne Boulevard

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Average Delay (sec/veh): 4.3 Worst Case Level Of Service: F[ 79.7]

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| Street Name: | Via Rivera  |   |             |   | Hawthorne Boulevard |   |            |   |              |   |   |   |   |   |   |   |
|--------------|-------------|---|-------------|---|---------------------|---|------------|---|--------------|---|---|---|---|---|---|---|
| Approach:    | North Bound |   | South Bound |   | East Bound          |   | West Bound |   |              |   |   |   |   |   |   |   |
| Movement:    | L           | T | R           | L | T                   | R | L          | T | R            |   |   |   |   |   |   |   |
| Control:     | Stop Sign   |   |             |   | Stop Sign           |   |            |   | Uncontrolled |   |   |   |   |   |   |   |
| Rights:      | Include     |   |             |   | Include             |   |            |   | Include      |   |   |   |   |   |   |   |
| Lanes:       | 0           | 0 | 0           | 1 | 1                   | 0 | 0          | 1 | 0            | 1 | 0 | 1 | 0 | 2 | 0 | 1 |

| Volume Module: | Via Rivera |      |      |      | Hawthorne Boulevard |      |      |      |      |      |      |      |
|----------------|------------|------|------|------|---------------------|------|------|------|------|------|------|------|
| Base Vol:      | 0          | 0    | 12   | 58   | 0                   | 24   | 35   | 512  | 5    | 20   | 563  | 74   |
| Growth Adj:    | 1.06       | 1.06 | 1.06 | 1.06 | 1.06                | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse:   | 0          | 0    | 13   | 61   | 0                   | 25   | 37   | 543  | 5    | 21   | 597  | 78   |
| Added Vol:     | 0          | 0    | 0    | 0    | 0                   | 0    | 0    | 201  | 0    | 0    | 202  | 0    |
| PasserByVol:   | 0          | 0    | 0    | 0    | 0                   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut:   | 0          | 0    | 13   | 61   | 0                   | 25   | 37   | 744  | 5    | 21   | 799  | 78   |
| User Adj:      | 1.00       | 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    | 14   | 67   | 0                   | 28   | 40   | 808  | 6    | 23   | 868  | 85   |
| Reduct Vol:    | 0          | 0    | 0    | 0    | 0                   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume:   | 0          | 0    | 14   | 67   | 0                   | 28   | 40   | 808  | 6    | 23   | 868  | 85   |

| Critical Gap Module: | Via Rivera |      |     |     | Hawthorne Boulevard |     |     |      |       |     |      |       |
|----------------------|------------|------|-----|-----|---------------------|-----|-----|------|-------|-----|------|-------|
| Critical Gap:        | xxxxx      | xxxx | 6.9 | 7.5 | 6.5                 | 6.9 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim:         | xxxxx      | xxxx | 3.3 | 3.5 | 4.0                 | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |

| Capacity Module: | Via Rivera |      |      |      | Hawthorne Boulevard |      |      |      |       |      |      |       |
|------------------|------------|------|------|------|---------------------|------|------|------|-------|------|------|-------|
| Cnflct Vol:      | xxxx       | xxxx | 407  | 1399 | 1809                | 434  | 954  | xxxx | xxxxx | 814  | xxxx | xxxxx |
| Potent Cap.:     | xxxx       | xxxx | 599  | 102  | 80                  | 575  | 729  | xxxx | xxxxx | 822  | xxxx | xxxxx |
| Move Cap.:       | xxxx       | xxxx | 599  | 93   | 73                  | 575  | 729  | xxxx | xxxxx | 822  | xxxx | xxxxx |
| Volume/Cap:      | xxxx       | xxxx | 0.02 | 0.72 | 0.00                | 0.05 | 0.06 | xxxx | xxxx  | 0.03 | xxxx | xxxx  |

| Level Of Service Module: | Via Rivera |      |       |       | Hawthorne Boulevard |       |        |      |       |        |      |       |
|--------------------------|------------|------|-------|-------|---------------------|-------|--------|------|-------|--------|------|-------|
| 2Way95thQ:               | xxxx       | xxxx | 0.1   | 3.6   | xxxx                | xxxxx | 0.2    | xxxx | xxxxx | 0.1    | xxxx | xxxxx |
| Control Del:             | xxxxx      | xxxx | 11.2  | 107.9 | xxxx                | xxxxx | 10.2   | xxxx | xxxxx | 9.5    | xxxx | xxxxx |
| LOS by Move:             | *          | *    | B     | F     | *                   | *     | B      | *    | *     | A      | *    | *     |
| Movement:                | LT         | LTR  | RT    | LT    | LTR                 | RT    | LT     | LTR  | RT    | LT     | LTR  | RT    |
| Shared Cap.:             | xxxx       | xxxx | xxxxx | xxxx  | xxxx                | 575   | xxxx   | xxxx | xxxxx | xxxx   | xxxx | xxxxx |
| SharedQueue:             | xxxxx      | xxxx | xxxxx | xxxxx | xxxx                | 0.2   | xxxxx  | xxxx | xxxxx | xxxxx  | xxxx | xxxxx |
| Shrd ConDel:             | xxxxx      | xxxx | xxxxx | xxxxx | xxxx                | 11.6  | xxxxx  | xxxx | xxxxx | xxxxx  | xxxx | xxxxx |
| Shared LOS:              | *          | *    | *     | *     | *                   | B     | *      | *    | *     | *      | *    | *     |
| ApproachDel:             | 11.2       |      |       | 79.7  |                     |       | xxxxxx |      |       | xxxxxx |      |       |
| ApproachLOS:             | B          |      |       | F     |                     |       | *      |      |       | *      |      |       |

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

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## TWO-WAY STOP CONTROL SUMMARY

| General Information  |               |  | Site Information |                              |
|----------------------|---------------|--|------------------|------------------------------|
| Analyst              | FSB           |  | Intersection     | Int #2:PVDS/Tramonto-Seahill |
| Agency/Co.           | LLG Engineers |  | Jurisdiction     | City of Rancho Palos Verdes  |
| Date Performed       | 08/14/12      |  | Analysis Year    | Future With Project          |
| Analysis Time Period | AM Peak Hour  |  |                  |                              |

Project Description *Zone 2 - Portuguese Bend Project/1-10-3845-1*

East/West Street: *Palos Verdes Drive South*

North/South Street: *Tramonto Drive-Seahill Drive*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

### Vehicle Volumes and Adjustments

| Major Street                  | Eastbound   |      |      | Westbound |      |      |
|-------------------------------|-------------|------|------|-----------|------|------|
| Movement                      | 1           | 2    | 3    | 4         | 5    | 6    |
|                               | L           | T    | R    | L         | T    | R    |
| Volume (veh/h)                | 3           | 427  | 18   | 24        | 934  | 2    |
| Peak-Hour Factor, PHF         | 0.92        | 0.92 | 0.92 | 0.92      | 0.92 | 0.92 |
| Hourly Flow Rate, HFR (veh/h) | 3           | 464  | 19   | 26        | 1015 | 2    |
| Percent Heavy Vehicles        | 0           | --   | --   | 0         | --   | --   |
| Median Type                   | Raised curb |      |      |           |      |      |
| RT Channelized                |             |      | 0    |           |      | 0    |
| Lanes                         | 1           | 2    | 0    | 1         | 2    | 1    |
| Configuration                 | L           | T    | TR   | L         | T    | R    |
| Upstream Signal               |             | 0    |      |           | 0    |      |

| Minor Street                  | Northbound |      |      | Southbound |      |      |
|-------------------------------|------------|------|------|------------|------|------|
| Movement                      | 7          | 8    | 9    | 10         | 11   | 12   |
|                               | L          | T    | R    | L          | T    | R    |
| Volume (veh/h)                | 100        | 1    | 30   | 10         | 0    | 0    |
| Peak-Hour Factor, PHF         | 0.92       | 0.92 | 0.92 | 0.92       | 0.92 | 0.92 |
| Hourly Flow Rate, HFR (veh/h) | 108        | 1    | 32   | 10         | 0    | 0    |
| Percent Heavy Vehicles        | 0          | 0    | 0    | 0          | 0    | 0    |
| Percent Grade (%)             | 0          |      |      | 0          |      |      |
| Flared Approach               |            | N    |      |            | N    |      |
| Storage                       |            | 0    |      |            | 0    |      |
| RT Channelized                |            |      | 0    |            |      | 0    |
| Lanes                         | 0          | 1    | 1    | 0          | 1    | 0    |
| Configuration                 | LT         |      | R    |            | LTR  |      |

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

| Approach               | Eastbound | Westbound | Northbound |   |      | Southbound |      |    |
|------------------------|-----------|-----------|------------|---|------|------------|------|----|
| Movement               | 1         | 4         | 7          | 8 | 9    | 10         | 11   | 12 |
| Lane Configuration     | L         | L         | LT         |   | R    |            | LTR  |    |
| v (veh/h)              | 3         | 26        | 109        |   | 32   |            | 10   |    |
| C (m) (veh/h)          | 690       | 1090      | 312        |   | 802  |            | 195  |    |
| v/c                    | 0.00      | 0.02      | 0.35       |   | 0.04 |            | 0.05 |    |
| 95% queue length       | 0.01      | 0.07      | 1.52       |   | 0.12 |            | 0.16 |    |
| Control Delay (s/veh)  | 10.2      | 8.4       | 22.6       |   | 9.7  |            | 24.5 |    |
| LOS                    | B         | A         | C          |   | A    |            | C    |    |
| Approach Delay (s/veh) | --        | --        | 19.7       |   |      | 24.5       |      |    |
| Approach LOS           | --        | --        | C          |   |      | C          |      |    |

## TWO-WAY STOP CONTROL SUMMARY

| General Information  |               |  | Site Information |                              |
|----------------------|---------------|--|------------------|------------------------------|
| Analyst              | FSB           |  | Intersection     | Int #2:PVDS/Tramonto-Seahill |
| Agency/Co.           | LLG Engineers |  | Jurisdiction     | City of Rancho Palos Verdes  |
| Date Performed       | 08/14/12      |  | Analysis Year    | Future With Project          |
| Analysis Time Period | PM Peak Hour  |  |                  |                              |

Project Description    *Zone 2 - Portuguese Bend Project/1-10-3845-1*

East/West Street:    *Palos Verdes Drive South*

North/South Street:    *Tramonto Drive-Seahill Drive*

Intersection Orientation:    *East-West*

Study Period (hrs):    *0.25*

### Vehicle Volumes and Adjustments

| Major Street                  | Eastbound   |      |      | Westbound |      |      |
|-------------------------------|-------------|------|------|-----------|------|------|
| Movement                      | 1           | 2    | 3    | 4         | 5    | 6    |
|                               | L           | T    | R    | L         | T    | R    |
| Volume (veh/h)                | 32          | 727  | 65   | 42        | 594  | 5    |
| Peak-Hour Factor, PHF         | 0.92        | 0.92 | 0.92 | 0.92      | 0.92 | 0.92 |
| Hourly Flow Rate, HFR (veh/h) | 34          | 790  | 70   | 45        | 645  | 5    |
| Percent Heavy Vehicles        | 0           | --   | --   | 0         | --   | --   |
| Median Type                   | Raised curb |      |      |           |      |      |
| RT Channelized                |             |      | 0    |           |      | 0    |
| Lanes                         | 1           | 2    | 0    | 1         | 2    | 1    |
| Configuration                 | L           | T    | TR   | L         | T    | R    |
| Upstream Signal               |             | 0    |      |           | 0    |      |

| Minor Street                  | Northbound |      |      | Southbound |      |      |
|-------------------------------|------------|------|------|------------|------|------|
| Movement                      | 7          | 8    | 9    | 10         | 11   | 12   |
|                               | L          | T    | R    | L          | T    | R    |
| Volume (veh/h)                | 51         | 0    | 29   | 2          | 0    | 0    |
| Peak-Hour Factor, PHF         | 0.92       | 0.92 | 0.92 | 0.92       | 0.92 | 0.92 |
| Hourly Flow Rate, HFR (veh/h) | 55         | 0    | 31   | 2          | 0    | 0    |
| Percent Heavy Vehicles        | 0          | 0    | 0    | 0          | 0    | 0    |
| Percent Grade (%)             | 0          |      |      | 0          |      |      |
| Flared Approach               |            | N    |      |            | N    |      |
| Storage                       |            | 0    |      |            | 0    |      |
| RT Channelized                |            |      | 0    |            |      | 0    |
| Lanes                         | 0          | 1    | 1    | 0          | 1    | 0    |
| Configuration                 | LT         |      | R    |            | LTR  |      |

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

| Approach               | Eastbound | Westbound | Northbound |   |      | Southbound |      |    |
|------------------------|-----------|-----------|------------|---|------|------------|------|----|
| Movement               | 1         | 4         | 7          | 8 | 9    | 10         | 11   | 12 |
| Lane Configuration     | L         | L         | LT         |   | R    |            | LTR  |    |
| v (veh/h)              | 34        | 45        | 55         |   | 31   |            | 2    |    |
| C (m) (veh/h)          | 946       | 790       | 218        |   | 629  |            | 242  |    |
| v/c                    | 0.04      | 0.06      | 0.25       |   | 0.05 |            | 0.01 |    |
| 95% queue length       | 0.11      | 0.18      | 0.97       |   | 0.16 |            | 0.02 |    |
| Control Delay (s/veh)  | 8.9       | 9.8       | 27.0       |   | 11.0 |            | 20.0 |    |
| LOS                    | A         | A         | D          |   | B    |            | C    |    |
| Approach Delay (s/veh) | --        | --        | 21.2       |   |      | 20.0       |      |    |
| Approach LOS           | --        | --        | C          |   |      | C          |      |    |

Year 2020 With Related Projects Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

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Intersection #15 Forrestal Drive/Palos Verdes Drive South

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|                  |     |                          |        |
|------------------|-----|--------------------------|--------|
| Cycle (sec):     | 100 | Critical Vol./Cap.(X):   | 0.713  |
| Loss Time (sec): | 10  | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle:   | 52  | Level Of Service:        | C      |

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|              |                 |     |     |             |     |     |                          |     |     |            |     |     |
|--------------|-----------------|-----|-----|-------------|-----|-----|--------------------------|-----|-----|------------|-----|-----|
| Street Name: | Forrestal Drive |     |     |             |     |     | Palos Verdes Drive South |     |     |            |     |     |
| 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   |
| Y+R:         | 4.0             | 4.0 | 4.0 | 4.0         | 4.0 | 4.0 | 4.0                      | 4.0 | 4.0 | 4.0        | 4.0 | 4.0 |
| Lanes:       | 1               | 0   | 0   | 1           | 0   | 0   | 1                        | 0   | 1   | 1          | 0   | 1   |

|                |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Volume Module: |      |      |      |      |      |      |      |      |      |      |      |      |
| Base Vol:      | 3    | 1    | 1    | 41   | 0    | 25   | 15   | 438  | 2    | 12   | 676  | 20   |
| Growth Adj:    | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse:   | 3    | 1    | 1    | 43   | 0    | 27   | 16   | 464  | 2    | 13   | 717  | 21   |
| Added Vol:     | 7    | 0    | 26   | 0    | 0    | 0    | 0    | 70   | 2    | 9    | 99   | 0    |
| PasserByVol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut:   | 10   | 1    | 27   | 43   | 0    | 27   | 16   | 534  | 4    | 22   | 816  | 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:    | 11   | 1    | 29   | 47   | 0    | 29   | 17   | 581  | 4    | 24   | 886  | 23   |
| Reduct Vol:    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced Vol:   | 11   | 1    | 29   | 47   | 0    | 29   | 17   | 581  | 4    | 24   | 886  | 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:   | 11   | 1    | 29   | 47   | 0    | 29   | 17   | 581  | 4    | 24   | 886  | 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 | 0.04 | 0.96 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.:             | 1600 | 60   | 1540 | 1600 | 0    | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |

|                           |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Capacity Analysis Module: |      |      |      |      |      |      |      |      |      |      |      |      |
| Vol/Sat:                  | 0.01 | 0.02 | 0.02 | 0.03 | 0.00 | 0.02 | 0.01 | 0.36 | 0.00 | 0.01 | 0.55 | 0.01 |
| Crit Moves:               | **** |      |      | **** |      |      | **** |      |      | **** |      |      |

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Year 2020 With Related Projects Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

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Intersection #15 Forrestal Drive/Palos Verdes Drive South

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|                  |     |                          |        |
|------------------|-----|--------------------------|--------|
| Cycle (sec):     | 100 | Critical Vol./Cap.(X):   | 0.687  |
| Loss Time (sec): | 10  | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle:   | 48  | Level Of Service:        | B      |

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|              |                 |     |     |             |     |     |                          |     |     |            |     |     |
|--------------|-----------------|-----|-----|-------------|-----|-----|--------------------------|-----|-----|------------|-----|-----|
| Street Name: | Forrestal Drive |     |     |             |     |     | Palos Verdes Drive South |     |     |            |     |     |
| 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   |
| Y+R:         | 4.0             | 4.0 | 4.0 | 4.0         | 4.0 | 4.0 | 4.0                      | 4.0 | 4.0 | 4.0        | 4.0 | 4.0 |
| Lanes:       | 1               | 0   | 0   | 1           | 0   | 0   | 1                        | 0   | 1   | 1          | 0   | 1   |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 17   | 0    | 29   | 34   | 1    | 24   | 23   | 557  | 13   | 27   | 425  | 46   |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 18   | 0    | 31   | 36   | 1    | 25   | 24   | 590  | 14   | 29   | 451  | 49   |
| Added Vol:   | 4    | 0    | 17   | 0    | 0    | 0    | 0    | 131  | 8    | 30   | 129  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 22   | 0    | 48   | 36   | 1    | 25   | 24   | 721  | 22   | 59   | 580  | 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:  | 24   | 0    | 52   | 39   | 1    | 28   | 27   | 784  | 24   | 64   | 630  | 53   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced Vol: | 24   | 0    | 52   | 39   | 1    | 28   | 27   | 784  | 24   | 64   | 630  | 53   |
| 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   | 0    | 52   | 39   | 1    | 28   | 27   | 784  | 24   | 64   | 630  | 53   |

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 | 0.00 | 1.00 | 1.00 | 0.04 | 0.96 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 0    | 1600 | 1600 | 64   | 1536 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |

Capacity Analysis Module:

|             |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Vol/Sat:    | 0.01 | 0.00 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.49 | 0.01 | 0.04 | 0.39 | 0.03 |
| Crit Moves: |      |      | **** | **** |      |      | **** |      |      | **** |      |      |

\*\*\*\*\*

TRAFFIC IMPACT STUDY  
**ZONE 2 LANDSLIDE MORATORIUM -  
PORTUGUESE BEND PROJECT**  
City of Rancho Palos Verdes, California  
April 12, 2011

*Prepared for:*

**Rincon Consultants, Inc.**  
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LLG Ref. 1-10-3845-1



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TRAFFIC IMPACT STUDY  
ZONE 2 LANDSLIDE MORATORIUM -  
PORTUGUESE BEND PROJECT  
City of Rancho Palos Verdes, California  
April 12, 2011

## 1.0 INTRODUCTION

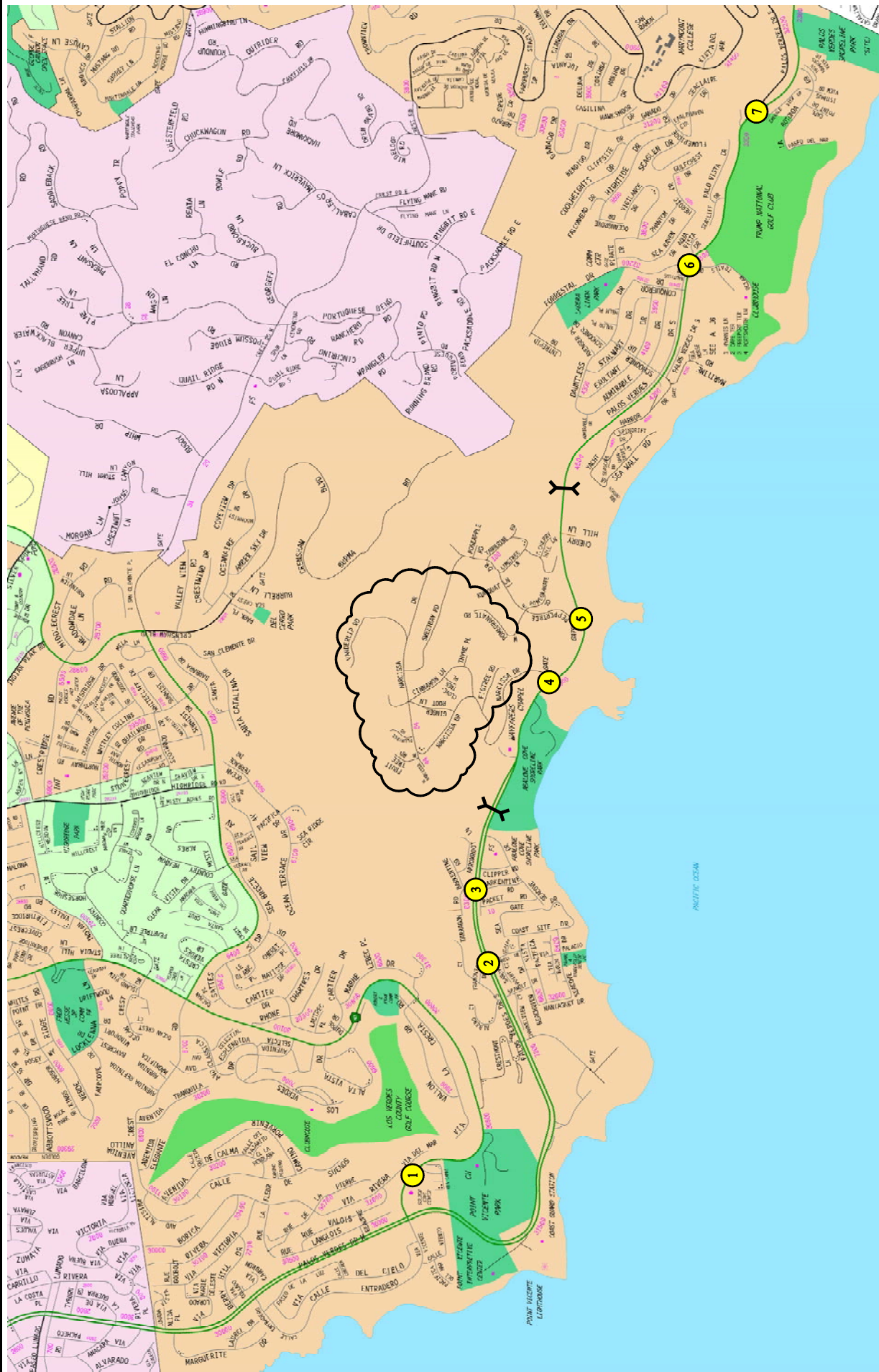
This traffic impact study addresses the potential traffic impacts and parking requirements associated with the proposed Zone 2 Landslide Moratorium project. The proposed project is located in the Portuguese Bend area of the City of Rancho Palos Verdes, California. The City of Rancho Palos Verdes is considering revisions to its Landslide Moratorium Ordinance that would facilitate the future development of single-family residences on undeveloped lots within a portion of the City's Portuguese Bend community (i.e., Zone 2). The proposed Zone 2 Landslide Moratorium - Portuguese Bend project site area and general vicinity are shown in *Figure 1-1*.

This report documents the findings and recommendations of a traffic impact analysis prepared by Linscott, Law & Greenspan, Engineers and summarizes the potential traffic impacts associated with the proposed project. The traffic analysis evaluates the existing operating conditions at seven key study intersections within the project vicinity, estimates the trip generation potential of the proposed project, and forecasts future operating conditions without and with the proposed project. Where necessary, intersection improvements and/or mitigation measures are identified. This report has been prepared in consultation with City of Rancho Palos Verdes Public Works Department staff and presents findings for future year operating conditions (Year 2020) pursuant to the requirements of City staff.

This traffic report satisfies the traffic impact study requirements of the City of Rancho Palos Verdes and is consistent with the *2010 Congestion Management Program for Los Angeles County*<sup>1</sup>. The specific parameters for this traffic study were developed in conjunction with City of Rancho Palos Verdes Public Works Department staff. The project site has been visited and observed and the adjacent area roadways, intersections, and existing parking conditions have been inventoried. Existing peak hour traffic information has been collected at the seven study intersections on a typical weekday (i.e., Tuesday, Wednesday, or Thursday) for use in the preparation of intersection Level of Service calculations. Information concerning cumulative projects (planned and/or approved) in the vicinity of the proposed project has been researched at the Cities of Rancho Palos Verdes, Palos Verdes Estates, Rolling Hills, Rolling Hills Estates, and Los Angeles, as well as other traffic studies prepared for projects in the vicinity. Based on this research, 34 related projects are planned in the project study area. These 34 planned and/or approved related projects were therefore considered in the cumulative traffic analysis for this project.

---

<sup>1</sup> *2010 Congestion Management Program for Los Angeles County*, Los Angeles County Metropolitan Transportation Authority, October 2010.



**FIGURE 1-1**  
**VICINITY MAP**

MAP SOURCE: THOMAS BROS. GUIDE  
 STUDY INTERSECTION  
 STUDY STREET SEGMENT  
 PROJECT AREA

NOT TO SCALE

LINSKOTT, LAW & GREENSPAN, engineers

ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

This traffic report analyzes existing and future weekday AM and PM peak hour traffic conditions for future-term (Year 2020) traffic settings upon completion of the proposed Zone 2 Landslide Moratorium - Portuguese Bend project. Peak hour traffic forecasts for the future horizon years have been projected by increasing existing traffic volumes by an annual growth rate of 0.6 percent (0.6%) per year and adding traffic volumes expected to be generated by the 34 related projects.

## 1.1 Study Area

Seven study intersections have been identified for evaluation during the weekday morning and afternoon peak hour conditions based upon coordination with City of Rancho Palos Verdes Public Works Department staff. The seven study intersections provide local access to the study area and define the extent of the boundaries for this traffic impact analysis. Further discussion of the existing street system and study area is provided in Section 4.0 herein.

The general location of the project in relation to the study locations and surrounding street system is presented in *Figure 1-1*. The traffic analysis study area is generally comprised of those locations which have the greatest potential to experience significant traffic impacts due to the proposed project as defined by the Lead Agency. In the traffic engineering practice, the study area generally includes those intersections that are:

- a. Immediately adjacent or in close proximity to the project site;
- b. In the vicinity of the project site that are documented to have current or projected future adverse operational issues; and
- c. In the vicinity of the project site that are forecast to experience a relatively greater percentage of project-related vehicular turning movements (e.g., at freeway ramp intersections).

The locations selected for analysis were based on the above criteria, forecast project peak hour vehicle trip generation, anticipated distribution of project vehicle trips and existing intersection/corridor operations. The seven intersections listed below provide local access to the study area and define the extent of the boundaries for this traffic impact investigation.

1. Hawthorne Boulevard/Via Rivera
2. Tramonto Drive-Seahill Drive/Palos Verdes Drive South
3. Barkentine Road/Palos Verdes Drive South
4. Narcissa Drive/Palos Verdes Drive South
5. Peppertree Drive/Palos Verdes Drive South
6. Forrestal Drive/Palos Verdes Drive South

## 7. Palos Verdes Drive East/Palos Verdes Drive South

The Volume-Capacity and Level of Service calculations for these key locations were used to evaluate the potential traffic-related impacts associated with area growth, cumulative projects and the proposed Zone 2 Landslide Moratorium - Portuguese Bend project. When necessary, this report recommends intersection improvements that may be required to accommodate future traffic volumes and restore/maintain an acceptable Level of Service, and/or to reduce a significant project impact to less than significant levels.

The following components are included as part of this traffic and parking analysis:

- Existing traffic counts,
- Estimated project traffic generation/distribution/assignment,
- Estimated cumulative project traffic generation/distribution/assignment,
- Weekday AM and PM peak hour capacity analyses for existing conditions,
- Weekday AM and PM peak hour capacity analyses for existing with project conditions,
- Weekday AM and PM peak hour capacity analyses for future (Year 2020) conditions without and with project traffic,
- Project-specific improvements, where necessary, and
- Congestion management program traffic impact assessment.

## 2.0 PROJECT DESCRIPTION

### 2.1 Project Location

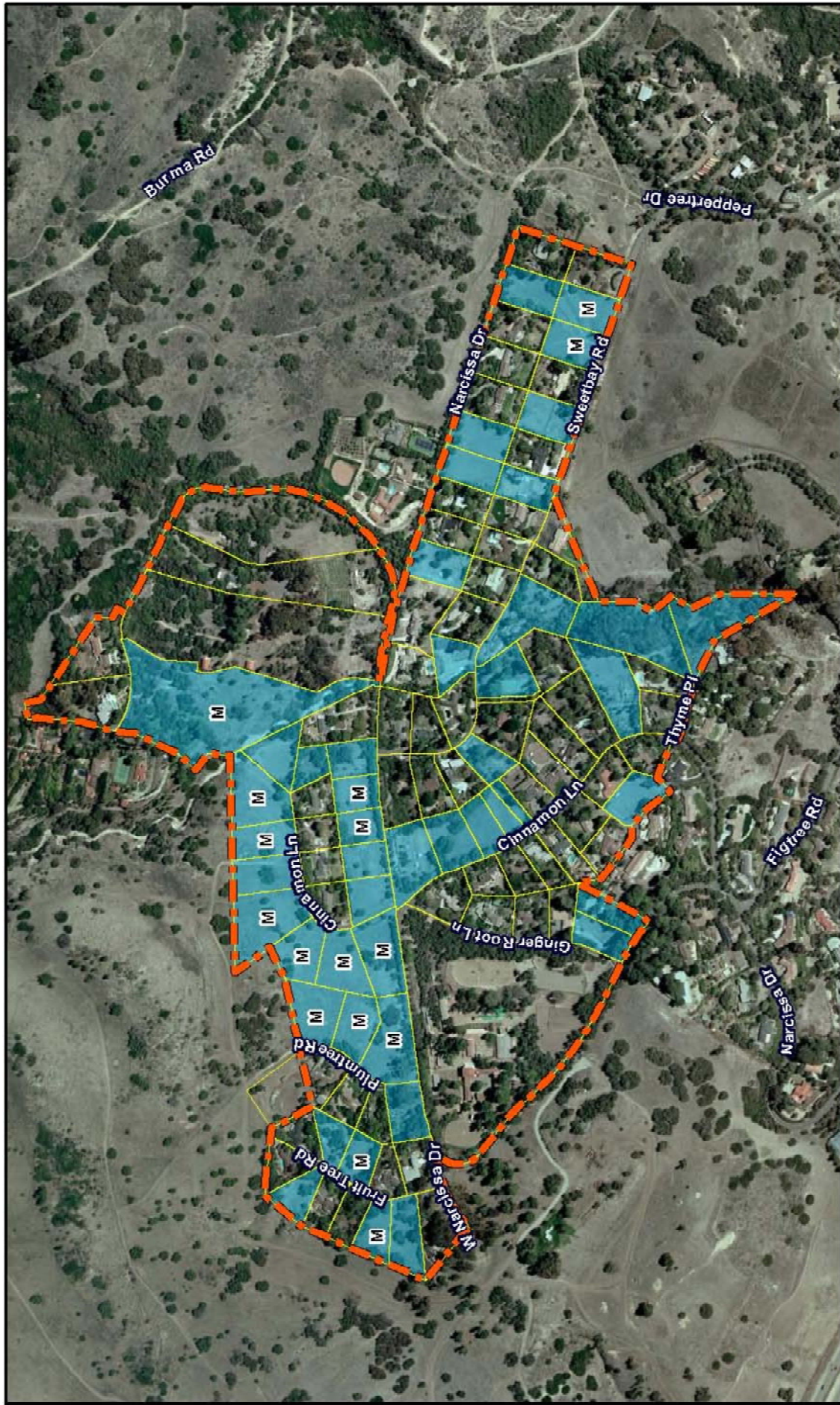
The proposed ordinance revisions would apply to the approximately 112-acre “Zone 2 Landslide Moratorium Ordinance” area, located north of the Narcissa Drive/Palos Verdes Drive South intersection in the Portuguese Bend area of the Palos Verdes Peninsula, within the City of Rancho Palos Verdes, County of Los Angeles, California. This area, located on the hills above the south-central coastline of the City, is within the City’s larger (approximately 1,200-acre) Landslide Moratorium Area (LMA). Zone 2 consists of 111 individual lots. Of these, 64 are developed with residences and accessory structures and 47 are undeveloped or underdeveloped. These latter 47 are the focus of this traffic impact study and the project’s environmental impact report. The proposed Zone 2 Landslide Moratorium - Portuguese Bend project site area and general vicinity are shown in *Figure 1-1*. The locations of the 47 undeveloped lots within the Portuguese Bend community under consideration by the City is displayed in *Figure 2-1*.

### 2.2 Current Land Use

Of the approximately 111 lots on the 112-acre project area (the Zone 2 area), the vast majority of the developed lots are improved with single-family residences, most dating from the 1950s, and related accessory structures and uses. The largest developed lot in Zone 2 is occupied by the Portuguese Bend Riding Club, a nonconforming commercial stable that was established prior to the City’s incorporation in 1973. Private streets within Zone 2 are maintained by the Portuguese Bend Community Association. The majority of the undeveloped lots contain non-native vegetation, and some have small, non-habitable structures (e.g., sheds, stables, fences, etc.) for equestrian or horticultural uses. The lots are generally between one-quarter acre and one acre or more in size.

### 2.3 Surrounding Land Uses

The approximately 112-acre Zone 2 area is primarily surrounded by open space and semi-rural residential development. To the northeast of the project area are developed residential lots in the Portuguese Bend community as well as City-owned open space in the Portuguese Bend Reserve of the Palos Verdes Nature Preserve, both of which are within Zone 1 of the Landslide Moratorium Area. To the northwest and west of the project area are developed residential lots in the Portuguese Bend community and vacant, residentially-zoned land (Upper and Lower Filiorum) which are located in Zone 1 of the Landslide Moratorium Area. To the south, southeast and east of the project area are developed and undeveloped residential lots in the Portuguese Bend community and located in Zone 5 (the area affected by the 1978 Abalone Cove landslide), Zone 6 (the active Portuguese Bend landslide area) and Zone 3 (located between Altamira Canyon and the westerly edge of the Portuguese Bend landslide area). Individual lots that would gain development potential as a result of the proposed project are located throughout Zone 2, and are therefore surrounded by the uses described above as well as other lots, both developed and undeveloped, in Zone 2.



SOURCE: RINCON CONSULTANTS, INC.

**FIGURE 2-1**  
**LOCATION OF PROJECT**  
**UNDEVELOPED LOTS**

ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

**LEGEND:**

-  NOT TO SCALE
-  Project Boundary
-  Vacant or Underdeveloped, Potentially Developable under Proposed Ordinance Revisions
-  Monks Plaintiff Lot

LINSCOTT, LAW & GREENSPAN, engineers

## 2.4 Project Characteristics

### 2.4.1 Project Background

In 2002, a group of Portuguese Bend property owners filed an ME application to exclude their undeveloped lots within the area known as Zone 2 from the LMA. Shortly after this application was deemed incomplete for processing, the applicants filed suit against the City. As part of the decision on the case (*Monks v. City of Rancho Palos Verdes*), the City has been ordered to remove regulatory impediments in its Municipal Code that prevent the development of the 16 *Monks* plaintiffs' lots. The City began this process with an Ordinance to allow the *Monks* plaintiffs to apply for Landslide Moratorium Exceptions (LMEs) for their lots. As of December 2010, five (5) *Monks* plaintiffs have obtained Planning entitlements to develop their lots, while the remaining *Monks* plaintiffs are at various stages in obtaining Planning entitlements for the balance of eleven (11) lots. The City now desires to consider broader revisions to the Landslide Moratorium Ordinance that could also permit the owners of the other 31 undeveloped lots in Zone 2 to be developed with new residences. This would result in the possible future development of up to 47 new residences on existing legal lots in Zone 2 within the Portuguese Bend community.

### 2.4.2 Project Description

Landslide Moratorium Ordinance Revisions. Section 15.20.040 of the Rancho Palos Verdes Municipal Code establishes the process for requesting exceptions from the City's landslide moratorium regulations. The current (amended in 2009) Municipal Code Section 15.20.040(P) includes the following category of exception to the moratorium on "the filing, processing, approval or issuance of building, grading or other permits" within the existing landslide moratorium area:

*The moratorium shall not be applicable to any of the following:...*

*...P. The construction of residential buildings, accessory structures, and grading totaling less than one thousand cubic yards of combined cut and fill and including no more than fifty cubic yards of imported fill material on the sixteen undeveloped lots in Zone 2 of the "Landslide Moratorium Area" as outlined in green on the landslide moratorium map on file in the Director's office, identified as belonging to the plaintiffs in the case "Monks v. City of Rancho Palos Verdes, 167 Cal. App. 4th 263, 84 Cal. Rptr. 3d 75 (Cal. App. 2 Dist., 2008)"; provided, that a landslide moratorium exception permit is approved by the Director, and provided that the project complies with the criteria set forth in Section 15.20.050 of this Chapter. Such projects shall qualify for a landslide moratorium exception permit only if all applicable requirements of this Code are satisfied, and the parcel is served by a sanitary sewer system. Prior to the issuance of a landslide moratorium exception permit, the applicant shall submit to the Director any geological or geotechnical studies reasonably required by the City to demonstrate to the satisfaction of the City geotechnical staff that the proposed project will not aggravate the existing situation.*

The proposed landslide moratorium ordinance revisions would revise the language of this section to encompass all 47 undeveloped lots in Zone 2, rather than restricting it to only the *Monks* plaintiffs' lots. This would allow for the future submittal of LMEs for all of these undeveloped lots. It should

be noted, however, that the granting of an LME does not constitute approval of a specific project request, but simply grants the property owner the ability to submit the appropriate application(s) for consideration of a specific project request.

Future Development Potential. The potential granting of up to 47 LME requests under the proposed ordinance revisions would permit individual property owners to then apply for individual entitlements to develop their lots. The undeveloped lots within Zone 2 are held in multiple private ownerships so the timing and scope of future development is not known. For the purposes of this EIR, it is assumed that development would occur over a period of at least 10 years from adoption of the ordinance revisions in a manner consistent with the private architectural standards adopted by the Portuguese Bend Community Association and the City's underlying RS-1 and RS-2 zoning regulations. Therefore, the future development assumptions for Zone 2 include the following:

- Forty-seven single-story, ranch-style residences with attached or detached three-car garages, with minimum living area of 1,500 square feet and maximum living area of 4,000 square feet or 15% of gross lot area, whichever is less;
- Less than 1,000 cubic yards of grading (cut and fill combined) per lot, with no more than 50 cubic yards of imported fill per lot;
- Maximum 25% (RS-1) or 40% (RS-2) net lot coverage;
- Maximum building height of 16 feet for residences and 12 feet for detached accessory structures;
- Minimum front setbacks of 20 feet, minimum rear setbacks of 15 feet, minimum street-side setbacks of 10 feet, and minimum interior side setbacks of five feet, with setbacks along private street rights-of-way measured from the easement line rather than the property line; and,
- No subdivision of existing lots within Zone 2.

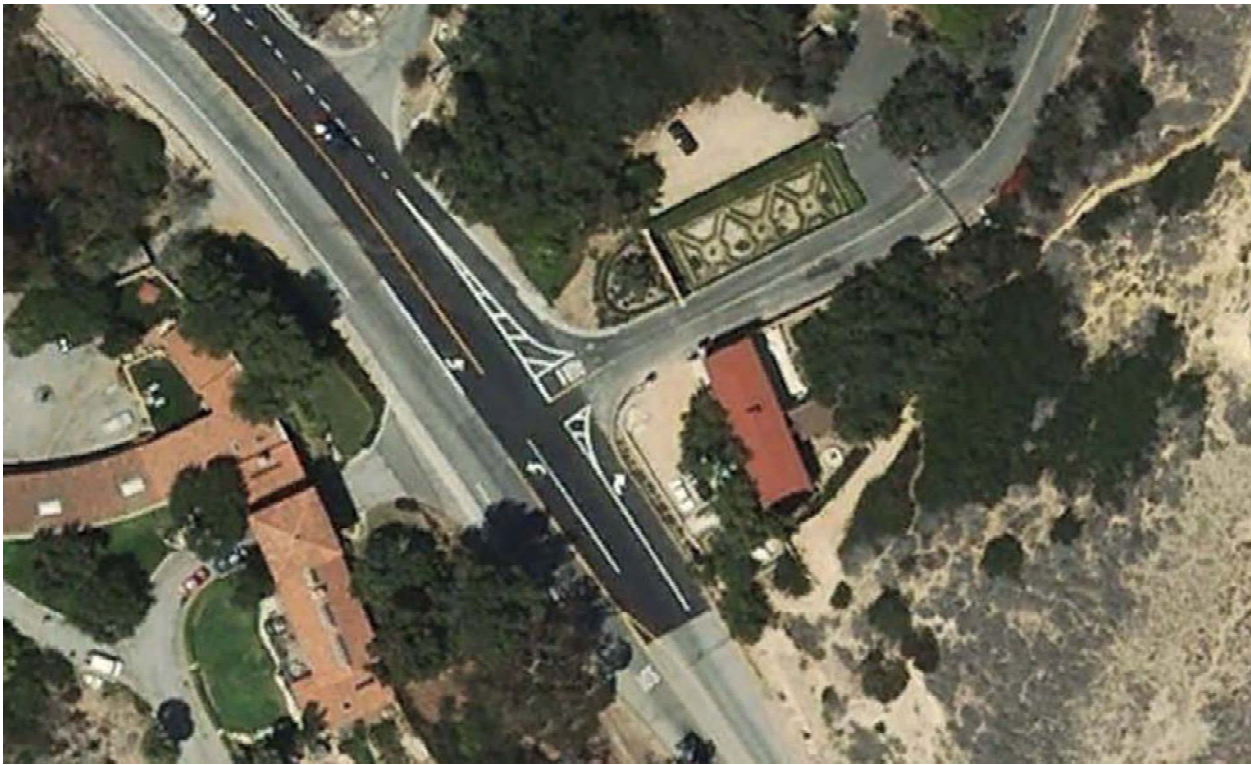
As noted above, the City has been ordered to remove regulatory impediments in its Municipal Code that prevent the development of the 16 *Monks* plaintiffs' lots. This was accomplished by the 2009 addition to the moratorium exceptions, cited above. As of December 2010, five *Monks* plaintiffs have obtained planning entitlements to develop their lots, while the remaining *Monks* plaintiffs are at various stages in obtaining planning entitlements for the balance of eleven lots. However, to provide a conservative analysis, this traffic impact study considers the potential environmental impacts of build-out of all 47 undeveloped and underdeveloped lots (16 *Monks* lots plus 31 additional lots) under the parameters listed above.

### 3.0 PROJECT SITE ACCESS AND CIRCULATION

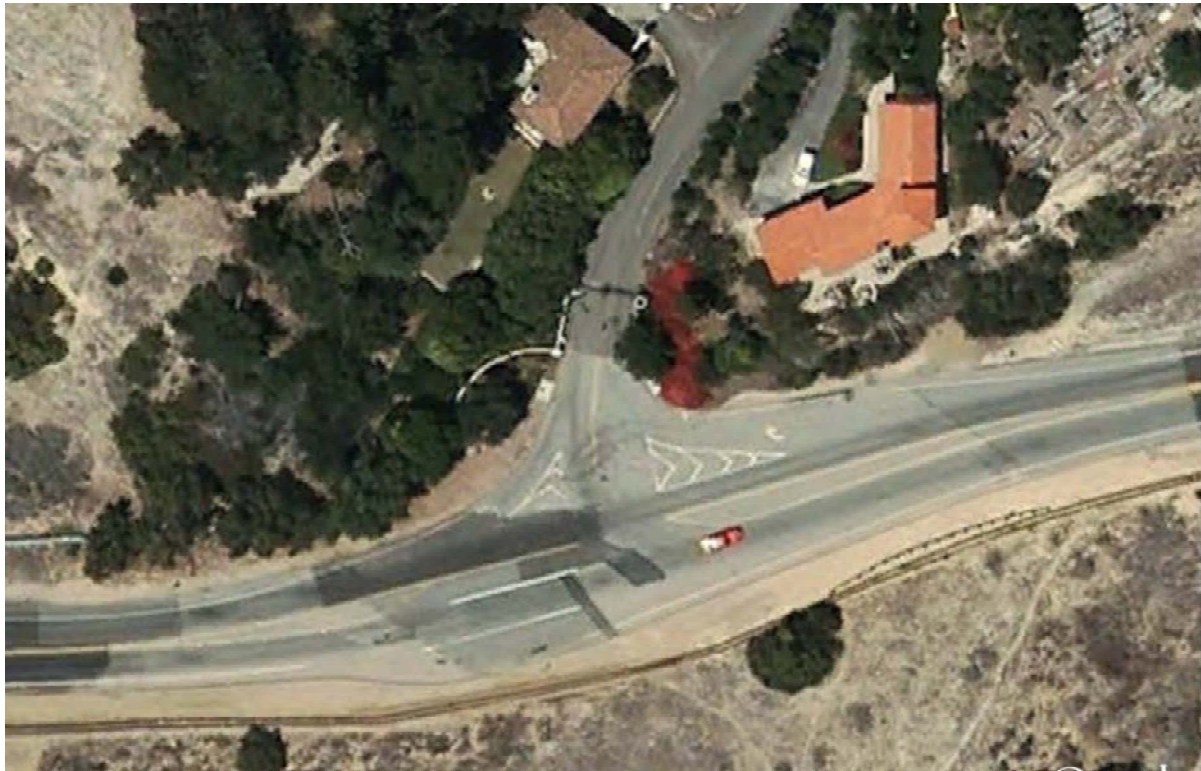
Access to the existing Portuguese Bend community of Rancho Palos Verdes is provided via Narcissa Drive and Peppertree Drive. All streets in the Portuguese Bend community are private, and the community itself is gated. The gates restricting access to the community on Narcissa Drive and Peppertree Drive are set back approximately 190 and 90 feet from Palos Verdes Drive South, respectively. The following lane configurations are provided at the existing access locations for the community:

- Narcissa Drive/Palos Verdes Drive South
  - Eastbound Approach: One left-turn lane and one shared through/right-turn lane
  - Westbound Approach: One left-turn lane, one through lane and one right-turn lane
  - Southbound Approach: One shared left-turn/through lane and one right-turn lane
- Peppertree Drive/Palos Verdes Drive South
  - Eastbound Approach: One left-turn lane and one through lane
  - Westbound Approach: One through lane and one right-turn lane
  - Southbound Approach: One left-turn lane and one right-turn lane

No changes to the existing Portuguese Bend community site access and circulation scheme are planned as part of the proposed project. Aerial photographs of the two subject Portuguese Bend community access intersections are displayed in *Figure 3-1*.



Palos Verdes Drive South and Narcissa Drive



Palos Verdes Drive South and Peppertree Drive



NOT TO SCALE

SOURCE: GOOGLE EARTH

# FIGURE 3-1 PORTUGUESE BEND COMMUNITY ACCESS INTERSECTIONS

LINSCOTT, LAW & GREENSPAN, engineers

ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

## 4.0 EXISTING CONDITIONS

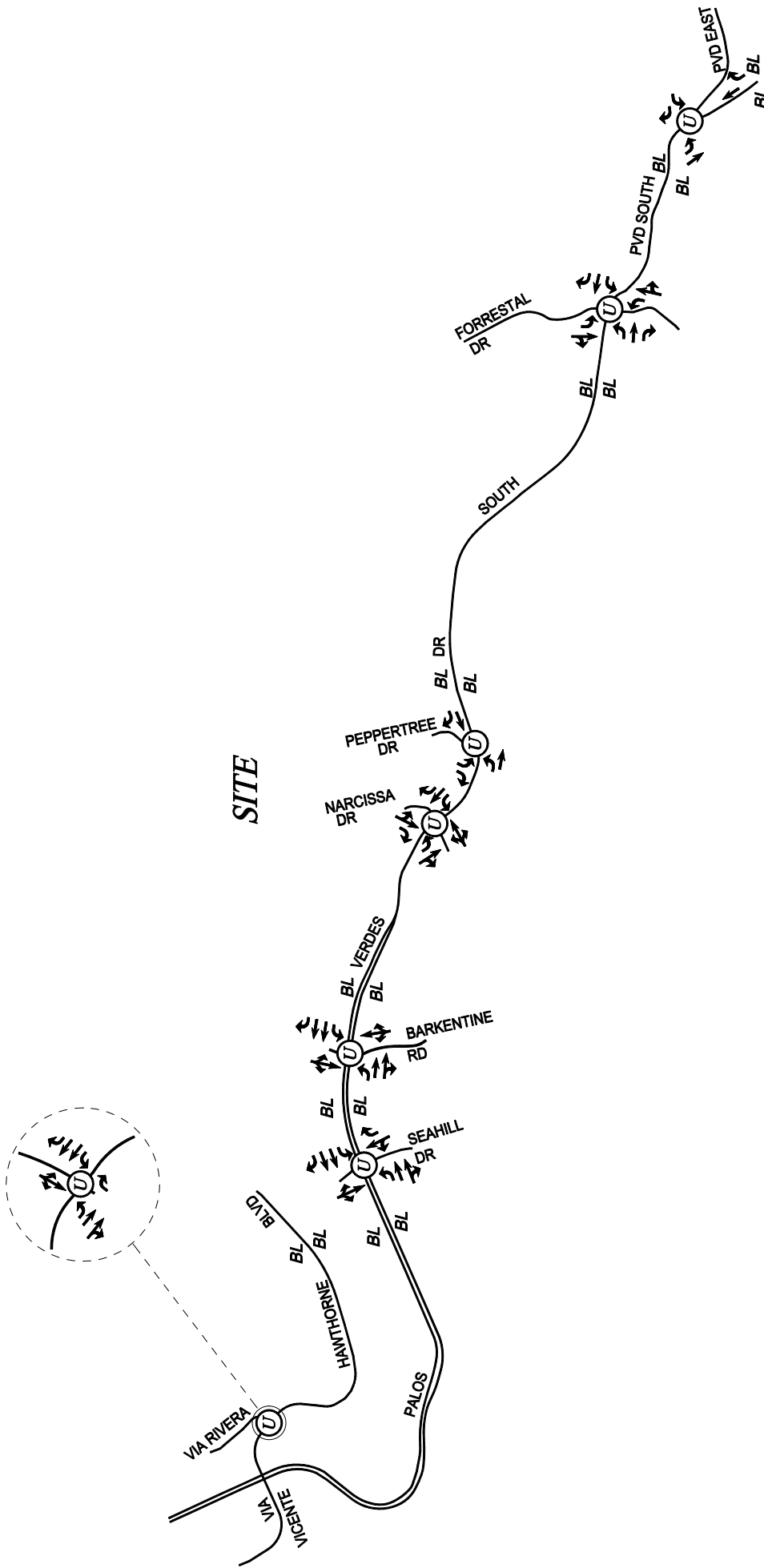
### 4.1 Existing Street System

The local network of streets serving the proposed project study area includes Palos Verdes Drive West, Palos Verdes Drive South and Hawthorne Boulevard. All of the seven study intersections selected for analysis are controlled by stop signs with the stop signs facing the minor street approaches. The existing roadway configurations and intersection controls at the seven study intersections are displayed in *Figure 4-1*.

#### 4.1.1 Roadway Classifications

The City of Rancho Palos Verdes utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- *Freeways* are limited-access and high-speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses.
- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: principal and minor arterials. Principal arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Minor arterials are typically two-to-four lane streets that service local and commute traffic.
- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.
- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.



**FIGURE 4-1**  
**EXISTING ROADWAY CONFIGURATIONS AND**  
**INTERSECTION CONTROLS**  
 ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

NOTES: (U) UNSIGNALIZED INTERSECTION  
 BL BIKE LANE

NOT TO SCALE

LINSCOTT, LAW & GREENSPAN, engineers

#### 4.1.2 Roadway Descriptions

Brief descriptions of the important roadways in the project vicinity are provided in the following paragraphs.

*Tramonto Drive* is an east-west oriented roadway located west of the project site and extends northerly of Palos Verdes Drive South. Tramonto Lane transitions to Seahill Drive south of Palos Verdes Drive South. This roadway is designated as a Local Street in the City of Rancho Palos Verdes General Plan Circulation Element. One through travel lane is provided in each direction along the roadway within the project study area. There is no posted speed limit on Tramonto Drive in the project vicinity, thus it is assumed to be a prima facie speed limit of 25 miles per hour.

*Seahill Drive* is an east-west oriented roadway located west of the project site and extends southerly of Palos Verdes Drive South. Seahill Drive transitions to Tramonto Lane north of Palos Verdes Drive South. This roadway is designated as a Local Street in the City of Rancho Palos Verdes General Plan Circulation Element. One through travel lane is provided in each direction along the roadway within the project study area. Seahill Drive is posted for a 25 miles per hour speed limit near the project site.

*Barkentine Road* is an east-west oriented roadway located west of the project site and extends northerly and south of Palos Verdes Drive South. This roadway is designated as a Local Street in the City of Rancho Palos Verdes General Plan Circulation Element. One through travel lane is provided in each direction along the roadway within the project study area. There is no posted speed limit on Barkentine Road in the project vicinity, thus it is assumed to be a prima facie speed limit of 25 miles per hour.

*Narcissa Drive* is a circuitous roadway that provides access to the Portuguese Bend community. This roadway is a private roadway that is maintained by the Portuguese Bend community association. One through travel lane is provided in each direction along Narcissa Drive within the community. The gate restricting access to the community on Narcissa Drive is set back approximately 190 feet from Palos Verdes Drive South.

*Peppertree Drive* is a circuitous roadway that provides access to the Portuguese Bend community. This roadway is a private roadway that is maintained by the Portuguese Bend community association. One through travel lane is provided in each direction along Peppertree Drive within the community. The gates restricting access to the community on Peppertree Drive is set back approximately 90 feet from Palos Verdes Drive South.

*Forrestal Drive* is an east-west oriented roadway located east of the project site and extends northerly of Palos Verdes Drive South. Forrestal Drive transitions to Ocean Trails Drive south of Palos Verdes Drive South. This roadway is designated as a Local Street in the City of Rancho Palos Verdes General Plan Circulation Element. One through travel lane is provided in each direction along the roadway within the project study area. There is no posted speed limit on Forrestal Drive in the project vicinity, thus it is assumed to be a prima facie speed limit of 25 miles per hour.

*Hawthorne Boulevard* is a predominantly north-south oriented roadway located west of the project site and extends generally between Palos Verdes Drive West and Pacific Coast Highway. This roadway is designated as an Arterial in the City of Rancho Palos Verdes General Plan Circulation Element. Two through travel lanes with raised medians and a bike lane are provided in each direction along the roadway within the project study area. Hawthorne Boulevard is posted for a 45 miles per hour speed limit near the project site.

*Via Rivera* is a north-south oriented roadway located west of the project site and extends generally north of Hawthorne Boulevard, east of Palos Verdes Drive West. This roadway is designated as a Local Street in the City of Rancho Palos Verdes General Plan Circulation Element. One through travel lane is provided in each direction along the roadway within the project study area. Via Rivera is posted for a 25 miles per hour speed limit near the project site.

*Palos Verdes Drive East* is a north-south oriented roadway located east of the project site. Palos Verdes Drive East extends from Palos Verdes Drive South to just north of Palos Verdes Drive North where it becomes Narbonne Avenue. This roadway is designated as an Arterial in the City of Rancho Palos Verdes General Plan Circulation Element. Two through travel lanes are provided in each direction along the roadway, except south of Ganado Drive where one lane in each direction is provided. Palos Verdes Drive East is posted for a 40 miles per hour speed limit in the project vicinity except near Ganado Drive where Palos Verdes Drive East is posted for a 35 miles per hour speed limit.

*Palos Verdes Drive South* is an east-west oriented roadway located south of the Portuguese Bend community. Palos Verdes Drive South transitions to Palos Verdes Drive West just north/west of the Point Vicente Interpretive Center easterly/southerly access point. This roadway is designated as an Arterial in the City of Rancho Palos Verdes General Plan Circulation Element. Two through travel lanes and a bike lane are provided in each direction along the roadway within the project study area, however, between Narcissa Drive and Schooner Drive, a Class II bike lane does not currently exist on Palos Verdes Drive South. Palos Verdes Drive South is posted for a 40 miles per hour speed limit near the project site.

## 4.2 Existing Public Bus Transit Service

Public bus transit service within the Zone 2 Landslide Moratorium - Portuguese Bend project study area is currently provided by the Los Angeles County Metropolitan Transportation Authority, Palos Verdes Peninsula Transit Authority, City of Redondo Beach Beach Cities Transit, and the City of Los Angeles Department of Transportation. A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in **Table 4-1**. The existing public transit routes in the Zone 2 Landslide Moratorium - Portuguese Bend project site vicinity are illustrated in **Figure 4-2**.

Table 4-1  
EXISTING TRANSIT ROUTES [1]

| ROUTE                         | DESTINATIONS                                                                                          | ROADWAY(S)<br>NEAR SITE                                                   | NO. OF BUSES<br>DURING PEAK HOUR |        |        |
|-------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------|--------|--------|
|                               |                                                                                                       |                                                                           | DIR                              | AM     | PM     |
| Metro 344                     | Rancho Palos Verdes to Harbor Gateway<br>(via Torrance)                                               | Palos Verdes Drive West, Palos Verdes Drive<br>South, Hawthorne Boulevard | NB<br>SB                         | 3<br>4 | 3<br>3 |
| LADOT Commuter<br>Express 448 | Downtown Los Angeles to Rancho Palos Verdes<br>(via Lomita, Harbor City, Wilmington, Century Freeway) | Hawthorne Boulevard                                                       | NB<br>SB                         | 1<br>0 | 0<br>3 |
| MAX 2                         | El Segundo to Rancho Palos Verdes<br>(via Manhattan Beach, Redondo Beach)                             | Palos Verdes Drive West,<br>Hawthorne Boulevard                           | NB<br>SB                         | 1<br>0 | 0<br>2 |
| PVPTA Blue Line               | Rancho Palos Verdes                                                                                   | Palos Verdes Drive West,<br>Hawthorne Boulevard                           | EB<br>WB                         | 1<br>2 | 1<br>1 |
| PVPTA Gold Line               | Rolling Hills to Rancho Palos Verdes                                                                  | Palos Verdes Drive West,<br>Palos Verdes Drive South                      | EB<br>WB                         | 2<br>2 | 1<br>1 |
| PVPTA Orange Line             | Rolling Hills to Rancho Palos Verdes                                                                  | Palos Verdes Drive West,<br>Palos Verdes Drive South                      | EB<br>WB                         | 0<br>2 | 1<br>0 |
| PVPTA 226                     | Palos Verdes Estates                                                                                  | Palos Verdes Drive West                                                   | NB<br>SB                         | 0<br>2 | 1<br>0 |

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro), Los Angeles Department of Transportation (LADOT), Municipal Area Express (MAX), and Palos Verdes Peninsula Transit Authority (PVPTA) websites.



MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY (METRO) WEBSITE



NOT TO SCALE



PROJECT SITE

## FIGURE 4-2 EXISTING PUBLIC TRANSIT ROUTES

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ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

### 4.3 Existing Traffic Volumes

Existing manual counts of vehicular turning movements were conducted in May 2010 at six of the seven existing study intersections and in March 2011 for the remaining study intersection (i.e., Intersection No. 1, Hawthorne Boulevard/Via Rivera) during the weekday morning (AM) and afternoon (PM) commuter periods to determine the peak hour traffic volumes. The manual counts were conducted by traffic count subconsultants at the study intersections from 7:00 to 9:00 AM to determine the weekday AM peak commuter hour, and from 4:00 to 6:00 PM to determine the weekday PM peak commuter hour. Traffic volumes at the seven study intersections show the weekday morning and afternoon peak periods typically associated with peak hours in the metropolitan area.

The existing weekday AM and PM peak hour manual counts of turning vehicles at the seven study intersections are summarized in **Table 4-2**. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in **Figures 4-3** and **4-4**, respectively. Summary data worksheets of the manual traffic counts of the study intersections are contained in **Appendix A**.

### 4.4 Existing Intersection Operating Conditions

Existing AM and PM peak hour operating conditions for the seven study intersections were evaluated using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the methodology outlined in Chapter 17 of the *Highway Capacity Manual 2000*<sup>2</sup> (HCM2000) for unsignalized intersections.

#### 4.4.1 Intersection Capacity Utilization Method of Analysis

In conformance with the City of Rancho Palos Verdes and Los Angeles County Congestion Management Program (CMP) requirements, any signalized intersections were evaluated using the Intersection Capacity Utilization (ICU) method. The ICU methodology is intended for signalized intersection analyses and estimates the volume-to-capacity (V/C) relationship for an intersection based on the individual V/C ratios for key conflicting traffic movements.

The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing. The ICU value translates to a LOS estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding ICU value range and are shown in **Table 4-3**.

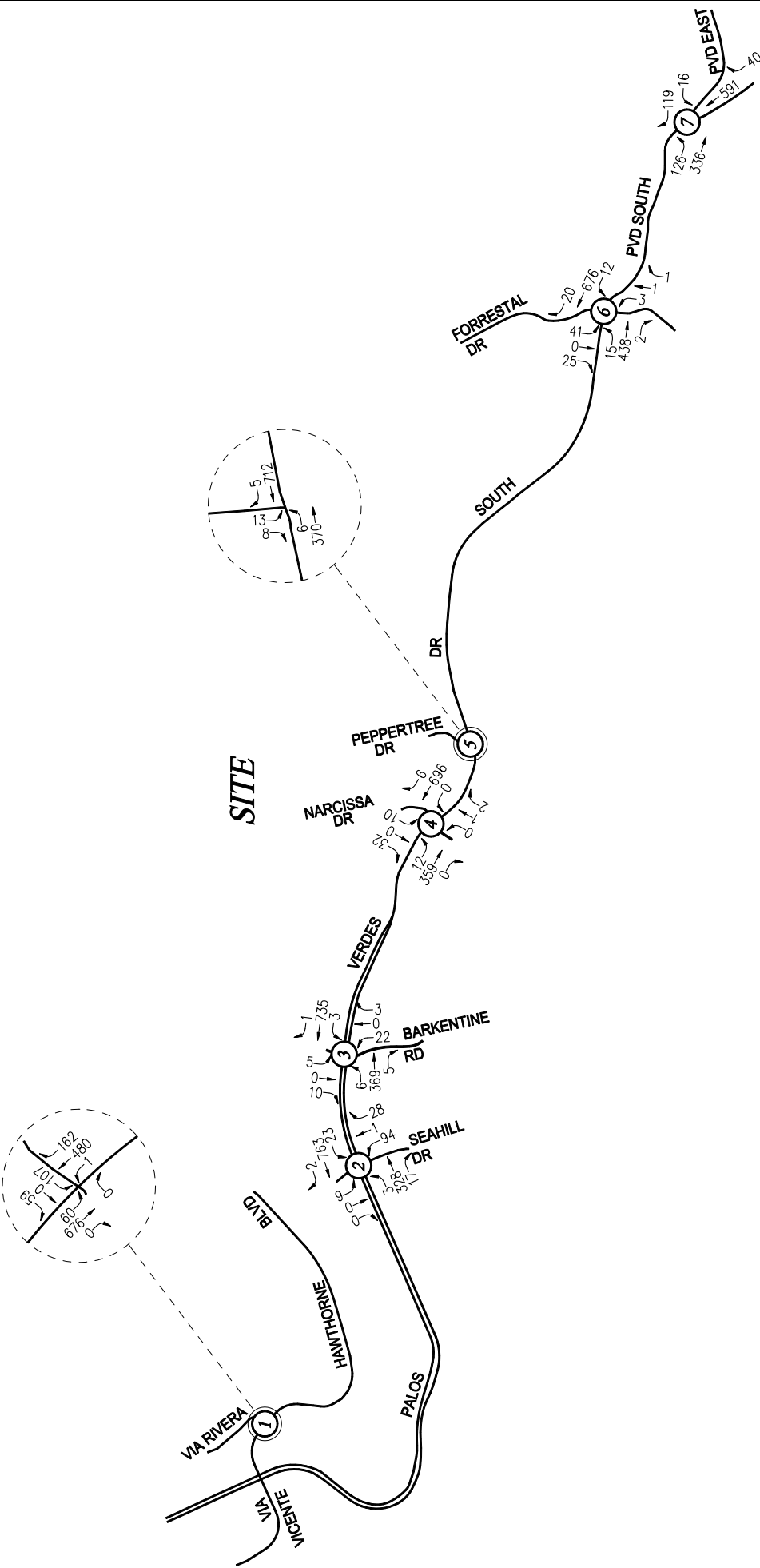
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<sup>2</sup> Source: *Highway Capacity Manual 2000*, Transportation Research Board, 2000.

Table 4-2  
EXISTING TRAFFIC VOLUMES [1]

| NO. | INTERSECTION                                              | DIR                  | DATE     | AM PEAK HOUR |                        | PM PEAK HOUR |                        |
|-----|-----------------------------------------------------------|----------------------|----------|--------------|------------------------|--------------|------------------------|
|     |                                                           |                      |          | BEGAN        | VOLUME                 | BEGAN        | VOLUME                 |
| 1   | Via Rivera/<br>Hawthorne Boulevard                        | NB<br>SB<br>EB<br>WB | 03/22/11 | 7:45         | 0<br>175<br>688<br>632 | 5:00         | 12<br>82<br>552<br>657 |
| 2   | Seahill Drive-Tramonto Drive/<br>Palos Verdes Drive South | NB<br>SB<br>EB<br>WB | 05/19/10 | 7:30         | 123<br>9<br>348<br>788 | 4:45         | 75<br>2<br>626<br>467  |
| 3   | Barkentine Road/<br>Palos Verdes Drive South              | NB<br>SB<br>EB<br>WB | 05/19/10 | 7:30         | 25<br>15<br>380<br>739 | 4:45         | 20<br>3<br>592<br>446  |
| 4   | Narcissa Drive/<br>Palos Verdes Drive South               | NB<br>SB<br>EB<br>WB | 05/19/10 | 7:30         | 3<br>42<br>371<br>702  | 4:45         | 0<br>30<br>568<br>416  |
| 5   | Peppertree Drive/<br>Palos Verdes Drive South             | NB<br>SB<br>EB<br>WB | 05/19/10 | 7:30         | 0<br>21<br>376<br>717  | 4:45         | 0<br>21<br>571<br>440  |
| 6   | Forrestal Drive/<br>Palos Verdes Drive South              | NB<br>SB<br>EB<br>WB | 05/19/10 | 7:30         | 5<br>66<br>455<br>708  | 4:45         | 46<br>59<br>593<br>498 |
| 7   | Palos Verdes Drive East<br>Palos Verdes Drive South       | NB<br>SB<br>EB<br>WB | 05/19/10 | 7:30         | 0<br>135<br>462<br>631 | 4:15         | 0<br>102<br>527<br>463 |

[1] Counts conducted by City Traffic Counters.

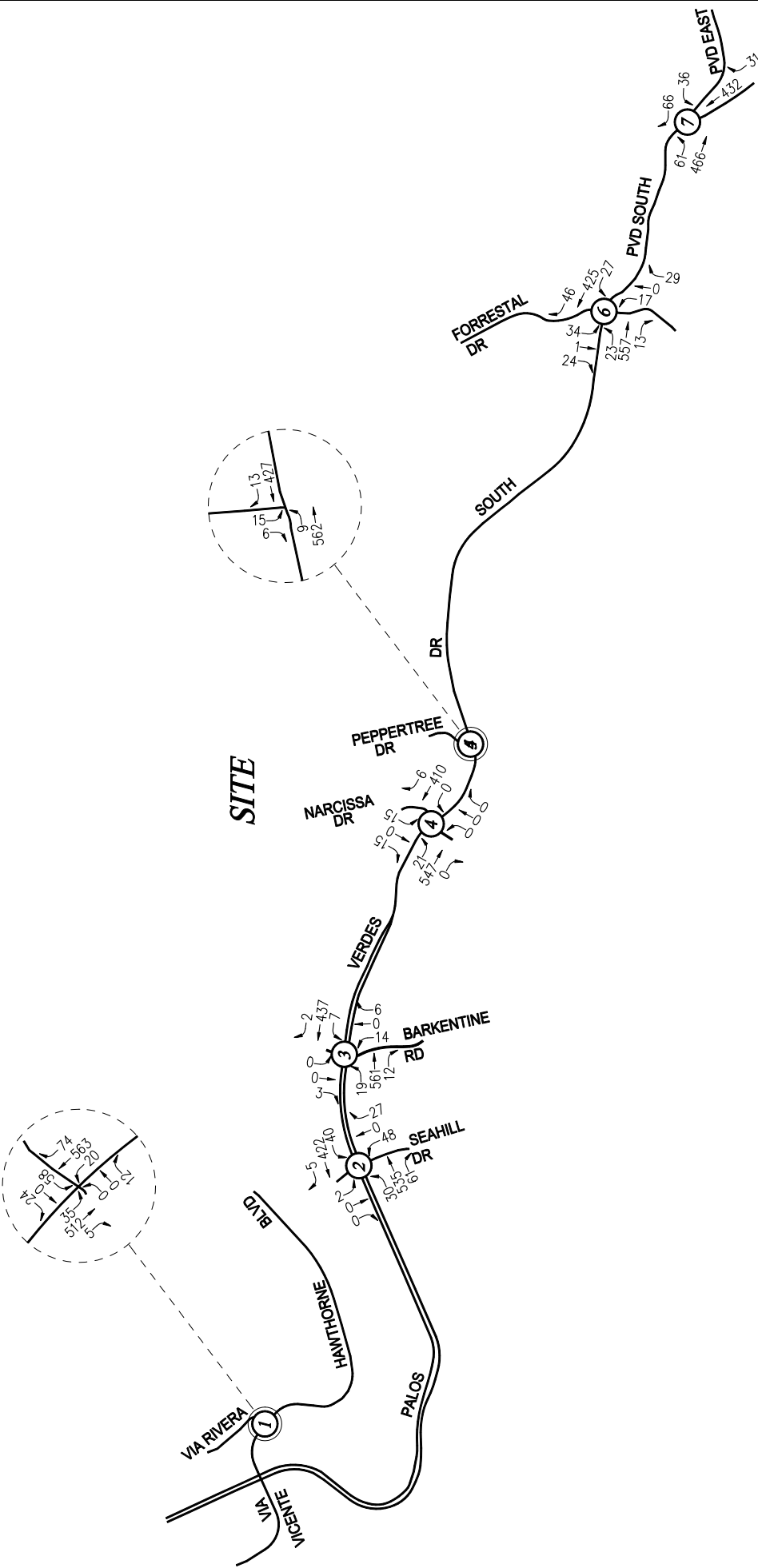


**FIGURE 4-3**  
**EXISTING TRAFFIC VOLUMES**  
 WEEKDAY AM PEAK HOUR  
 ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

(X) = INTERSECTION NUMBER

NOT TO SCALE

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**FIGURE 4-4**  
**EXISTING TRAFFIC VOLUMES**  
 WEEKDAY PM PEAK HOUR  
 ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

(X) = INTERSECTION NUMBER

NOT TO SCALE

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Pursuant to Los Angeles County CMP requirements, the ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and a dual left-turn capacity of 2,880 vph. Additionally, a clearance adjustment factor of 0.10 was added to each Level of Service (LOS) calculation.

Table 4-3  
LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

| Level of Service (LOS) | Intersection Capacity Utilization Value (V/C) | Level of Service Description                                                                                                                                                                                         |
|------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A                      | $\leq 0.600$                                  | EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.                                                                                                                          |
| B                      | 0.601 – 0.700                                 | VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.                                                                                 |
| C                      | 0.701 – 0.800                                 | GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.                                                                                            |
| D                      | 0.801 – 0.900                                 | FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.                                       |
| E                      | 0.901 – 1.000                                 | POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.                                                                     |
| F                      | $> 1.000$                                     | FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths. |

#### 4.4.2 Highway Capacity Manual Method of Analysis (Unsignalized Intersections)

The HCM2000 unsignalized methodology for stop-controlled intersections was utilized for the analysis of the unsignalized intersections. This methodology estimates the average control delay for each of the subject movements and determines the level of service for each movement. The overall average control delay measured in seconds per vehicle, and level of service is then calculated for the entire intersection. The HCM2000 control delay value translates to a LOS estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in **Table 4-4**.

TABLE 4-4  
LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS<sup>3</sup>

| Level of Service (LOS) | Highway Capacity Manual Delay Value (sec/veh) | Level of Service Description |
|------------------------|-----------------------------------------------|------------------------------|
| A                      | $\leq 10.0$                                   | Little or no delay           |
| B                      | $> 10.0$ and $\leq 15.0$                      | Short traffic delays         |
| C                      | $> 15.0$ and $\leq 25.0$                      | Average traffic delays       |
| D                      | $> 25.0$ and $\leq 35.0$                      | Long traffic delays          |
| E                      | $> 35.0$ and $\leq 50.0$                      | Very long traffic delays     |
| F                      | $> 50.0$                                      | Severe congestion            |

#### 4.5 Existing Level of Service Results

The existing peak hour service level calculations for the seven study intersections based on existing traffic volumes and current street geometry is summarized in **Table 4-5**. Review of **Table 4-5** indicates that all of the seven study intersections are currently operating at acceptable Levels of Service (i.e., LOS D or better) during the weekday AM and PM peak hours. The ICU and HCM data worksheets for the analyzed intersections for the weekday AM and PM peak hours are contained in **Appendix B**.

<sup>3</sup>Source: *Highway Capacity Manual 2000*, Chapter 17 (Unsignalized Intersections).

Table 4-5  
EXISTING INTERSECTION LEVELS OF SERVICE SUMMARY

| Int No. | Key Intersections                                         | Time Period | Control Type      | Delay (sec/veh) | V/C Ratio      | LOS    |
|---------|-----------------------------------------------------------|-------------|-------------------|-----------------|----------------|--------|
| 1       | Via Rivera/<br>Hawthorne Boulevard                        | AM<br>PM    | Two – Way<br>Stop | 38.6<br>29.4    | 0.572<br>0.342 | E<br>D |
| 2       | Tramonto Drive-Seahill Drive/<br>Palos Verdes Drive South | AM<br>PM    | Two – Way<br>Stop | 27.6<br>23.6    | 0.396<br>0.274 | D<br>C |
| 3       | Barkentine Road/<br>Palos Verdes Drive South              | AM<br>PM    | Two – Way<br>Stop | 18.9<br>18.7    | 0.091<br>0.067 | C<br>C |
| 4       | Narcissa Drive/<br>Palos Verdes Drive South               | AM<br>PM    | Two – Way<br>Stop | 17.8<br>16.1    | 0.085<br>0.069 | C<br>C |
| 5       | Peppertree Drive/<br>Palos Verdes Drive South             | AM<br>PM    | Two – Way<br>Stop | 20.0<br>18.4    | 0.068<br>0.069 | C<br>C |
| 6       | Forrestal Drive/<br>Palos Verdes Drive South              | AM<br>PM    | Two – Way<br>Stop | 31.3<br>26.6    | 0.315<br>0.251 | D<br>D |
| 7       | Palos Verdes Drive East/<br>Palos Verdes Drive South      | AM<br>PM    | Two – Way<br>Stop | 17.0<br>16.3    | 0.271<br>0.175 | C<br>C |

## 5.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the Zone 2 Landslide Moratorium - Portuguese Bend project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., LOS) conditions at selected key intersections using existing and expected future traffic volumes without and with forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

### 5.1 Project Traffic Generation Characteristics

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Traffic volumes to be generated by the proposed project were forecast for the weekday AM and PM peak hours, and over a 24-hour period. The resource typically used by traffic engineers (including the City of Rancho Palos Verdes) to forecast trip generation for development projects is the Institute of Transportation Engineers' (ITE) *Trip Generation* manual<sup>4</sup>. ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates were used to forecast traffic volumes for the proposed project.

The trip generation rates and forecast of the vehicular trips anticipated to be generated by the proposed project are presented in **Table 5-1**. The project trip generation forecast was submitted for review by City staff. As summarized in *Table 5-1*, the proposed project is expected to generate 35 vehicle trips (9 inbound trips and 26 outbound trips) during the AM peak hour. During the PM peak hour, the proposed project is expected to generate 47 vehicle trips (30 inbound trips and 17 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 450 daily trip ends during a typical weekday (approximately 225 inbound trips and 225 outbound trips).

---

<sup>4</sup> Institute of Transportation Engineers *Trip Generation* manual, 8<sup>th</sup> Edition, 2008.

Table 5-1  
PROJECT TRIP GENERATION [1]

| LAND USE                  | SIZE  | DAILY<br>TRIP ENDS [2]<br>VOLUMES | AM PEAK HOUR<br>VOLUMES [2] |           |           | PM PEAK HOUR<br>VOLUMES [2] |           |           |
|---------------------------|-------|-----------------------------------|-----------------------------|-----------|-----------|-----------------------------|-----------|-----------|
|                           |       |                                   | IN                          | OUT       | TOTAL     | IN                          | OUT       | TOTAL     |
| Single-Family Housing [3] | 47 DU | 450                               | 9                           | 26        | 35        | 30                          | 17        | 47        |
| <b>TOTAL</b>              |       | <b>450</b>                        | <b>9</b>                    | <b>26</b> | <b>35</b> | <b>30</b>                   | <b>17</b> | <b>47</b> |

[1] Source: ITE "Trip Generation", 8th Edition, 2008.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.

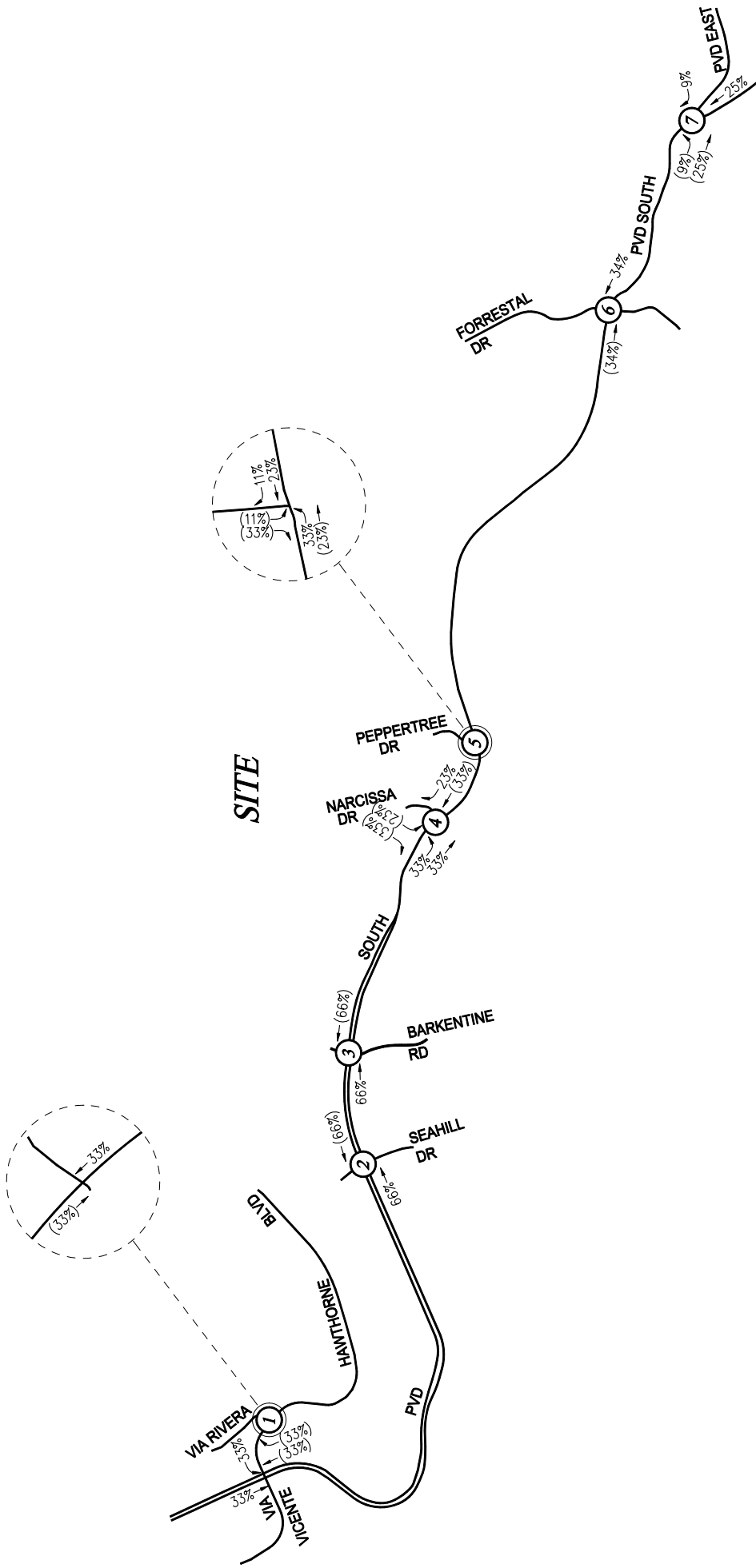
- Daily Trip Rate: 9.57 trips/DU; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.75 trips/DU; assume 25% inbound/75% outbound
- PM Peak Hour Trip Rate: 1.01 trips/DU; 63% inbound/37% outbound

## 5.2 Project Traffic Distribution and Assignment

The general, directional traffic distribution pattern for the proposed Zone 2 Landslide Moratorium - Portuguese Bend project is presented in **Figure 5-1**. Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Palos Verdes Drive South),
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals,
- Existing intersection traffic volumes,
- Ingress/egress availability at the project site, and
- Input from City staff.

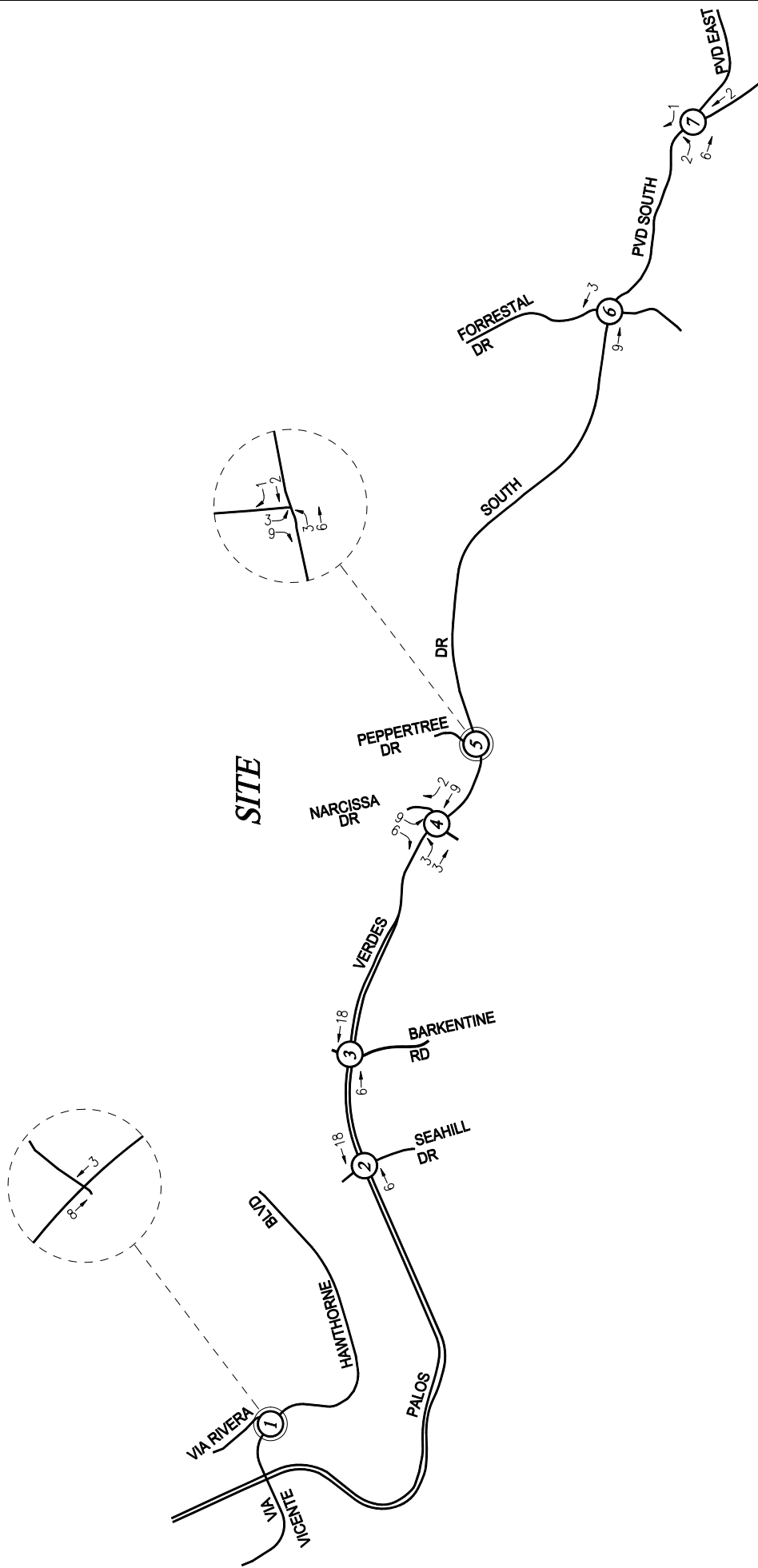
The forecast weekday AM and PM peak hour project traffic volumes associated with the proposed project under Year 2020 conditions are presented in **Figures 5-2** and **5-3**, respectively. The traffic volume assignments presented in **Figures 5-2** and **5-3** reflect the traffic distribution characteristics shown in **Figure 5-1** and the project traffic generation forecasts presented in **Table 5-1**.



**FIGURE 5-1**  
**PROJECT TRAFFIC DISTRIBUTION PATTERN**

(X) = INTERSECTION NUMBER  
XX = INBOUND PERCENTAGES  
(XX) = OUTBOUND PERCENTAGES

NOT TO SCALE

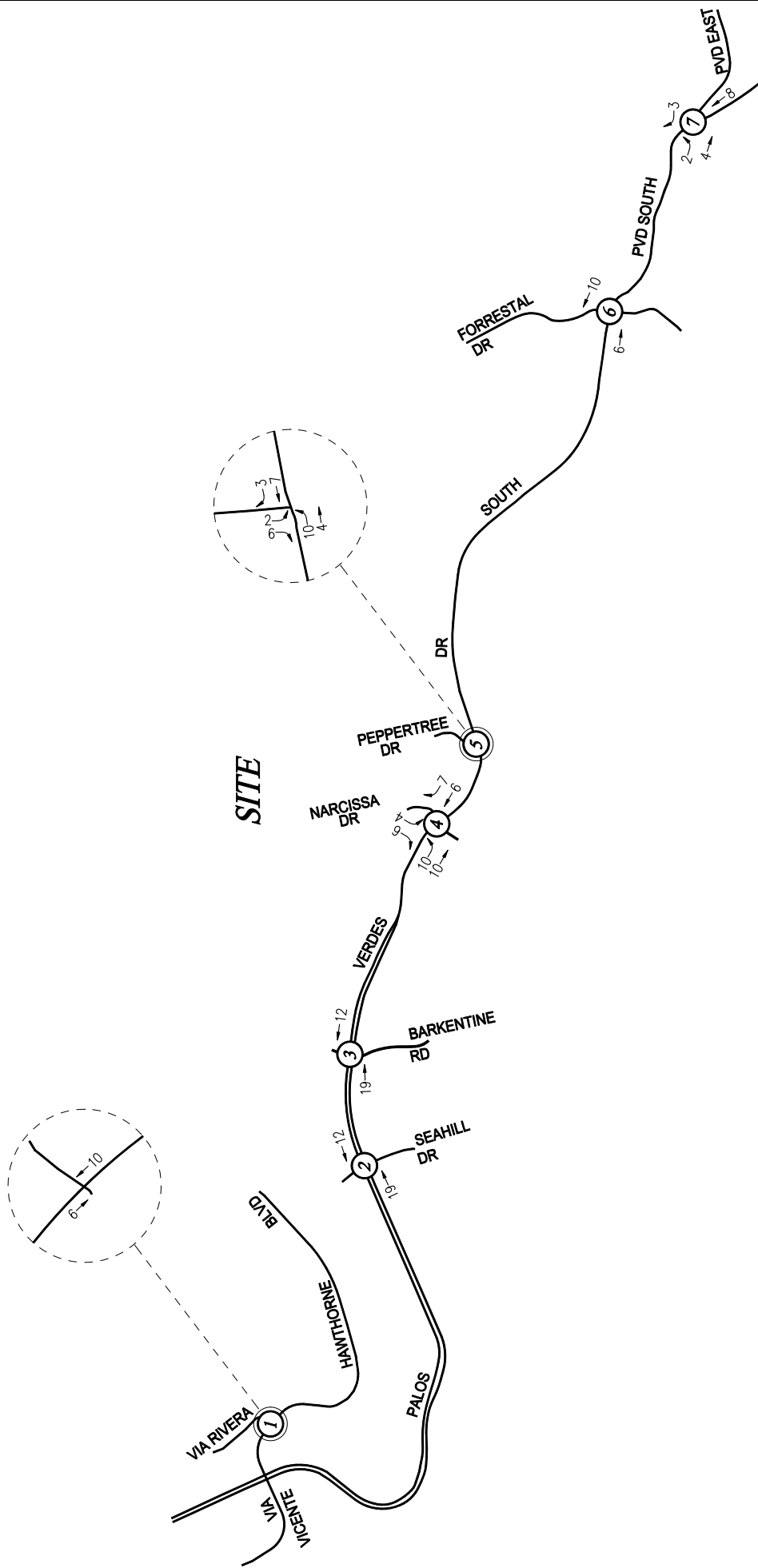


**FIGURE 5-2**  
**PROJECT TRAFFIC VOLUMES**  
 WEEKDAY AM PEAK HOUR  
 ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

(X) = INTERSECTION NUMBER

NOT TO SCALE

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**FIGURE 5-3**  
**PROJECT TRAFFIC VOLUMES**  
 WEEKDAY PM PEAK HOUR  
 ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

(X) = INTERSECTION NUMBER

NOT TO SCALE

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## 6.0 FUTURE TRAFFIC CONDITIONS

The forecast of future pre-project conditions was prepared in accordance with procedures outlined in Section 15130 of the California Environmental Quality Act (CEQA) Guidelines. Specifically, the CEQA Guidelines provides two options for developing the future traffic volume forecast:

“(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or

(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.”

The traffic analysis is conservative in that for the future year 2020 pre-project condition, both option “A” and “B” have been incorporated into the analysis as outlined the CEQA Guidelines for purposes of developing the future year 2020 forecasts.

### 6.1 Ambient Traffic Growth

Horizon year, background traffic growth estimates have been calculated by using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area, as well as account for typical growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at 0.6 percent (0.6%) per year. The ambient growth factor was based on review of the background traffic growth estimates for the Palos Verdes area published in the *2010 Congestion Management Program for Los Angeles County*, which indicate that existing traffic volumes would be expected to increase at an annual rate of approximately 0.51 percent (0.51% per year) between years 2010 and 2020. However, in order to provide a conservative analysis, the higher ambient growth factor of 0.60 percent (0.60% per year) contained in the *2004 Congestion Management Program for Los Angeles County* was utilized in this analysis. Application of the ambient traffic growth factor to existing traffic volumes results in a 6.0 percent (6.0%) increase in existing traffic volumes to horizon Year 2020.

## 6.2 Related Projects Traffic Characteristics

In order to make a realistic estimate of future on-street conditions prior to implementation of the Zone 2 Landslide Moratorium - Portuguese Bend project, the status of other known development projects (related projects) in the area has been researched at the City of Rancho Palos Verdes, City of Rolling Hills Estates, and City of Los Angeles. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development. Based on current research, 34 related projects are located in the project vicinity that have either been built, but not yet fully occupied, or are being processed for approval. These 34 related projects have been included as part of the cumulative background setting in Year 2020.

The location of the related projects and a brief description for each of the 34 related projects is described in **Table 6-1**. The location of the related projects is graphically illustrated in **Figure 6-1**. These related projects are expected to generate vehicular traffic, which may affect the operating conditions of the key study intersections.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the ITE *Trip Generation* manual. The related projects respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in **Table 6-1**. The assignment of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in **Figures 6-2** and **6-3**, respectively.

## 6.3 Existing With Project Traffic Volumes

The forecast weekday AM and PM peak hour with project traffic volumes (i.e., existing traffic volumes and proposed project traffic volumes) at the seven study intersections are illustrated in **Figures 6-4** and **6-5**, respectively.

## 6.4 Year 2020 Traffic Volumes

### 6.4.1 Year 2020 Future Pre-Project Traffic Volumes

The Year 2020 future forecast weekday AM and PM peak hour pre-project traffic volumes (i.e., existing traffic volumes, ambient traffic growth to Year 2020 and related projects traffic volumes) at the seven study intersections are presented in **Figures 6-6** and **6-7**, respectively.

### 6.4.2 Year 2020 Future With Project Traffic Volumes

The Year 2020 future forecast weekday AM and PM peak hour with project traffic volumes (i.e., existing traffic volumes, ambient traffic growth to Year 2020, related projects and proposed project traffic volumes) at the seven study intersections are illustrated in **Figures 6-8** and **6-9**, respectively.

Table 6-1  
LIST OF RELATED PROJECTS AND RELATED PROJECTS TRIP GENERATION FORECAST [1]

| NO.                         | PROJECT STATUS       | PROJECT NAME<br>ADDRESS/LOCATION                                                                                                                                                                  | LAND USE DATA                                                                                                                                                 |                                                                           | PROJECT DATA<br>SOURCE                       | WEEKDAY                        |                             |         |                             |         |         |          |  |
|-----------------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------|--------------------------------|-----------------------------|---------|-----------------------------|---------|---------|----------|--|
|                             |                      |                                                                                                                                                                                                   | LAND-USE                                                                                                                                                      | SIZE                                                                      |                                              | DAILY TRIP ENDS [2]<br>VOLUMES | AM PEAK HOUR<br>VOLUMES [2] |         | PM PEAK HOUR<br>VOLUMES [2] |         |         |          |  |
|                             |                      |                                                                                                                                                                                                   |                                                                                                                                                               |                                                                           |                                              |                                | IN                          | OUT     | IN                          | OUT     | IN      | OUT      |  |
| City of Rancho Palos Verdes |                      |                                                                                                                                                                                                   |                                                                                                                                                               |                                                                           |                                              |                                |                             |         |                             |         |         |          |  |
| R1                          | Partially Built      | Trump National Golf Club Project<br>(Ocean Trails)<br>Palos Verdes Drive South/west of<br>Shoreline Park                                                                                          | Single-Family Detached Housing<br>Affordable Housing<br>(5 Homes Built)                                                                                       | 54 DU<br>4 DU                                                             | [3]                                          | 517<br>38                      | 10<br>1                     | 31<br>2 | 41<br>3                     | 35<br>3 | 20<br>1 | 55<br>4  |  |
| R2                          | Proposed             | Chevron with Car Wash<br>27774 Hawthorne Boulevard                                                                                                                                                | Gas Station With Convenience<br>Market and Car Wash                                                                                                           | 6 VFP                                                                     | [4]                                          | 917                            | 37                          | 35      | 72                          | 43      | 41      | 84       |  |
| R3                          | Built                | Teranea Resort and Spa Project<br>6610 Palos Verdes Drive South                                                                                                                                   | Resort Hotel<br>Condominium<br>Retail<br>Restaurant<br>Fitness Center<br>Golf Course                                                                          | 550 Rooms<br>32 DU<br>20,000 GLSF<br>22,500 GLSF<br>22,000 GSF<br>9 Holes | [5],[6]<br>[7]<br>[8]<br>[9]<br>[10]<br>[11] | 6,263                          | 195                         | 118     | 313                         | 247     | 252     | 499      |  |
| R4                          | Proposed             | Green Hills Memorial Park<br>Master Plan Project<br>27501 South Western Avenue                                                                                                                    | Cemetery                                                                                                                                                      | 27.3 Acres                                                                | [12]                                         | 129                            | 4                           | 1       | 5                           | 8       | 15      | 23       |  |
| R5                          | Proposed             | Marymount College Facilities Expansion<br>30800 Palos Verdes Drive East<br>(793 Student Enrollment Cap with<br>250-student Bachelor of Arts Degree Program<br>and 150-student Weekend Enrollment) | Junior College Building Expansion<br>(Demolish Existing Building)<br>BA Degree Program (University)<br>Junior College<br>Jr. College Weekend Enrollment Incr. | 77,504 SF<br>(18,022) SF<br>250 Students<br>(250) Students<br>67 Students | [13]                                         | 1,931                          | 149                         | 51      | 200                         | 83      | 92      | 175      |  |
| R6                          | Partially Built      | TTM No. 52666 Project<br>3200 Palos Verdes Drive West                                                                                                                                             | Single-Family Detached Housing<br>(10 Homes Built)                                                                                                            | 3 DU                                                                      | [3]                                          | 29                             | 1                           | 1       | 2                           | 2       | 1       | 3        |  |
| R7                          | Partially Built      | Ocean Front Estates Project<br>Seaward side of Palos Verdes Drive West<br>terminus of Hawthorne Boulevard                                                                                         | Single-Family Detached Housing<br>(74 Homes Built)                                                                                                            | 5 DU                                                                      | [3]                                          | 48                             | 1                           | 3       | 4                           | 3       | 2       | 5        |  |
| R8                          | Under Construction   | Trader Joe's<br>Golden Cove Shopping Center<br>31176 Hawthorne Boulevard                                                                                                                          | Supermarket<br>(Project Opened April 2010)                                                                                                                    | 11,000 GLSF                                                               | [14]                                         | 1,125                          | 24                          | 15      | 39                          | 59      | 57      | 116      |  |
| R9                          | Approved             | Point Vicente Animal Hospital<br>31270 Palos Verdes Drive West                                                                                                                                    | Animal Hospital                                                                                                                                               | 5,759 GSF                                                                 | [15]                                         | 270                            | 17                          | 6       | 23                          | 11      | 16      | 27       |  |
| R10                         | Permit Expired 10/09 | Hawthorne/Crest Office Project<br>29941 Hawthorne Boulevard                                                                                                                                       | Office                                                                                                                                                        | 7,232 GSF                                                                 | [16]                                         | 80                             | 10                          | 1       | 11                          | 2       | 9       | 11       |  |
| R11                         | Approved             | Highridge Condominium Project<br>28220 Highridge Road                                                                                                                                             | Condominium                                                                                                                                                   | 28 DU                                                                     | [7]                                          | 163                            | 2                           | 10      | 12                          | 10      | 5       | 15       |  |
| R12                         | Built                | Salvation Army Crestridge<br>College Project<br>30840 Hawthorne Boulevard                                                                                                                         | Apartment (Campus Housing)<br>(Project Opened April 2009)                                                                                                     | 20 DU                                                                     | [17]                                         | 133                            | 2                           | 8       | 10                          | 8       | 4       | 12       |  |
| R13                         | Proposed             | Crestridge Estate LLC Project<br>5601 Crestridge Road                                                                                                                                             | Senior Condominium<br>Senior Center                                                                                                                           | 90 DU<br>10,000 GSF                                                       | [18]<br>[19]                                 | 313<br>229                     | 4<br>10                     | 8<br>6  | 12<br>16                    | 8<br>6  | 6<br>9  | 14<br>15 |  |

Table 6-1 (Continued)  
LIST OF RELATED PROJECTS AND RELATED PROJECTS TRIP GENERATION FORECAST [1]

| NO.                                     | PROJECT STATUS               | PROJECT NAME ADDRESS/LOCATION                                                                  | LAND USE DATA                                                                                                           |                                                         | PROJECT DATA SOURCE                       | DAILY TRIP ENDS [2] VOLUMES | WEEKDAY                  |                |                 |                          |                |                 |
|-----------------------------------------|------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------|-----------------------------|--------------------------|----------------|-----------------|--------------------------|----------------|-----------------|
|                                         |                              |                                                                                                | LAND-USE                                                                                                                | SIZE                                                    |                                           |                             | AM PEAK HOUR VOLUMES [2] |                |                 | PM PEAK HOUR VOLUMES [2] |                |                 |
|                                         |                              |                                                                                                |                                                                                                                         |                                                         |                                           |                             | IN                       | OUT            | TOTAL           | IN                       | OUT            | TOTAL           |
| City of Rancho Palos Verdes (continued) |                              |                                                                                                |                                                                                                                         |                                                         |                                           |                             |                          |                |                 |                          |                |                 |
| R 14                                    | Approved                     | St. John Fisher Church Project<br>5488 Crest Road                                              | Day Care Center<br>Proposed new building area<br>Existing to be demolished                                              | 40 Students<br>32,426 GSF<br>(10,329) GSF               | [20]<br>[21]<br>[21]                      | 179<br>295<br>(94)          | 17<br>11<br>(4)          | 15<br>7<br>(2) | 32<br>18<br>(6) | 16<br>9<br>(3)           | 17<br>9<br>(3) | 33<br>18<br>(6) |
| R 15                                    | Under Construction           | Mirandella Project<br>Northwest corner of<br>Crenshaw Boulevard/Crestridge Road                | Senior Apartment                                                                                                        | 34 DU                                                   | [22]                                      | 272                         | 2                        | 16             | 18              | 16                       | 9              | 25              |
| R 16                                    | Proposed                     | Annenberg Project at Lower Point Vicente<br>31501 Palos Verdes Drive West                      | Multi-Use Educational and<br>Interpretive Center                                                                        | 35,200 SF                                               | [23]                                      | 596                         | 81                       | 30             | 111             | 51                       | 59             | 110             |
| City of Rolling Hills Estates           |                              |                                                                                                |                                                                                                                         |                                                         |                                           |                             |                          |                |                 |                          |                |                 |
| RH1                                     | Proposed                     | Rolling Hills Covenant Church Project<br>2221-2222 Palos Verdes Drive North                    | Church                                                                                                                  | 1,650 Seats                                             | [24]                                      | 1,000                       | 68                       | 28             | 96              | 41                       | 59             | 100             |
| RH2                                     | Proposed                     | Tanglewood Subdivision Project<br>Northeast corner of<br>Rolling Hills/Tanglewood Lane         | Single-Family Detached Housing                                                                                          | 3 DU                                                    | [3]                                       | 29                          | 1                        | 1              | 2               | 2                        | 1              | 3               |
| RH3                                     | Built/<br>Partially Occupied | Silver Spur Court Project<br>981 Silver Spur Road                                              | Condominium                                                                                                             | 18 DU                                                   | [7]                                       | 105                         | 1                        | 7              | 8               | 6                        | 3              | 9               |
| RH4                                     | Built/<br>Partially Occupied | Rolling Hills Villas Project<br>901 Deep Valley Drive                                          | Senior Condominium<br>Retail                                                                                            | 41 DU<br>1,526 GLSF                                     | [18]<br>[8]                               | 143<br>66                   | 2<br>1                   | 3<br>1         | 5<br>2          | 4<br>3                   | 3<br>3         | 7<br>6          |
| RH5                                     | Approved                     | Crest Road Building Project<br>5883 Crest Road                                                 | Office<br>Retail                                                                                                        | 4,545 GSF<br>1,215 GLSF                                 | [16]<br>[8]                               | 50<br>52                    | 6<br>1                   | 1<br>0         | 7<br>1          | 1<br>2                   | 6<br>3         | 7<br>5          |
| RH6                                     | Proposed                     | Butcher Ranch Subdivision Project<br>Palos Verdes Drive North and<br>Montecillo Drive          | Single-Family Detached Housing                                                                                          | 11 DU                                                   | [3]                                       | 105                         | 2                        | 6              | 8               | 7                        | 4              | 11              |
| RH7                                     | Proposed                     | Chandler Ranch/Rolling Hills<br>Country Club Project<br>26311 & 27000 Palos Verdes Drive East  | Single-Family Detached Housing<br>Quality Restaurant<br>Health/Fitness Club<br>Tennis Courts<br>New Social Club Members | 114 DU<br>338 Seats<br>7,150 GSF<br>5 TC<br>100 Members | [25], [3]<br>[26]<br>[10]<br>[27]<br>[28] | 1,486                       | 24                       | 42             | 66              | 152                      | 70             | 222             |
| RH8                                     | Approved                     | 627 Deep Valley Drive                                                                          | Condominium<br>Retail<br>10% Pass-By<br>10% Internal Capture<br>Existing Car Wash<br>Existing Auto Repair               | 58 DU<br>5,810 GSF<br><br>(13,608) SF<br>(13,608) SF    | [29], [30]<br>[8]<br><br>[31]<br>[32]     | 636                         | (2)                      | 15             | 13              | 30                       | 21             | 51              |
| RH9                                     | Proposed                     | Brickwalk LLC Residential Project<br>655-683 Deep Valley Drive and<br>924-950 Indian Peak Road | Condominium<br>Retail                                                                                                   | 148 DU<br>14,200 GLSF                                   | [7]<br>[8]                                | 860<br>610                  | 11<br>9                  | 54<br>5        | 65<br>14        | 52<br>26                 | 25<br>27       | 77<br>53        |

Table 6-1 (Continued)  
LIST OF RELATED PROJECTS AND RELATED PROJECTS TRIP GENERATION FORECAST [1]

| NO.                                       | PROJECT STATUS                  | PROJECT NAME ADDRESS/LOCATION                            | LAND USE DATA                                 |                            | PROJECT DATA SOURCE | DAILY TRIP ENDS [2] VOLUMES | WEEKDAY                  |                  |                  |                          |                 |                  |
|-------------------------------------------|---------------------------------|----------------------------------------------------------|-----------------------------------------------|----------------------------|---------------------|-----------------------------|--------------------------|------------------|------------------|--------------------------|-----------------|------------------|
|                                           |                                 |                                                          | LAND-USE                                      | SIZE                       |                     |                             | AM PEAK HOUR VOLUMES [2] |                  |                  | PM PEAK HOUR VOLUMES [2] |                 |                  |
|                                           |                                 |                                                          |                                               |                            |                     |                             | IN                       | OUT              | TOTAL            | IN                       | OUT             | TOTAL            |
| City of Rolling Hills Estates (continued) |                                 |                                                          |                                               |                            |                     |                             |                          |                  |                  |                          |                 |                  |
| RH10                                      | Approved                        | 827 Deep Valley Drive                                    | Senior Condominium                            | 16 DU                      | [7]                 | 93                          | 1                        | 6                | 7                | 5                        | 3               | 8                |
| RH11                                      | Approved                        | Mediterranean Village Project<br>927 Deep Valley Drive   | Condominium<br>Retail                         | 75 DU<br>2,000 GLSF        | [7]<br>[8]          | 436<br>86                   | 6<br>1                   | 27<br>1          | 33<br>2          | 26<br>3                  | 13<br>4         | 39<br>7          |
| RH12                                      | Approved                        | Silverdes Medical Office Project<br>828 Silver Spur Road | Medical Office<br>Office                      | 24,518 GSF<br>5,124 GSF    | [33]<br>[16]        | 886<br>56                   | 48<br>7                  | 13<br>1          | 61<br>8          | 25<br>1                  | 66<br>7         | 91<br>8          |
| RH13                                      | Proposed                        | Continental Development Project<br>627 Silver Spur Road  | Condominium<br>Commercial                     | 70 DU<br>30,000 GLSF       | [7]<br>[16]         | 407<br>330                  | 5<br>41                  | 26<br>6          | 31<br>47         | 24<br>8                  | 12<br>37        | 36<br>45         |
| RH14                                      | Proposed                        | Silver Center Project<br>449 Silver Spur Road            | Retail/Commercial                             | 4,745 GLSF                 | [8]                 | 204                         | 3                        | 2                | 5                | 9                        | 9               | 18               |
| RH15                                      | Proposed                        | Promenade Peninsula Project<br>550 Deep Valley Drive     | Condominium<br>Retail                         | 66 DU<br>16,620 GLSF       | [7]<br>[8]          | 383<br>714                  | 5<br>10                  | 24<br>7          | 29<br>17         | 23<br>30                 | 11<br>32        | 34<br>62         |
| RH16                                      | Proposed                        | 2901 Palos Verdes Drive North                            | Single-Family Detached Housing                | 3 DU                       | [3]                 | 29                          | 1                        | 1                | 2                | 2                        | 1               | 3                |
| City of Los Angeles                       |                                 |                                                          |                                               |                            |                     |                             |                          |                  |                  |                          |                 |                  |
| LA1                                       | Proposed                        | Ponte Vista Project<br>26900 South Western Avenue        | Multi-Family<br>Condominium<br>Senior Housing | 385 DU<br>630 DU<br>380 DU | [7]<br>[7]<br>[18]  | 2,256<br>3,692<br>1,322     | 29<br>47<br>14           | 140<br>230<br>16 | 169<br>277<br>30 | 134<br>220<br>26         | 66<br>108<br>16 | 200<br>328<br>42 |
| LA2                                       | Build/<br>Partially<br>Occupied | Seaport Condos Project                                   | Condominium                                   | 140 DU                     | [7]                 | 813                         | 11                       | 51               | 62               | 49                       | 24              | 73               |
| TOTAL                                     |                                 |                                                          |                                               |                            |                     | 30,282                      | 927                      | 1,076            | 1,924            | 1,528                    | 1,255           | 2,653            |

[1] Source: City of Rancho Palos Verdes Planning Department, City of Rancho Palos Verdes Estates Planning Department, City of Rolling Hills Planning Department, and City of Los Angeles Department of Transportation. The peak hour traffic volumes were forecast based on either related projects data obtained from the respective agencies or applied trip rates as provided in the ITE "Trip Generation", 8th Edition, 2008 (as referenced in the Project Data Source column).

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 210 (Single Family Detached Housing) trip generation average rates.

[4] ITE Land Use Code 946 (Gasoline/Service Station with Convenience Market and Car Wash) trip generation average rates. Saturday PM mid-day peak hour traffic volumes represent ten percent of the Saturday daily trip generation forecast.

[5] The AM and PM peak hour trip generation forecast obtained from the Revised Long Point Resort Project Traffic Impact Analysis, prepared by Urban Crossroads, January 2001. Saturday trip generation forecast based on ITE Trip Generation manual trip generation rates for Saturday.

[6] ITE Land Use Code 330 (Resort Hotel) trip generation average rates.

[7] ITE Land Use Code 230 (Residential Condominium/Townhome) trip generation average rates.

[8] ITE Land Use Code 820 (Shopping Center) trip generation average rates.

[9] ITE Land Use Code 932 (High-Turnover Restaurant) trip generation average rates.

[10] ITE Land Use Code 492 (Health/Fitness Center) trip generation average rates.

[11] ITE Land Use Code 430 (Golf Course) trip generation average rates.

[12] ITE Land Use Code 566 (Cemetery) trip generation average rates.

[13] Source: Marymount College Facilities Expansion Project Bachelor of Arts Degree Program Environmental Impact Report Appendix D, January 2010.

[14] ITE Land Use Code 850 (Supermarket) trip generation average rates.

[15] ITE Land Use Code 640 (Animal Hospital/Veterinary Clinic) trip generation average rates. Daily and Saturday trip generation rates not provided in the ITE Trip Generation manual.

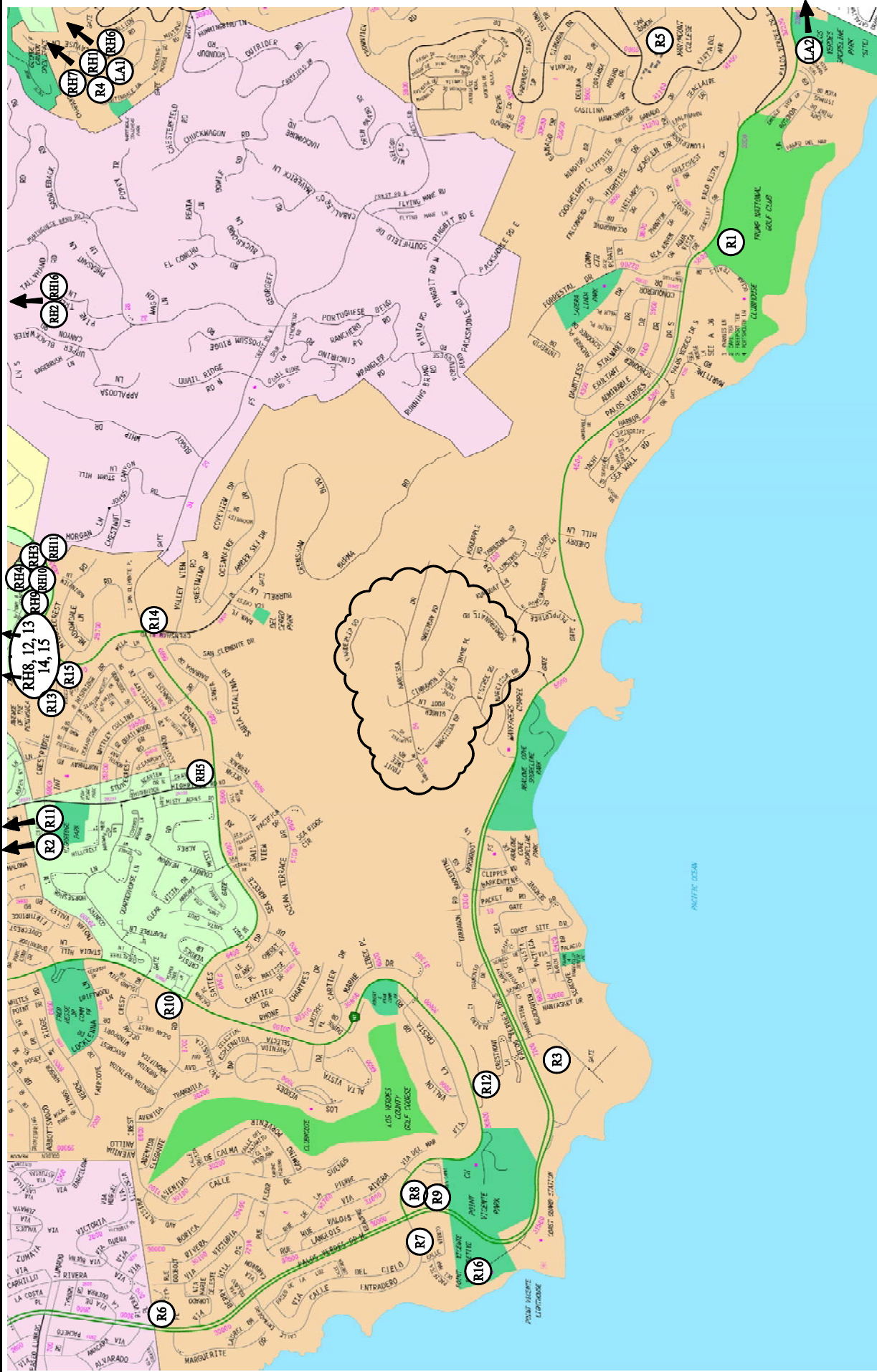
Thus, it is assumed that the PM peak hour traffic volumes represent ten percent of the daily trip generation forecast and the Saturday trip generation forecast based on PM peak hour trip generation rates.

[16] ITE Land Use Code 710 (General Office Building) trip generation average rates.

Table 6-1 (Continued)  
LIST OF RELATED PROJECTS AND RELATED PROJECTS TRIP GENERATION FORECAST [1]

- [17] ITE Land Use Code 220 (Apartment) trip generation average rates.
- [18] ITE Land Use Code 252 (Senior Adult Housing-Attached) trip generation average rates.
- [19] ITE Land Use Code 495 (Recreational Community Center) trip generation average rates.
- [20] ITE Land Use Code 565 (Day Care Center) trip generation average rates.
- [21] ITE Land Use Code 560 (Church) trip generation average rates.
- [22] The AM and PM peak hour trip generation forecast based on County of Los Angeles trip generation rates for townhomes/condominiums consistent with the *Traffic Impact Analysis for Senior Apartment Project*, prepared by LLG Engineers, January 15, 2009.
- [23] Source: *Traffic Impact Study, The Amenberg Project at Lower Point Vicente, City of Rancho Palos Verdes, California*, May 18, 2010, prepared by LLG Engineers.
- [24] Source: City of Rolling Hills Planning Department
- [25] Saturday trip generation forecast based on ITE Land Use Code 252 trip generation rates for Saturday.
- [26] The AM and PM peak hour trip generation forecast obtained from the Chandler Ranch/Rolling Hills Country Club Project DEIR, April 30, 2009, Saturday trip generation forecast based on ITE Trip Generation manual.
- [27] ITE Land Use Code 931 (Quality Restaurant) trip generation average rates.
- [28] ITE Land Use Code 490 (Tennis Courts) trip generation average rates.
- [29] ITE trip rates not provided in the ITE Trip Generation manual. Saturday new member trips calculated based on existing clubhouse trips during the PM peak hour.
- [30] The AM and PM peak hour trip generation forecast obtained from the Traffic Impact Analysis, 627 Deep Valley Drive Residential Mixed-Use Development, prepared by DKS Associates, October 13, 2005, Saturday trip generation forecast based on ITE Trip Generation manual.
- [31] ITE Land Use Code 232 (High-Rise Condominium) trip generation average rates.
- [32] ITE Land Use Code 948 (Automated Car Wash) trip generation average rates.
- [33] ITE Land Use Code 943 (Automobile Parts and Service Center) trip generation average rates.
- [34] ITE Land Use Code 720 (Medical/Dental Office) trip generation average rates.

n/a = not available



MAP SOURCE: THOMAS BROS. GUIDE

PROJECT AREA

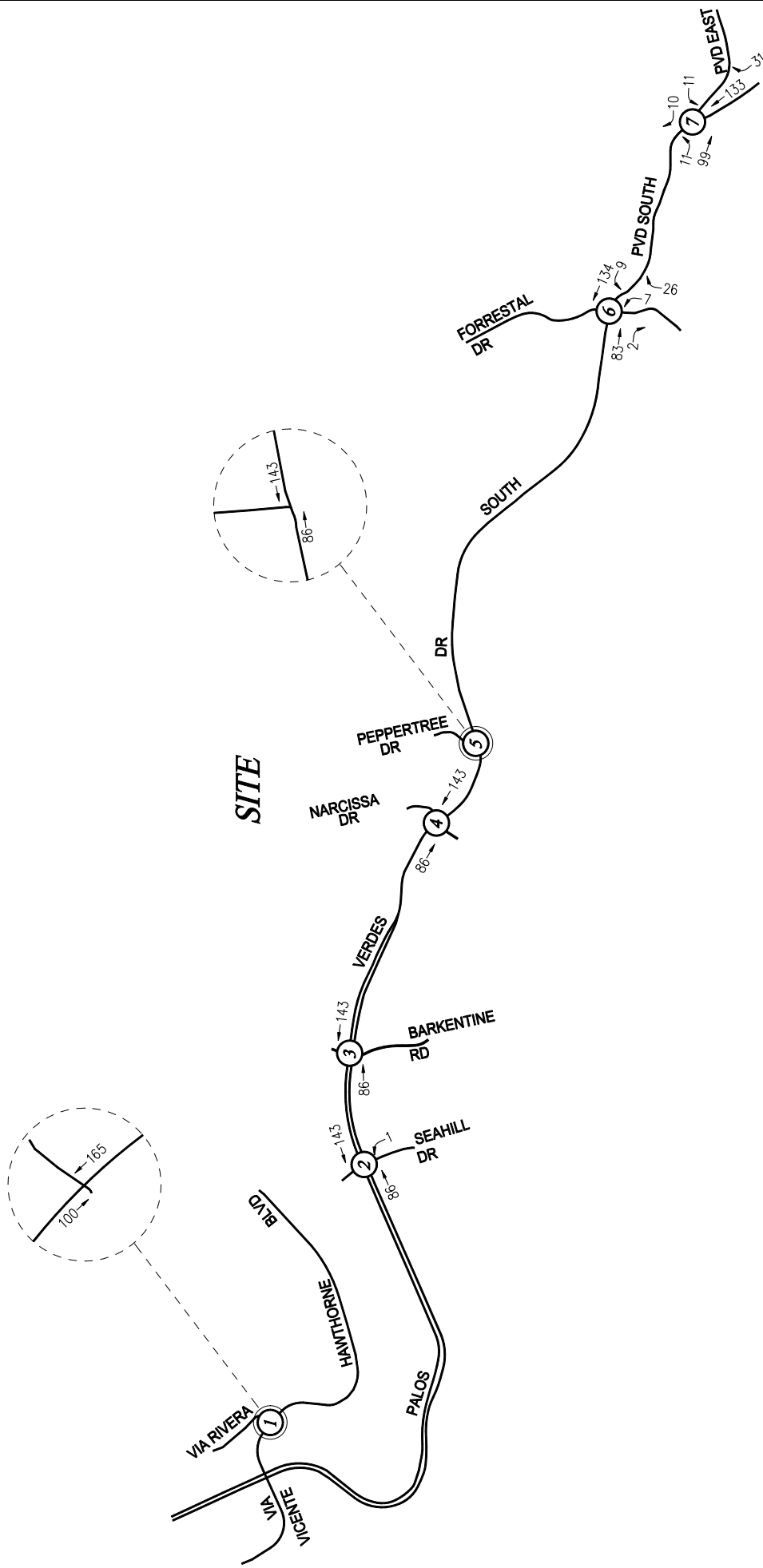


NOT TO SCALE

# FIGURE 6-1 LOCATION OF RELATED PROJECTS

LINSKOTT, LAW & GREENSPAN, engineers

ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

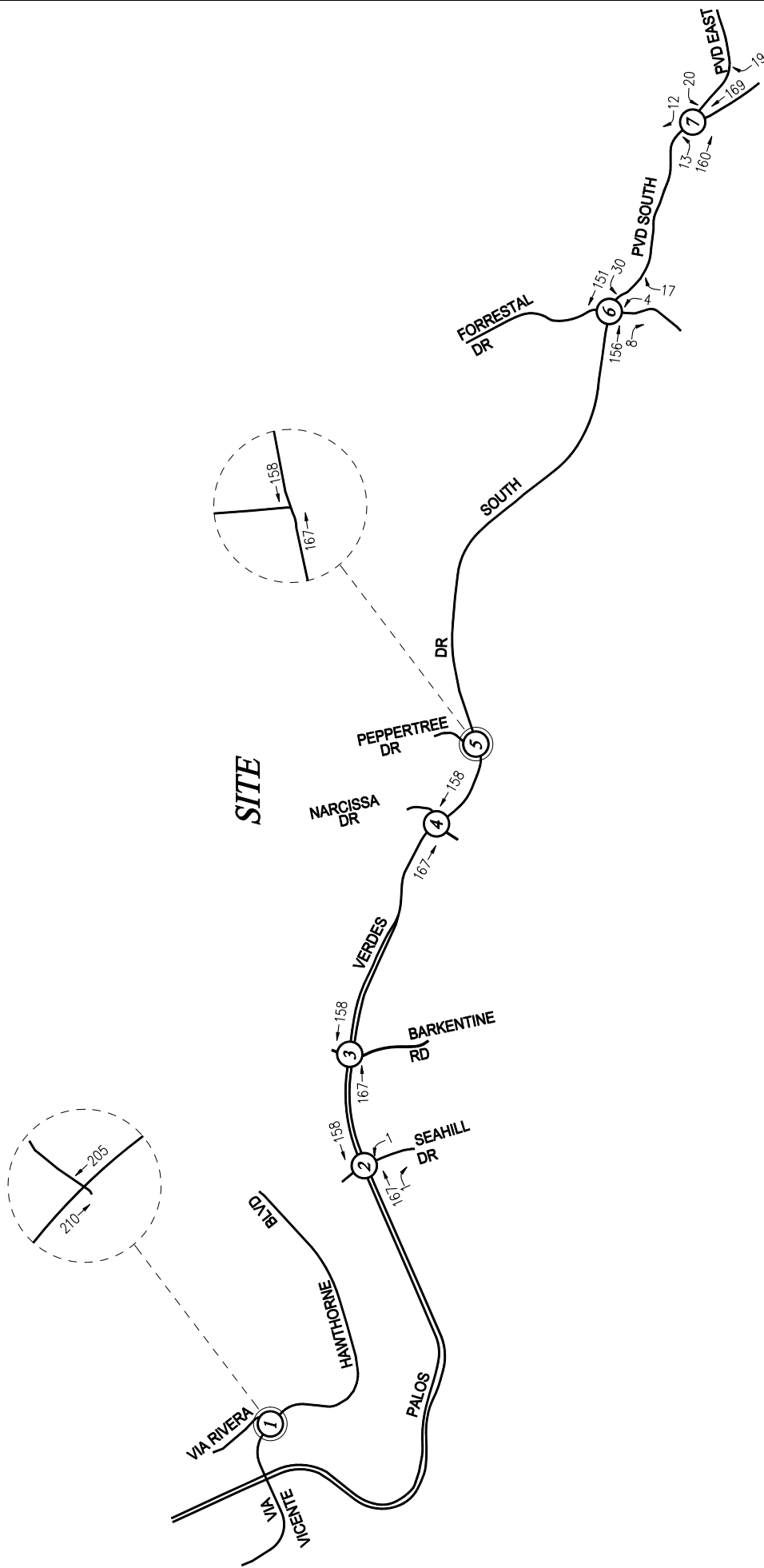


**FIGURE 6-2**  
**RELATED PROJECTS TRAFFIC VOLUMES**  
 WEEKDAY AM PEAK HOUR  
 ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

(X) = INTERSECTION NUMBER

NOT TO SCALE

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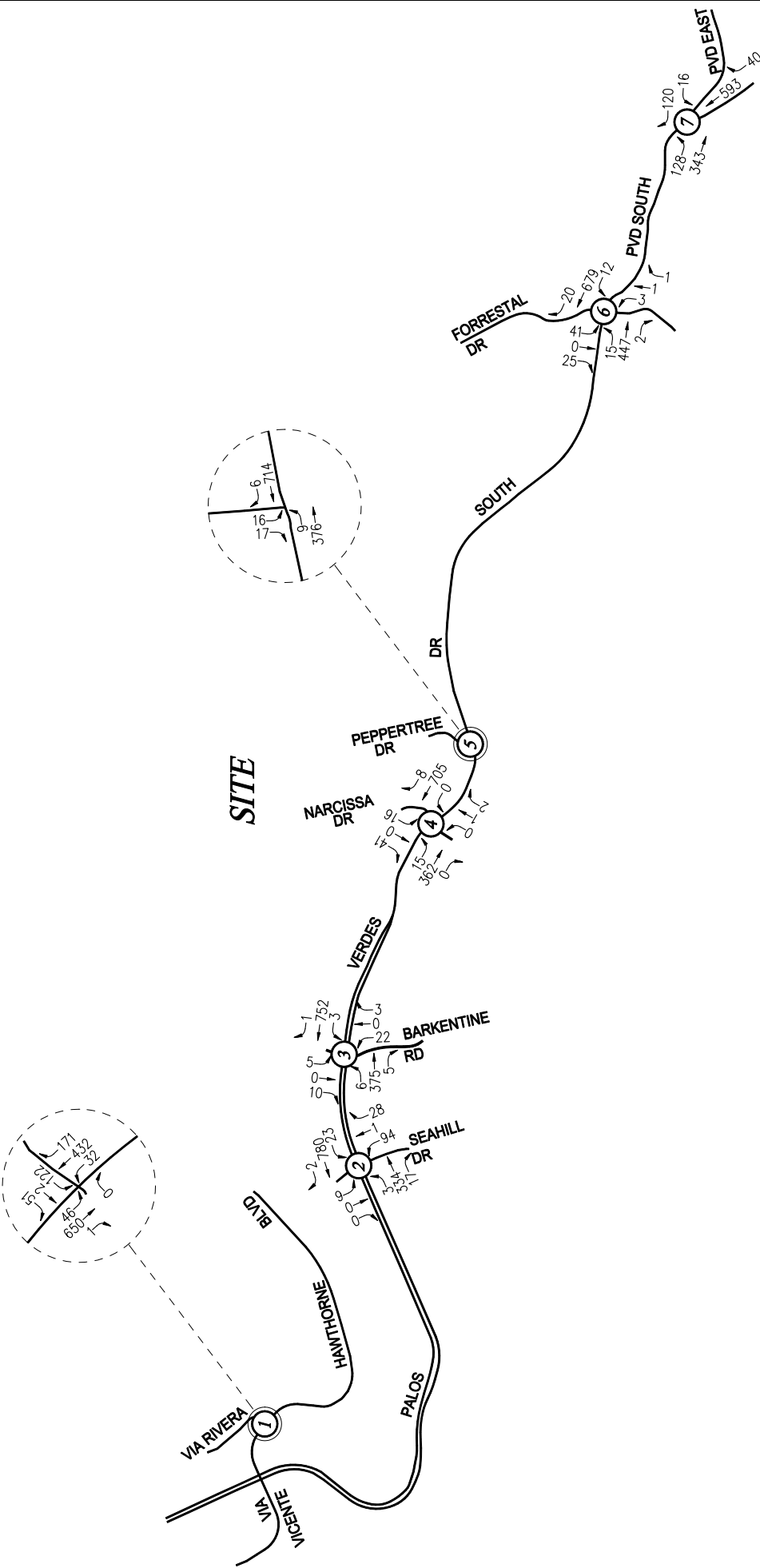


**FIGURE 6-3**  
**RELATED PROJECTS TRAFFIC VOLUMES**  
 WEEKDAY PM PEAK HOUR  
 ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

(X) = INTERSECTION NUMBER

NOT TO SCALE

LINSCOTT, LAW & GREENSPAN, engineers

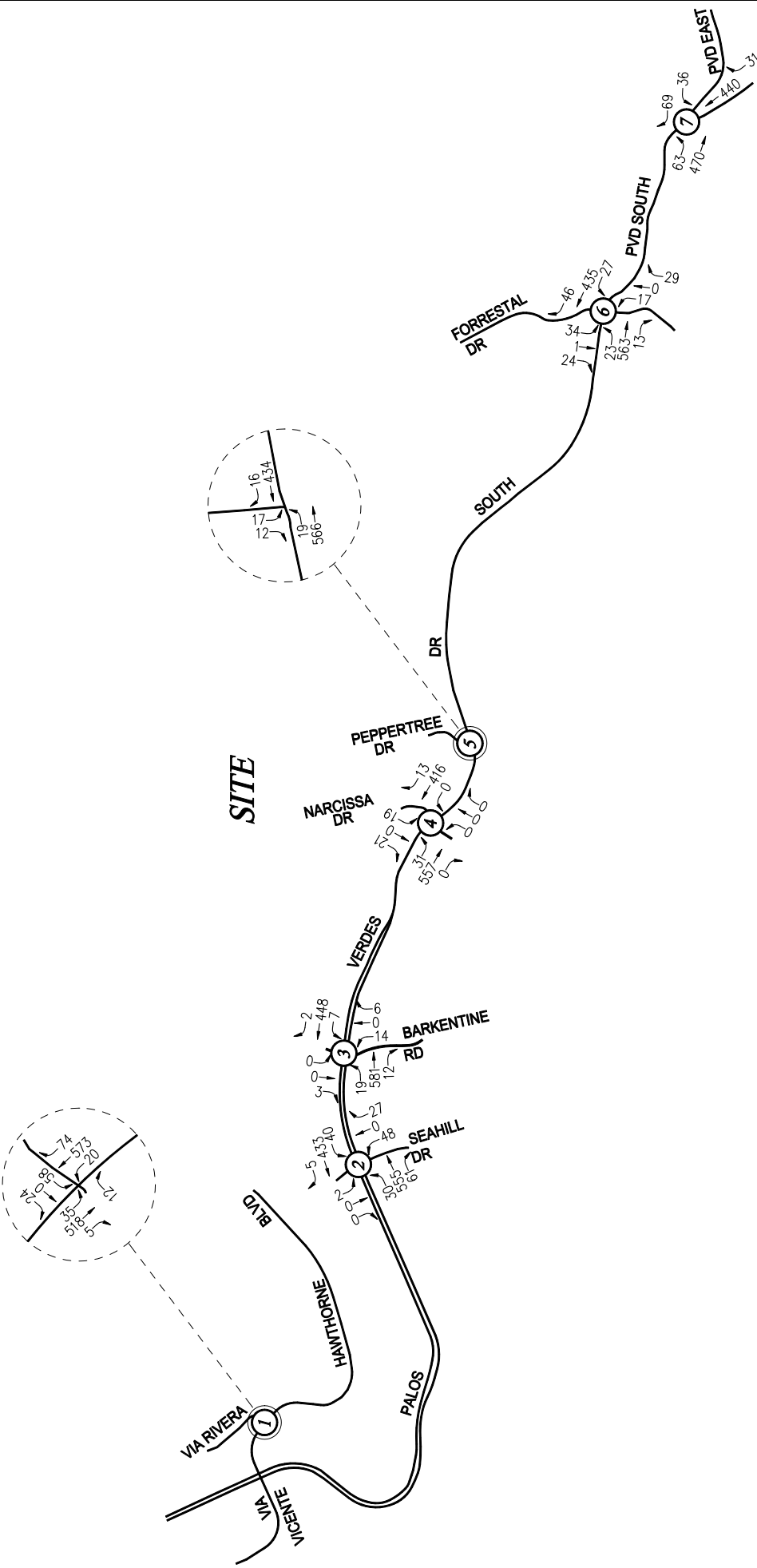


**FIGURE 6-4**  
**EXISTING WITH PROJECT TRAFFIC VOLUMES**  
 WEEKDAY AM PEAK HOUR  
 ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

(X) = INTERSECTION NUMBER

NOT TO SCALE

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**FIGURE 6-5**

**EXISTING WITH PROJECT TRAFFIC VOLUMES**

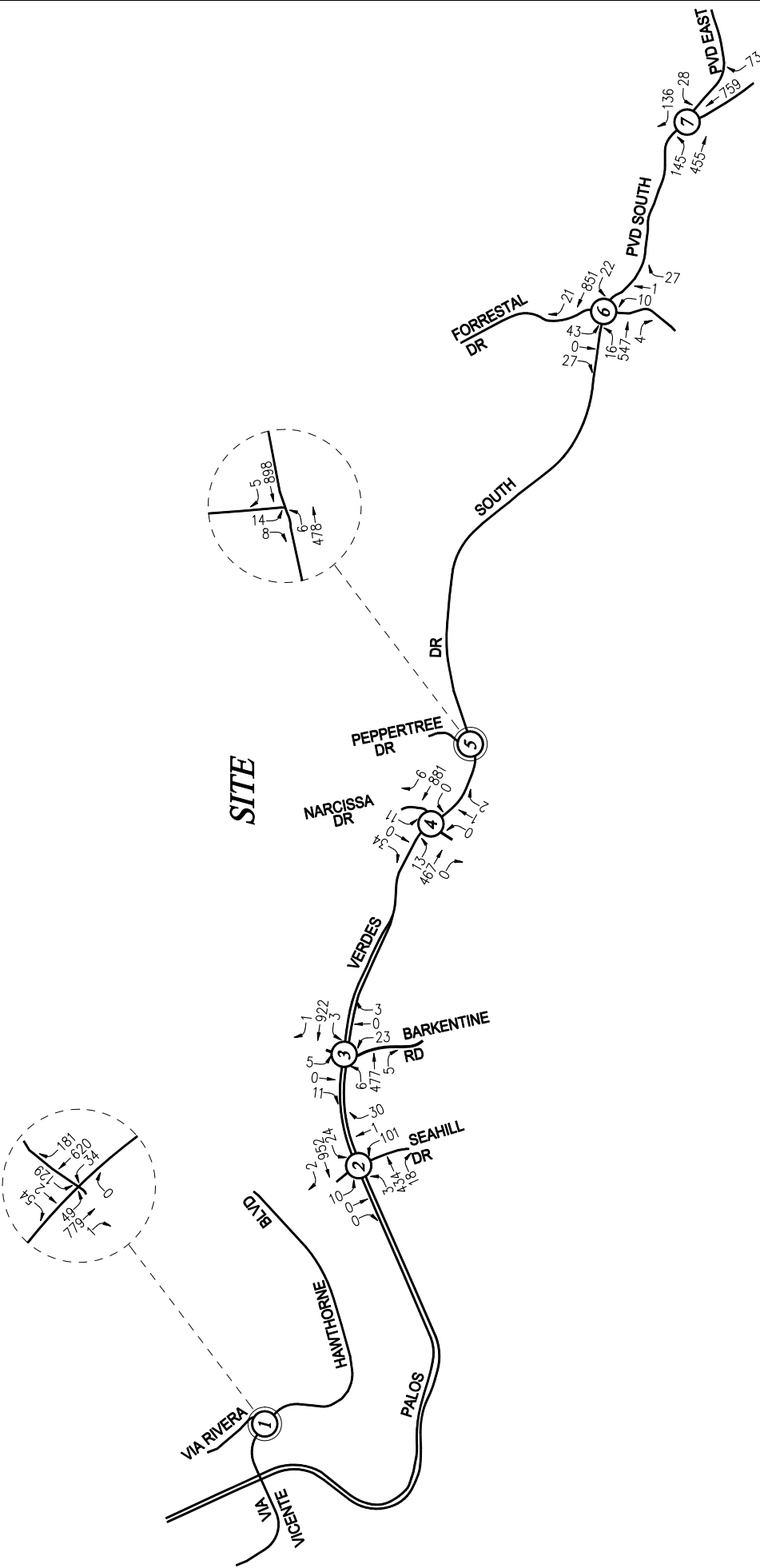
WEEKDAY PM PEAK HOUR

ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

NOT TO SCALE

(X) = INTERSECTION NUMBER

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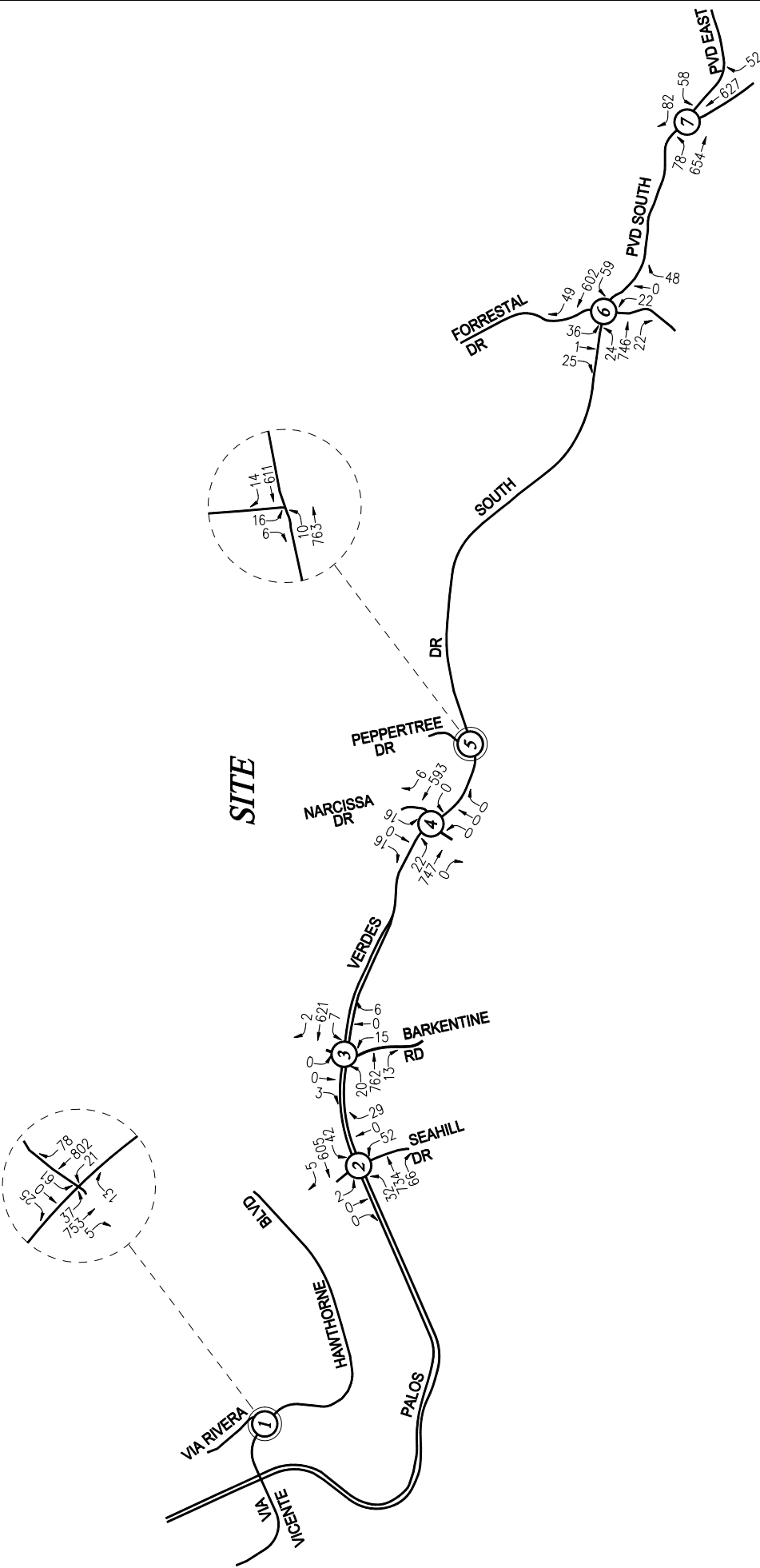


**FIGURE 6-6**

**YEAR 2020 FUTURE PRE-PROJECT TRAFFIC VOLUMES**

**WEEKDAY AM PEAK HOUR**

**ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT**



**FIGURE 6-7**

**YEAR 2020 FUTURE PRE-PROJECT TRAFFIC VOLUMES**

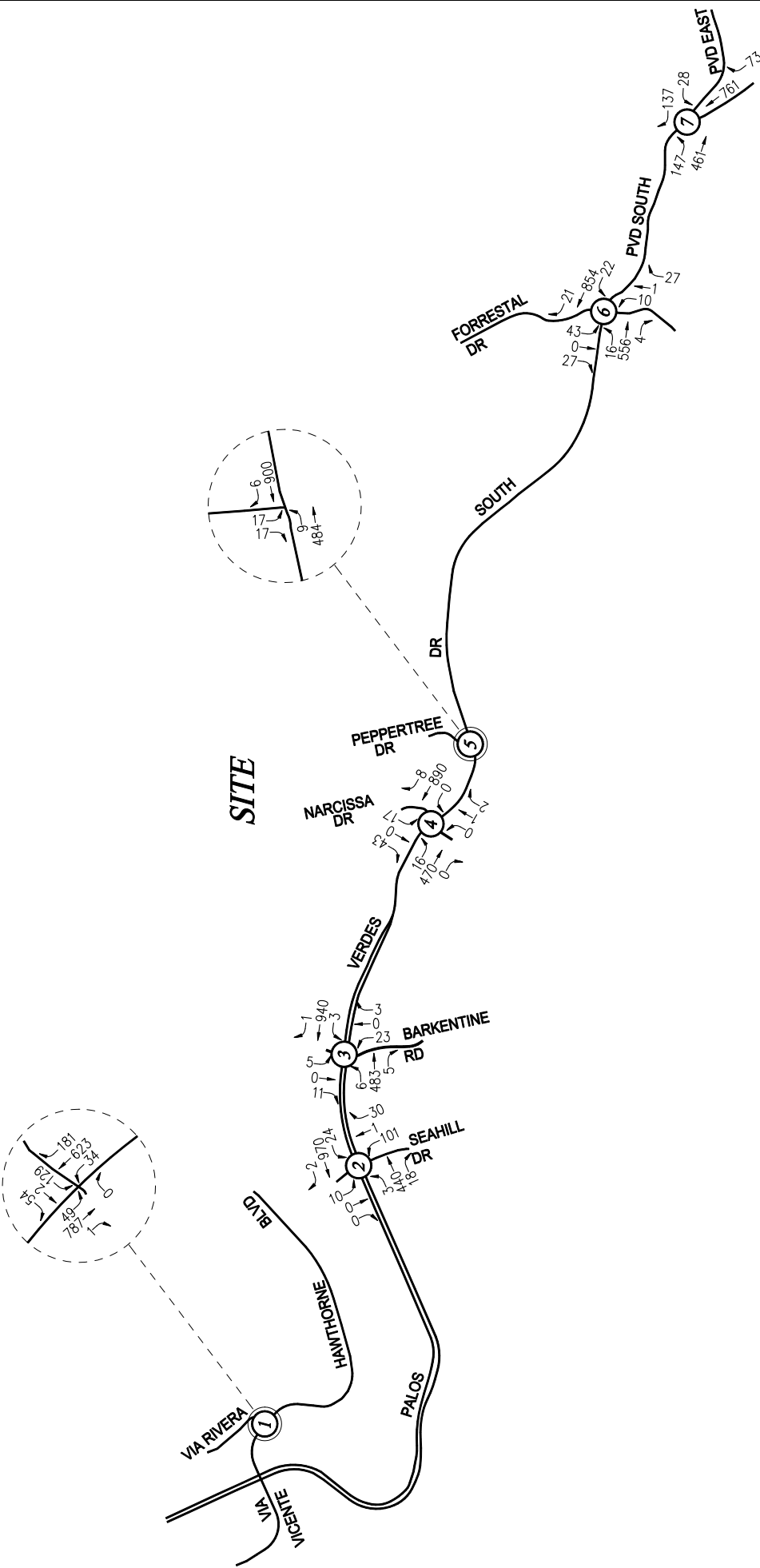
**WEEKDAY PM PEAK HOUR**

**ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT**

**NOT TO SCALE**

**(X) = INTERSECTION NUMBER**

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**FIGURE 6-8**

**YEAR 2020 FUTURE WITH PROJECT TRAFFIC VOLUMES**

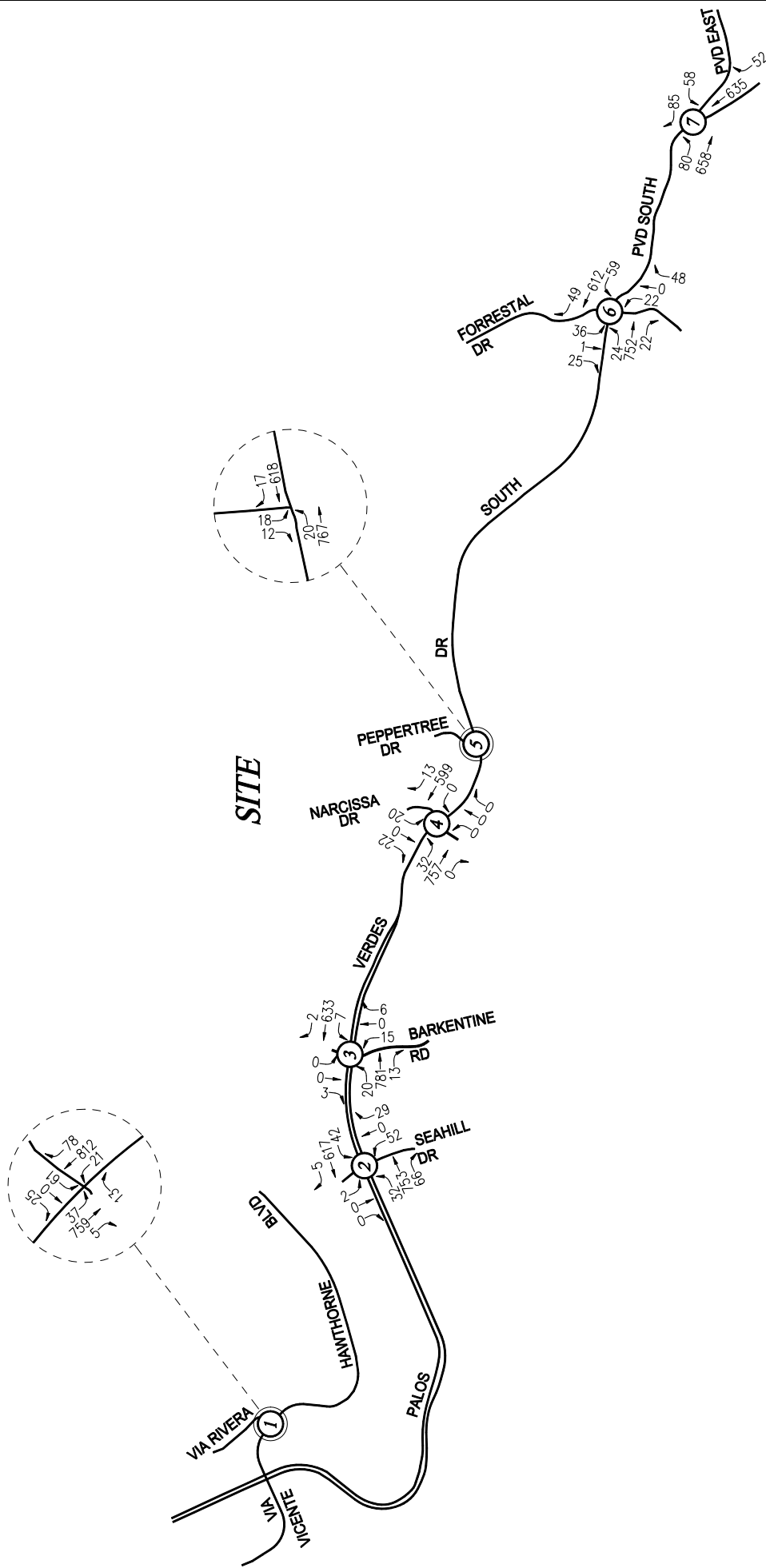
**WEEKDAY AM PEAK HOUR**

**ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT**

**NOT TO SCALE**

**(X) = INTERSECTION NUMBER**

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**FIGURE 6-9**  
**YEAR 2020 FUTURE WITH PROJECT TRAFFIC VOLUMES**  
 WEEKDAY PM PEAK HOUR  
 ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

(X) = INTERSECTION NUMBER  
 NOT TO SCALE  
 LINSOTT, LAW & GREENSPAN, engineers

## 7.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

### 7.1 Impact Criteria and Thresholds

The relative impact of the added project traffic volumes generated by the proposed Zone 2 Landslide Moratorium - Portuguese Bend project during the AM and PM peak hours was evaluated based on analysis of future operating conditions at the seven study intersections, without, then with the proposed project. The previously discussed capacity analysis procedures were utilized to investigate the future volume-to-capacity relationships and service level characteristics at each study intersection. The significance of the potential project impacts at each key intersection was then evaluated using the traffic impact criteria employed for projects in the City of Rancho Palos Verdes. The City of Rancho Palos Verdes's target for peak hour intersection operation is LOS D or better.

#### 7.1.1 Signalized Intersections

The City of Rancho Palos Verdes utilizes the County of Los Angeles traffic thresholds of significance for signalized intersections. The significance of the potential project generated traffic impacts at the signalized intersections was identified using criteria set forth in the Los Angeles County Department of Public Works' *Traffic Impact Analysis Report Guidelines*<sup>5</sup>. According to the County's published guidelines, the impact is considered significant if the project-related increase in the *v/c* ratio equals or exceeds the thresholds presented in **Table 7-1**.

TABLE 7-1  
SIGNALIZED INTERSECTION IMPACT THRESHOLD CRITERIA

| Pre-Project ICU | Level of Service | Project Related Increase in ICU |
|-----------------|------------------|---------------------------------|
| ≥ 0.71 - 0.80   | C                | equal to or greater than 0.04   |
| ≥ 0.81 - 0.90   | D                | equal to or greater than 0.02   |
| ≥ 0.91 or more  | E/F              | equal to or greater than 0.01   |

As indicated in *Table 7-1*, the project-related increase in ICU value for the signalized intersections that defines a significant impact varies with LOS. At LOS C or D the threshold of significance is an increase of 0.04 or greater 0.02 or greater, respectively, in the ICU value for signalized intersections. This is reduced to 0.01 or greater under LOS E and F.

<sup>5</sup> *Los Angeles County Traffic Impact Analysis Report Guidelines*, Los Angeles County Department of Public Works, January 1, 1997.

### 7.1.2 *Unsignalized Intersections*

The City of Rancho Palos Verdes has established the following thresholds of significance for unsignalized intersections:

- A significant impact would occur at an unsignalized intersection when the addition of project-generated trips causes the peak hour level of service of the 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 intersection if the peak hour level of service of the intersection is LOS E or F and the addition of project-generated trips changes the delay by 2.0 seconds or more.

## 7.2 Traffic Impact Analysis Scenarios

Volume/capacity calculations have been performed for the key study intersections for the following traffic conditions:

- (a) Existing traffic conditions;
- (b) Scenario (a) with project traffic;
- (c) Scenario (b) with mitigation, if necessary.
- (d) Scenario (a) with ambient growth traffic to the Year 2020 at 0.6% per year plus related projects traffic;
- (e) Scenario (d) with project traffic to the Year 2020; and
- (g) Scenario (e) with mitigation, if necessary.

## 8.0 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

### 8.1 Existing Conditions

The peak hour Level of Service results at the seven study intersections for the existing conditions are summarized in **Table 8-1**. The first column [1] of ICU/LOS and HCM/LOS values in *Table 8-1* presents a summary of the existing AM and PM peak hour traffic conditions (which were also presented in *Table 4-5*). The second column [2] presents projected existing with project traffic conditions based on the addition of the proposed project traffic. The third column [3] shows the change in ICU value or delay value due to the added peak hour project trips and indicates whether the traffic associated with the project will have a significant impact based on the City of Rancho Palos Verdes LOS standards and the significance impact threshold criteria defined in this report. The ICU and HCM data worksheets for the seven analyzed intersections for the weekday AM and PM peak hours are contained in *Appendix B*.

#### 8.1.1 Existing Traffic Conditions

As shown in column [1] of *Table 8-1* (previously presented in *Table 4-5*), six of the seven study intersections are currently operating at acceptable Levels of Service (i.e., LOS D or better) during the weekday AM and PM peak hours. The remaining study intersection (Intersection No. 1, Via Rivera/Hawthorne Boulevard) is current operating at LOS E during the AM peak hour and LOS D during the PM peak hour. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in *Figures 4-3* and *4-4*, respectively.

#### 8.1.2 Existing With Project Conditions

As shown in columns [2] and [3] of *Table 8-1*, application of the City's threshold criteria to the "Existing With Project Conditions" scenario indicates that the proposed project is not expected to create significant impacts at any of the seven study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections under the "Existing With Project Conditions". The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in *Figures 6-4* and *6-5*, respectively.

### 8.2 Year 2020 Future Traffic Conditions

The peak hour Level of Service results at the seven study intersections for the Year 2020 horizon year are summarized in **Table 8-2**. The first column [1] of ICU/LOS and HCM/LOS values in *Table 8-2* presents a summary of the projected Year 2020 future pre-project traffic conditions based on future intersection geometry, where applicable, existing traffic volumes with the addition of ambient growth, and related projects traffic volumes. It is important to note that any intersection improvements/mitigation measures associated with the related projects have been incorporated as part of this condition for purposes of this analysis. The second column [2] presents projected Year 2020 future with project traffic conditions based on the addition of the proposed project traffic. The third column [3] shows the change in ICU value or delay value due to the added peak hour project trips and indicates whether the traffic associated with the project will have a significant impact based on the City of Rancho Palos Verdes LOS standards and the significance impact threshold criteria

**TABLE 8-1**  
**EXISTING WITH PROJECT INTERSECTION LEVELS OF SERVICE SUMMARY**

| Int No. | Key Intersection                                          | Unsignalized (1)/<br>Signalized (2) | Time Period | [1]<br>Existing Traffic Conditions |                |         | [2]<br>Existing + Project Traffic Conditions |                |         | [3]<br>Change in V/C or Delay |         | Significant Impact |
|---------|-----------------------------------------------------------|-------------------------------------|-------------|------------------------------------|----------------|---------|----------------------------------------------|----------------|---------|-------------------------------|---------|--------------------|
|         |                                                           |                                     |             | Delay                              | V/C            | LOS [a] | Delay                                        | V/C            | LOS [a] | [(2-1)]                       | [b],[c] |                    |
| 1       | Via Rivera/<br>Hawthorne Boulevard                        | 1                                   | AM<br>PM    | 38.6<br>29.4                       | 0.572<br>0.342 | E<br>D  | 39.6<br>30.3                                 | 0.579<br>0.351 | E<br>D  | 1.0<br>0.9                    |         | NO<br>NO           |
| 2       | Tramonto Drive-Seahill Drive/<br>Palos Verdes Drive South | 1                                   | AM<br>PM    | 27.6<br>23.6                       | 0.396<br>0.274 | D<br>C  | 28.5<br>24.7                                 | 0.407<br>0.288 | D<br>C  | 0.9<br>1.1                    |         | NO<br>NO           |
| 3       | Barkentine Road/<br>Palos Verdes Drive South              | 1                                   | AM<br>PM    | 18.9<br>18.7                       | 0.091<br>0.067 | C<br>C  | 19.3<br>19.4                                 | 0.094<br>0.070 | C<br>C  | 0.4<br>0.7                    |         | NO<br>NO           |
| 4       | Narcissa Drive/<br>Palos Verdes Drive South               | 1                                   | AM<br>PM    | 17.8<br>16.1                       | 0.085<br>0.069 | C<br>C  | 19.2<br>16.6                                 | 0.110<br>0.092 | C<br>C  | 1.4<br>0.5                    |         | NO<br>NO           |
| 5       | Peppertree Drive/<br>Palos Verdes Drive South             | 1                                   | AM<br>PM    | 20.0<br>18.4                       | 0.068<br>0.069 | C<br>C  | 19.2<br>17.8                                 | 0.086<br>0.082 | C<br>C  | -0.8<br>-0.6                  |         | NO<br>NO           |
| 6       | Forrestal Drive/<br>Palos Verdes Drive South              | 1                                   | AM<br>PM    | 31.3<br>26.6                       | 0.315<br>0.251 | D<br>D  | 32.0<br>27.4                                 | 0.322<br>0.258 | D<br>D  | 0.7<br>0.8                    |         | NO<br>NO           |
| 7       | Palos Verdes Drive East/<br>Palos Verdes Drive South      | 1                                   | AM<br>PM    | 17.0<br>16.3                       | 0.271<br>0.175 | C<br>C  | 17.1<br>16.5                                 | 0.274<br>0.180 | C<br>C  | 0.1<br>0.2                    |         | NO<br>NO           |

[a] Level of Service (LOS) is based on the delay for unsignalized intersections and on the reported ICU value for signalized intersections.

[b] For signalized intersections, the City of Rancho Palos Verdes utilizes the County of Los Angeles traffic thresholds of significance. According to the County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines," January 1, 1997, Page 6: "an impact is considered significant if the project related increase in the volume-to-capacity ratio (v/c) equals or exceeds the thresholds shown below:

| Level of Service | Pre-Project ICU    | Project-Related Increase in V/C |
|------------------|--------------------|---------------------------------|
| C                | $\geq 0.71 - 0.80$ | equal to or greater than 0.040  |
| D                | $\geq 0.81 - 0.90$ | equal to or greater than 0.020  |
| E/F              | $\geq 0.91$        | equal to or greater than 0.010  |

[c] For unsignalized intersections, the City of Rancho Palos Verdes has established the following thresholds of significance:

- A significant impact would occur at an unsignalized intersection when the addition of project-generated trips causes the peak hour level of service of the 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 intersection if the peak hour level of service of the intersection is LOS E or F and the addition of project-generated trips changes the delay by 2.0 seconds or more.

TABLE 8-2  
YEAR 2020 WITH PROJECT INTERSECTION LEVELS OF SERVICE SUMMARY

| Int No. | Key Intersection                                          | Unsignalized (1)/<br>Signalized (2) | Time Period | [1]<br>Year 2020 Future Pre-Project Traffic Conditions |                |         | [2]<br>Year 2020 Future With Project Traffic Conditions |                |         | [3]<br>Change in V/C or Delay [3-2] |     | Significant Impact [b] [c] | [4]<br>Year 2020 Future With Project + Mitigation |                |         | [5]<br>Change in V/C or Delay [3-2] |     | Significant Impact [b] [c] |
|---------|-----------------------------------------------------------|-------------------------------------|-------------|--------------------------------------------------------|----------------|---------|---------------------------------------------------------|----------------|---------|-------------------------------------|-----|----------------------------|---------------------------------------------------|----------------|---------|-------------------------------------|-----|----------------------------|
|         |                                                           |                                     |             | Delay                                                  | V/C            | LOS [a] | Delay                                                   | V/C            | LOS [a] | Delay                               | V/C | LOS [a]                    | Delay                                             | V/C            | LOS [a] | Delay                               | V/C | LOS [a]                    |
| 1       | Via Rivera/<br>Hawthorne Boulevard                        | I                                   | AM<br>PM    | 137.3<br>97.0                                          | 0.954<br>0.726 | F<br>F  | 141.7<br>102.3                                          | 0.966<br>0.744 | F<br>F  | 4.4<br>5.3                          |     | YES<br>YES                 | 91.7<br>86.0                                      | 0.966<br>0.744 | F<br>F  | -45.6<br>-11.0                      |     | NO<br>NO                   |
| 2       | Tramonto Drive-Seahill Drive/<br>Palos Verdes Drive South | I                                   | AM<br>PM    | 44.6<br>49.5                                           | 0.616<br>0.524 | E<br>E  | 47.0<br>53.3                                            | 0.633<br>0.549 | E<br>F  | 2.4<br>3.8                          |     | YES<br>YES                 | 20.5<br>22.3                                      | ---            | C<br>C  | -24.1<br>-27.2                      |     | YES<br>YES                 |
| 3       | Barkentine Road/<br>Palos Verdes Drive South              | I                                   | AM<br>PM    | 26.2<br>29.3                                           | 0.141<br>0.123 | D<br>D  | 26.9<br>30.5                                            | 0.145<br>0.129 | D<br>D  | 0.7<br>1.2                          |     | NO<br>NO                   | 26.9<br>30.5                                      | 0.145<br>0.129 | D<br>D  | 0.7<br>1.2                          |     | NO<br>NO                   |
| 4       | Narcissa Drive/<br>Palos Verdes Drive South               | I                                   | AM<br>PM    | 24.5<br>24.5                                           | 0.117<br>0.131 | C<br>C  | 27.6<br>25.9                                            | 0.187<br>0.174 | D<br>D  | 3.1<br>1.4                          |     | NO<br>NO                   | 27.6<br>25.9                                      | 0.187<br>0.174 | D<br>D  | 3.1<br>1.4                          |     | NO<br>NO                   |
| 5       | Pepperree Drive/<br>Palos Verdes Drive South              | I                                   | AM<br>PM    | 28.5<br>29.6                                           | 0.113<br>0.131 | D<br>D  | 27.2<br>28.5                                            | 0.141<br>0.156 | D<br>D  | -1.3<br>-1.1                        |     | NO<br>NO                   | 27.2<br>28.5                                      | 0.141<br>0.156 | D<br>D  | -1.3<br>-1.1                        |     | NO<br>NO                   |
| 6       | Forrestal Drive/<br>Palos Verdes Drive South              | I                                   | AM<br>PM    | 75.8<br>87.4                                           | 0.626<br>0.653 | F<br>F  | 78.6<br>91.9                                            | 0.640<br>0.673 | F<br>F  | 2.8<br>4.5                          |     | YES<br>YES                 | ---                                               | 0.739<br>0.708 | C<br>C  | 0.113<br>0.055                      |     | YES<br>YES                 |
| 7       | Palos Verdes Drive East/<br>Palos Verdes Drive South      | I                                   | AM<br>PM    | 10.4<br>10.1                                           | 0.394<br>0.548 | B<br>B  | 10.8<br>11.1                                            | 0.398<br>0.563 | B<br>B  | 0.4<br>1.0                          |     | NO<br>NO                   | 10.8<br>11.1                                      | 0.398<br>0.563 | B<br>B  | 0.4<br>1.0                          |     | NO<br>NO                   |

[a] Level of Service (LOS) is based on the delay for unsignalized intersections and on the reported ICU value for signalized intersections.

[b] For signalized intersections, the City of Rancho Palos Verdes utilizes the County of Los Angeles traffic thresholds of significance. According to the County of Los Angeles Department of Public Works "Traffic Impact Analysis Report Guidelines," January 1, 1997, Page 6: "an impact is considered significant if the project related increase in the volume-to-capacity ratio (v/c) equals or exceeds the thresholds shown below:

| Level of Service | Pre-Project ICU | Project-Related Increase in V/C |
|------------------|-----------------|---------------------------------|
| C                | >= 0.71 - 0.80  | equal to or greater than 0.040  |
| D                | >= 0.81 - 0.90  | equal to or greater than 0.020  |
| E/F              | >= 0.91         | equal to or greater than 0.010  |

[c] For unsignalized intersections, the City of Rancho Palos Verdes has established the following thresholds of significance:

- A significant impact would occur at an unsignalized intersection when the addition of project-generated trips causes the peak hour level of service of the 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 intersection if the peak hour level of service of the intersection is LOS E or F and the addition of project-generated trips changes the delay by 2.0 seconds or more.

### 8.2.1 Year 2020 Future Pre-Project Traffic Conditions

|                                                     |                                       |
|-----------------------------------------------------|---------------------------------------|
| • Int. No. 1: Via Rivera/Hawthorne Blvd.            | AM Peak Hour: $Delay = 137.3$ , LOS F |
|                                                     | PM Peak Hour: $Delay = 97.0$ , LOS F  |
| • Int. No. 2: Tramonto Dr.-Seahill Dr./PV Dr. South | AM Peak Hour: $Delay = 44.6$ , LOS E  |
|                                                     | PM Peak Hour: $Delay = 49.5$ , LOS E  |
| • Int. No. 6 Forrestal Dr./Palos Verdes Dr. South   | AM Peak Hour: $Delay = 75.8$ , LOS F  |
|                                                     | PM Peak Hour: $Delay = 87.4$ , LOS F  |

### 8.2.2 Year 2020 Future With Project Conditions

- Int. No. 1: Via Rivera/Hawthorne Boulevard  
AM peak hour *delay* increase of 4.4 seconds [to 141.7 (LOS F) from 137.3 (LOS F)]  
PM peak hour *delay* increase of 5.3 seconds [to 102.3 (LOS F) from 97.0 (LOS F)]
- Int. No. 2: Seahill Drive-Tramonto Drive/Palos Verdes Drive South  
AM peak hour *delay* increase of 2.4 seconds [to 47.0 (LOS E) from 44.6 (LOS E)]  
PM peak hour *delay* increase of 3.8 seconds [to 53.3 (LOS F) from 49.5 (LOS E)]

- Int. No. 6: Forrestal Drive/Palos Verdes Drive South

AM peak hour *delay* increase of 2.8 seconds [to 78.6 (LOS F) from 75.8 (LOS F)]

PM peak hour *delay* increase of 4.5 seconds [to 91.9 (LOS F) from 87.4 (LOS F)]

Incremental but not significant cumulative traffic impacts are noted at the remaining four study intersections under Year 2020 future with project conditions. The Year 2020 future with project traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in *Figures 6-8 and 6-9*, respectively.

## 9.0 ROADWAY STREET SEGMENT ANALYSIS

Based on direction from City of Rancho Palos Verdes Public Works Department staff, roadway level of service analyses were prepared for two roadway segments located in the project study area. The following two roadway street segments were selected in consultation with City of Rancho Palos Verdes staff for analysis of potential impacts due to the proposed project:

1. Palos Verdes Drive South east of Seacove Drive
2. Palos Verdes Drive South east of Cherry Hill Lane

Automatic 24-hour machine traffic counts were conducted at the above locations during a mid-week day (i.e., Tuesday, Wednesday, or Thursday) in May 2010. The average weekday AM and PM peak hour volumes were then calculated based on the automatic 24-hour machine traffic counts. Copies of the 24-hour machine counts are contained in *Appendix A*.

The significance of the potential impacts of project generated traffic at the study street segments was identified using the two-lane roadway criteria set forth in the *County of Los Angeles Traffic Impact Analysis Report Guidelines* document. According to the County's published traffic impact study guidelines, a transportation impact on a roadway shall be deemed significant based on a percentage increase in passenger cars per hour (PCPH) by the project as shown in **Table 9-1**.

TABLE 9-1  
ROADWAY SEGMENT IMPACT THRESHOLD CRITERIA

| Two-lane Roadways |                       |                                                                   |   |     |
|-------------------|-----------------------|-------------------------------------------------------------------|---|-----|
| Directional Split | Total Capacity (PCPH) | Percentage Increases in Passenger Cars Per Hour (PCPH) by Project |   |     |
|                   |                       | Pre-Project 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   |

## 9.1 Year 2020 Future Traffic Conditions

The forecast traffic conditions at the analyzed street segments for existing, year 2020 future pre-project (i.e., existing traffic volumes, ambient traffic growth and related projects traffic volumes) and Year 2020 future with project analysis scenarios are summarized in **Table 9-2**. As presented in Column [1], the average AM and PM peak hour volumes were utilized to evaluate existing conditions on the roadway. As shown in Column [2] of *Table 9-2*, a 0.6 percent (0.6 %) annual ambient growth rate through the year 2020 as well as related projects traffic volumes were conservatively added to the existing weekday AM and PM peak hour volumes in order to estimate the future pre-project traffic volumes. As presented in Column [3] of *Table 9-2*, the proposed project AM and PM day trips will incrementally affect traffic volumes on the analyzed street segments. Application of the County's two-lane roadway threshold criteria for street segment analysis indicates that the proposed project is not anticipated to significantly impact the analyzed street segments. Thus, no mitigation measures are required or recommended.

Table 9-2  
YEAR 2020 WITH PROJECT ROADWAY LEVELS OF SERVICE SUMMARY

| NO. | ROADWAY SEGMENT                                   | TIME PERIOD | DIRECTIONAL SPLIT [a] | TOTAL CAPACITY (PCPH) [b] | (1)<br>EXISTING TRAFFIC CONDITIONS |                |        | (2)<br>YEAR 2020 W/ RELATED PROJECTS TRAFFIC CONDITIONS |                   |                | (3)<br>YEAR 2020 WITH PROJECT TRAFFIC CONDITIONS |              |                   |                |        |                       |                        |
|-----|---------------------------------------------------|-------------|-----------------------|---------------------------|------------------------------------|----------------|--------|---------------------------------------------------------|-------------------|----------------|--------------------------------------------------|--------------|-------------------|----------------|--------|-----------------------|------------------------|
|     |                                                   |             |                       |                           | PEAK HOUR VOL [c]                  | V/C            | LOS    | REL. PROJ. VOL [d]                                      | PEAK HOUR VOL [e] | V/C            | LOS                                              | PROJ VOL [f] | PEAK HOUR VOL [g] | V/C            | LOS    | PCPH PERCENT INCREASE | SIG. IMPACT YES/NO [h] |
| 1   | Palos Verdes Drive South east of Seacove Drive    | AM<br>PM    | 70 / 30<br>60 / 40    | 2,500<br>2,650            | 1,122<br>1,023                     | 0.449<br>0.386 | A<br>A | 290<br>423                                              | 1,479<br>1,507    | 0.592<br>0.569 | A<br>A                                           | 23<br>31     | 1502<br>1538      | 0.601<br>0.581 | B<br>A | 1.6%<br>2.1%          | NO<br>NO               |
| 2   | Palos Verdes Drive South east of Cherry Hill Lane | AM<br>PM    | 70 / 30<br>60 / 40    | 2,500<br>2,650            | 1,125<br>972                       | 0.450<br>0.367 | A<br>A | 278<br>403                                              | 1,471<br>1,433    | 0.588<br>0.541 | A<br>A                                           | 12<br>16     | 1483<br>1449      | 0.593<br>0.547 | A<br>A | 0.8%<br>1.1%          | NO<br>NO               |

Note: PCPH = Passenger Cars Per Hour

- [a] Directional split of the roadway based on existing traffic count data.  
 [b] Total capacity, in passenger cars per hour (PCPH), based on existing roadway directional split per County of Los Angeles Department of Public Works' Traffic Impact Analysis Report Guidelines.  
 [c] 24-hour machine counts conducted by City Traffic Counters in May 2010.  
 [d] Represents related projects trips based on Table 6-1.  
 [e] Derived by combining the existing with ambient traffic volumes and the related projects traffic volumes. An ambient growth rate of 0.60% per year was assumed to derive the year 2020 (i.e., future pre-project) traffic volumes based on the 2004 CMP for Los Angeles County document and consultation with City of Rancho Palos Verdes Public Works staff.  
 [f] Represents net new project trips based on the project trip generation and trip distribution for the proposed Zone 2 Landslide Moratorium - Portuguese Bend project.  
 [g] Derived by combining the future pre-project traffic volumes and the proposed project volumes.  
 [h] According to the County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines," January 1, 1997, Page 6: an impact is considered significant if the project related increase in Passenger Car Per Hour (PCPH) equals or exceeds the thresholds shown below:

| Percentage Increases in PCPH by Project |                       |                 |     |
|-----------------------------------------|-----------------------|-----------------|-----|
| Directional Split                       | Total Capacity (PCPH) | Pre-project LOS |     |
|                                         |                       | C               | D   |
| 50/50                                   | 2,800                 | 4               | 2   |
| 60/40                                   | 2,650                 | 4               | 2   |
| 70/30                                   | 2,500                 | 4               | 2   |
| Percentage Increases in PCPH by Project |                       |                 |     |
| Directional Split                       | Total Capacity (PCPH) | Pre-project LOS |     |
|                                         |                       | C               | D   |
| 80/20                                   | 2,300                 | 4               | 2   |
| 90/10                                   | 2,100                 | 4               | 2   |
| 100/0                                   | 2,000                 | 4               | 2   |
| Percentage Increases in PCPH by Project |                       |                 |     |
| Directional Split                       | Total Capacity (PCPH) | Pre-project LOS |     |
|                                         |                       | C               | D   |
| E/F                                     |                       | E/F             | E/F |

## 10.0 TRANSPORTATION IMPROVEMENT MEASURES

The following sections provide an overview of transportation improvement measures that are anticipated to address the forecast significant cumulative traffic impacts to the local roadway network associated with the proposed project. It is important to note that the traffic analysis has been based on a conservative approach with respect to the analysis of potential project-related impacts. No project-specific significant traffic impacts are forecast.

### 10.1 Summary of Intersection Improvement Measures

#### 10.1.1 Cumulative Mitigation Measures

As summarized in the Year 2020 Future With Project Conditions section (refer to Subsection 8.2.2) herein, application of the City's threshold criteria to this scenario indicates that the project and related projects are expected to create significant cumulative impacts at three of the seven study intersections:

- Int. No.1: Via Rivera/Hawthorne Boulevard
- Int. No. 2: Seahill Drive-Tramonto Drive/Palos Verdes Drive South
- Int. No. 6: Forrestal Drive/Palos Verdes Drive South

The following transportation mitigation measures have been considered and if approved and implemented would reduce the project's contribution to the significant cumulative transportation impacts at the subject study intersections to less than significant levels. However, it is important to note that for Intersection No. 2 (Seahill Drive-Tramonto Drive/Palos Verdes Drive South), and Intersection No. 6 (Forrestal Drive/Palos Verdes Drive South), it has been conservatively assumed for purposes of the Draft EIR that a significant and unavoidable traffic impact would remain at these intersections as described more fully below.

- Int. No. 1: Via Rivera/Hawthorne Boulevard

Two mitigation alternatives exist which are both expected to reduce the project's contribution to the significant cumulative transportation impact to less than significant levels. Either of the two measures, as described more fully below, are anticipated to reduce the potentially significant cumulative impact to less than significant levels due to the resulting improvement in the overall intersection operations.

The first measure consists of restriping the southbound approach of Via Rivera to provide two lanes (i.e., a 10-foot wide single left-turn lane and a 12-foot wide optional through-right combination lane) versus the single lane approach that exists today. This restriping can occur by shifting the roadway centerline (double yellow paint stripe) two feet easterly and prohibiting on-street parking along the west side of Via Rivera for approximately 100 feet north of the Hawthorne Boulevard intersection. By providing a two lane approach, right-turning vehicles will not be delayed by southbound left-turning vehicles and thus intersection delay is reduced. As indicated in *Table 8-2*, this measure is anticipated to reduce the potentially significant

cumulative impact to less than significant levels. The improvement is expected to improve operations to 91.7 seconds of delay (LOS F) from 141.7 seconds of delay (LOS F) during the AM peak hour. During the PM peak hour, the improvement is expected to improve operations to 86.0 seconds of delay (LOS F) from 102.3 seconds of delay (LOS F). While this restriping measure does improve overall intersection operations as a whole by reducing the overall southbound approach delay, it should be noted that the southbound left-turn movement delay during the AM and PM peak hours is 125.9 seconds (LOS F) and 116.8 seconds (LOS F), respectively.

The second alternative consists of funding for the design and installation of a traffic signal at this intersection in order to improve overall operations and assignment of motorist right-of-way. This measure is anticipated to reduce the potentially significant cumulative impact to less than significant levels. The improvement is expected to improve operations to 0.517 (LOS A) from 141.7 seconds of delay (LOS F) during the AM peak hour. During the PM peak hour, the improvement is expected to improve operations to 0.460 (LOS A) from 102.3 seconds of delay (LOS F). From a calculation perspective, the installation of a traffic signal would in itself reduce the potentially significant cumulative impact to less than significant levels.

It is important to note that the southbound restriping measure (i.e., provide a two-lane approach versus a single lane approach) would likely be implemented along with the traffic signal installation, should the traffic signal be approved due to the forecast southbound left-turn delay and LOS. The two-lane southbound approach would further enhance the efficiency of the proposed traffic signal by devoting more green time to the predominant east-west through traffic movements (i.e., along Hawthorne Boulevard) and allocating a shorter clearance interval for the southbound approach. This operation would enhance both safety and minimize approach delays.

- Int. No. 2: Seahill Drive-Tramonto Drive/Palos Verdes Drive South

The recommended mitigation consists of providing a proportionate fair-share funding contribution towards the modification of the intersection to provide an acceleration lane to better facilitate the northbound left-turn movement (i.e., from Seahill Drive) onto westbound Palos Verdes Drive South. By modifying the existing median west of Seahill Drive-Tramonto Drive and restriping the west leg of the intersection, the improvement would provide the necessary area for vehicles to accelerate prior to merging with the westbound Palos Verdes Drive South traffic flow. In addition, the improvement allows northbound left-turns to occur via a sufficient gap in only the eastbound traffic flow versus in both the eastbound and westbound traffic flows as occurs today. As indicated in *Table 8-2*, this measure is anticipated to reduce the potentially significant cumulative impact to less than significant levels. The improvement is expected to improve operations to 20.5 seconds of delay (LOS C) from 47.0 seconds of delay (LOS E) during the AM peak hour and to 22.3 seconds of delay (LOS C) from 53.3 seconds of delay (LOS F) during the PM peak hour.

However, it is important to note that for this intersection it has been conservatively assumed for purposes of the Draft EIR that a significant and unavoidable cumulative traffic impact would remain at the intersection since the proportionate share funding contribution to this mitigation measure would not allow the City to fully implement the measure absent other funding sources.

- Int. No. 6: Forrestal Drive/Palos Verdes Drive South

Several mitigation alternatives were considered for this location and some involved the construction of additional travel lanes along Palos Verdes Drive South. While these mitigation alternatives were reviewed, they were subsequently removed from further consideration as they were determined to be in conflict with adopted City policy and the overall goals of the General Plan due to the likely removal of the bicycle lanes. It is important to note that the southbound approach is the most heavily constrained approach as southbound left-turning vehicles must yield to both the eastbound and westbound through vehicles on Palos Verdes Drive South.

Another mitigation alternative consists of the funding for the design and installation of a traffic signal at this intersection in order to improve overall operations and assignment of motorist right-of-way. This measure is anticipated to reduce the potentially significant cumulative impact to less than significant levels. The improvement is expected to improve operations to 0.739 (LOS C) from 78.6 seconds of delay (LOS F) during the AM peak hour and to 0.708 (LOS C) from 91.9 seconds of delay (LOS F) during the PM peak hour. However, it is important to note that for this intersection it has been conservatively assumed for purposes of the Draft EIR that a significant and unavoidable cumulative traffic impact would remain at the intersection due to current uncertainty regarding the approval of a traffic signal installation.

## 11.0 CONGESTION MANAGEMENT PROGRAM TRAFFIC IMPACT ASSESSMENT

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the *2010 Congestion Management Program for Los Angeles County*, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the *2010 Congestion Management Program for Los Angeles County*, County of Los Angeles Metropolitan Transportation Authority, October 2010.

### 11.1 Freeways

No CMP freeway monitoring locations are located in the project vicinity. Further, the CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the AM or PM weekday peak periods. The proposed project will not add 150 or more trips (in either direction), during either the AM or PM weekday peak hours to the CMP freeway monitoring location, which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

### 11.2 Intersections

The following CMP intersection monitoring location in the project vicinity has been identified:

| <u>CMP Station</u> | <u>Intersection</u>                             |
|--------------------|-------------------------------------------------|
| Int. No. 58        | Pacific Coast Highway at Western Avenue         |
| Int. No. 84        | Western Avenue at 9 <sup>th</sup> Street        |
| Int. No. 128       | Western Avenue at Toscanini Drive               |
| Int. No. 151       | Pacific Coast Highway at Crenshaw Boulevard     |
| Int. No. 152       | Pacific Coast Highway at Hawthorne Boulevard    |
| Int. No. 153       | Pacific Coast Highway at Palos Verdes Boulevard |

The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the AM or PM weekday peak periods. The proposed project will not add 50 or more trips, during the AM or PM peak hours at the CMP monitoring intersection, which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. As such, no further review of potential impacts to intersection monitoring locations that are part of the CMP highway system is required.

### 11.3 Transit Impact Review

As required by the *2010 Congestion Management Program for Los Angeles County*, a review has been made of the CMP transit service. Existing transit service is provided in the vicinity of the proposed project.

The project trip generation, as shown in *Table 5-2*, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to the CMP guidelines, the proposed project is forecast to generate demand for two (2) transit trip during the weekday AM peak hour, two (2) transit trips during the weekday PM peak hour, and 22 daily transit trips during the weekday. The calculations are as follows:

- Weekday AM Peak Hour =  $35 \times 1.4 \times 0.035 = 2$  Transit Trips
- Weekday PM Peak Hour =  $47 \times 1.4 \times 0.035 = 2$  Transit Trips
- Weekday Daily Trips =  $450 \times 1.4 \times 0.035 = 22$  Transit Trips

As shown in *Table 4-1*, seven bus transit lines and routes are provided adjacent to or in close proximity to the project site, with two of these transit lines and routes directly serving the Portuguese Bend community. A total of four different bus transit providers provide service within the study area. As outlined in *Table 4-1* under the “No. of Buses During Peak Hour” column, these seven transit lines provide service for an average (i.e., an average of the directional number of buses during the peak hours) of approximately 20 buses during the AM peak hour and roughly 17 buses during the PM peak hour. Therefore, based on the above calculated peak hour transit trips, this would correspond to less than one transit rider per bus. Thus, given the low number of generated transit trips per bus, no impacts on existing or future transit services in the project area are expected to occur as a result of the proposed project.

## 12.0 CONCLUSIONS

This traffic impact analysis has been prepared to evaluate the potential traffic impacts associated with the Zone 2 Landslide Moratorium - Portuguese Bend project. The City of Rancho Palos Verdes is considering revisions to its Landslide Moratorium Ordinance that would facilitate the future development of 47 additional single-family residences on undeveloped lots within a portion of the City's Portuguese Bend community. This traffic analysis evaluates potential project-related impacts at seven intersections and two street segments. Application of the City's threshold criteria to the "Existing With Project" scenario indicates that none of the study locations are anticipated to be significantly impacted by the proposed project. However, the project is forecast to contribute on a cumulative basis to significant traffic impacts at a total of three study intersections.

Transportation mitigation measures have been considered and if approved and implemented would reduce the project's contribution to the significant cumulative transportation impacts at the subject study intersections to less than significant levels. It is important to note that for Intersection No. 2 (Seahill Drive-Tramonto Drive/Palos Verdes Drive South), it has been conservatively assumed for purposes of the Draft EIR that a significant and unavoidable traffic impact would remain at this intersection as described in this report, as the project's proportionate share funding contribution in and of itself would not allow the City to implement the measure absent other funding sources. Further, for Intersection No. 6 (Forrestal Drive/Palos Verdes Drive South), it has been conservatively assumed for purposes of the Draft EIR that a significant and unavoidable traffic impact would remain at the intersection due to current uncertainty regarding an approval of a traffic signal installation.

# **APPENDIX A**

## **TRAFFIC COUNT DATA**

City Traffic Counters, LLC.  
626-256-4171

File Name : Hawthorne\_VR  
Site Code : 00000000  
Start Date : 3/22/2011  
Page No : 1

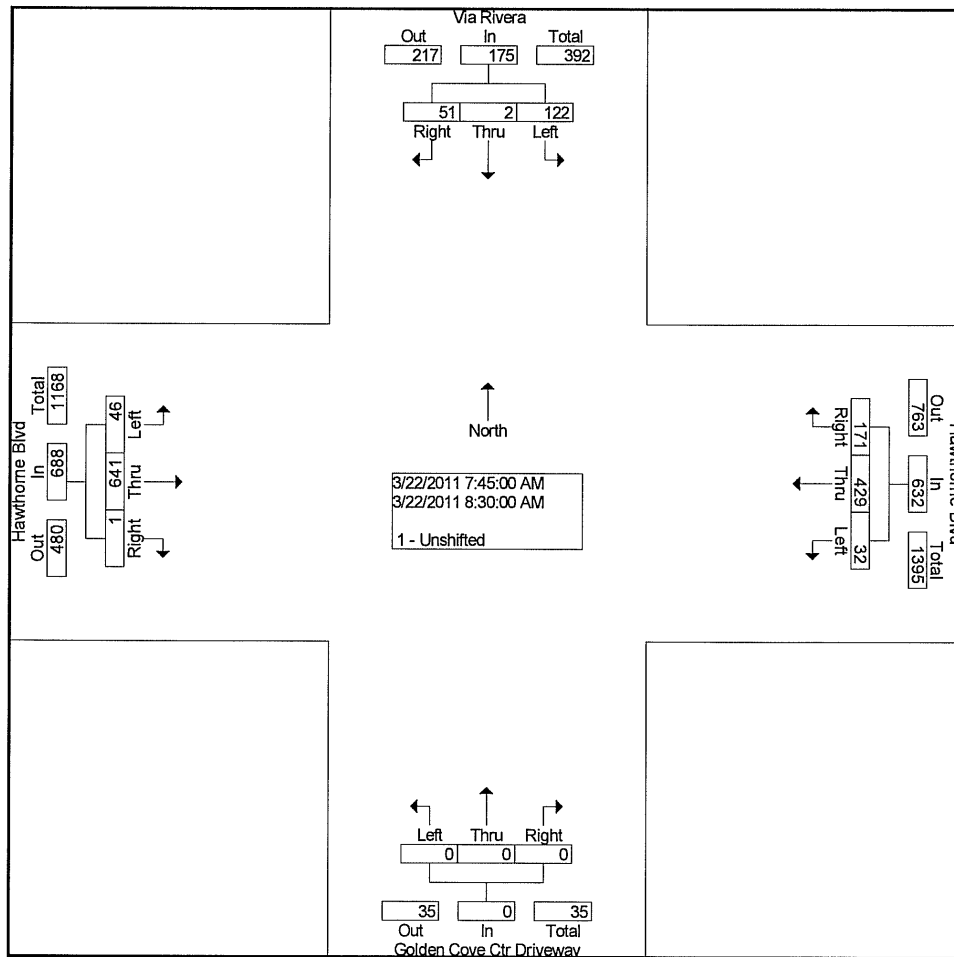
Groups Printed- 1 - Unshifted

|             | Via Rivera<br>Southbound |      |       | Hawthorne Blvd<br>Westbound |      |       | Golden Cove Ctr Driveway<br>Northbound |      |       | Hawthorne Blvd<br>Eastbound |      |       |            |
|-------------|--------------------------|------|-------|-----------------------------|------|-------|----------------------------------------|------|-------|-----------------------------|------|-------|------------|
| Start Time  | Left                     | Thru | Right | Left                        | Thru | Right | Left                                   | Thru | Right | Left                        | Thru | Right | Int. Total |
| Factor      | 1.0                      | 1.0  | 1.0   | 1.0                         | 1.0  | 1.0   | 1.0                                    | 1.0  | 1.0   | 1.0                         | 1.0  | 1.0   |            |
| 07:00 AM    | 11                       | 0    | 6     | 2                           | 45   | 4     | 0                                      | 0    | 1     | 6                           | 84   | 0     | 159        |
| 07:15 AM    | 14                       | 0    | 4     | 3                           | 41   | 6     | 0                                      | 0    | 1     | 7                           | 65   | 0     | 141        |
| 07:30 AM    | 25                       | 0    | 10    | 2                           | 98   | 11    | 0                                      | 0    | 0     | 6                           | 159  | 0     | 311        |
| 07:45 AM    | 23                       | 0    | 12    | 2                           | 153  | 24    | 0                                      | 0    | 0     | 3                           | 153  | 1     | 371        |
| Total       | 73                       | 0    | 32    | 9                           | 337  | 45    | 0                                      | 0    | 2     | 22                          | 461  | 1     | 982        |
| 08:00 AM    | 16                       | 2    | 1     | 5                           | 102  | 39    | 0                                      | 0    | 0     | 7                           | 160  | 0     | 332        |
| 08:15 AM    | 28                       | 0    | 19    | 15                          | 81   | 78    | 0                                      | 0    | 0     | 22                          | 173  | 0     | 416        |
| 08:30 AM    | 55                       | 0    | 19    | 10                          | 93   | 30    | 0                                      | 0    | 0     | 14                          | 155  | 0     | 376        |
| 08:45 AM    | 27                       | 0    | 7     | 11                          | 106  | 8     | 0                                      | 0    | 2     | 3                           | 130  | 0     | 294        |
| Total       | 126                      | 2    | 46    | 41                          | 382  | 155   | 0                                      | 0    | 2     | 46                          | 618  | 0     | 1418       |
| 04:00 PM    | 14                       | 0    | 14    | 6                           | 126  | 26    | 0                                      | 0    | 1     | 11                          | 136  | 1     | 335        |
| 04:15 PM    | 27                       | 0    | 9     | 5                           | 144  | 14    | 0                                      | 0    | 2     | 8                           | 110  | 0     | 319        |
| 04:30 PM    | 12                       | 1    | 8     | 3                           | 164  | 16    | 1                                      | 0    | 0     | 9                           | 113  | 0     | 327        |
| 04:45 PM    | 11                       | 1    | 14    | 7                           | 140  | 15    | 0                                      | 0    | 2     | 10                          | 115  | 0     | 315        |
| Total       | 64                       | 2    | 45    | 21                          | 574  | 71    | 1                                      | 0    | 5     | 38                          | 474  | 1     | 1296       |
| 05:00 PM    | 14                       | 0    | 7     | 3                           | 112  | 19    | 0                                      | 0    | 1     | 6                           | 137  | 0     | 299        |
| 05:15 PM    | 15                       | 0    | 6     | 7                           | 157  | 11    | 0                                      | 0    | 3     | 12                          | 105  | 2     | 318        |
| 05:30 PM    | 12                       | 0    | 8     | 9                           | 141  | 19    | 0                                      | 1    | 5     | 12                          | 138  | 1     | 346        |
| 05:45 PM    | 17                       | 0    | 3     | 1                           | 153  | 25    | 0                                      | 1    | 1     | 5                           | 132  | 2     | 340        |
| Total       | 58                       | 0    | 24    | 20                          | 563  | 74    | 0                                      | 2    | 10    | 35                          | 512  | 5     | 1303       |
| Grand Total | 321                      | 4    | 147   | 91                          | 1856 | 345   | 1                                      | 2    | 19    | 141                         | 2065 | 7     | 4999       |
| Apprch %    | 68.0                     | 0.8  | 31.1  | 4.0                         | 81.0 | 15.1  | 4.5                                    | 9.1  | 86.4  | 6.4                         | 93.3 | 0.3   |            |
| Total %     | 6.4                      | 0.1  | 2.9   | 1.8                         | 37.1 | 6.9   | 0.0                                    | 0.0  | 0.4   | 2.8                         | 41.3 | 0.1   |            |

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626-256-4171

File Name : Hawthorne\_VR  
Site Code : 00000000  
Start Date : 3/22/2011  
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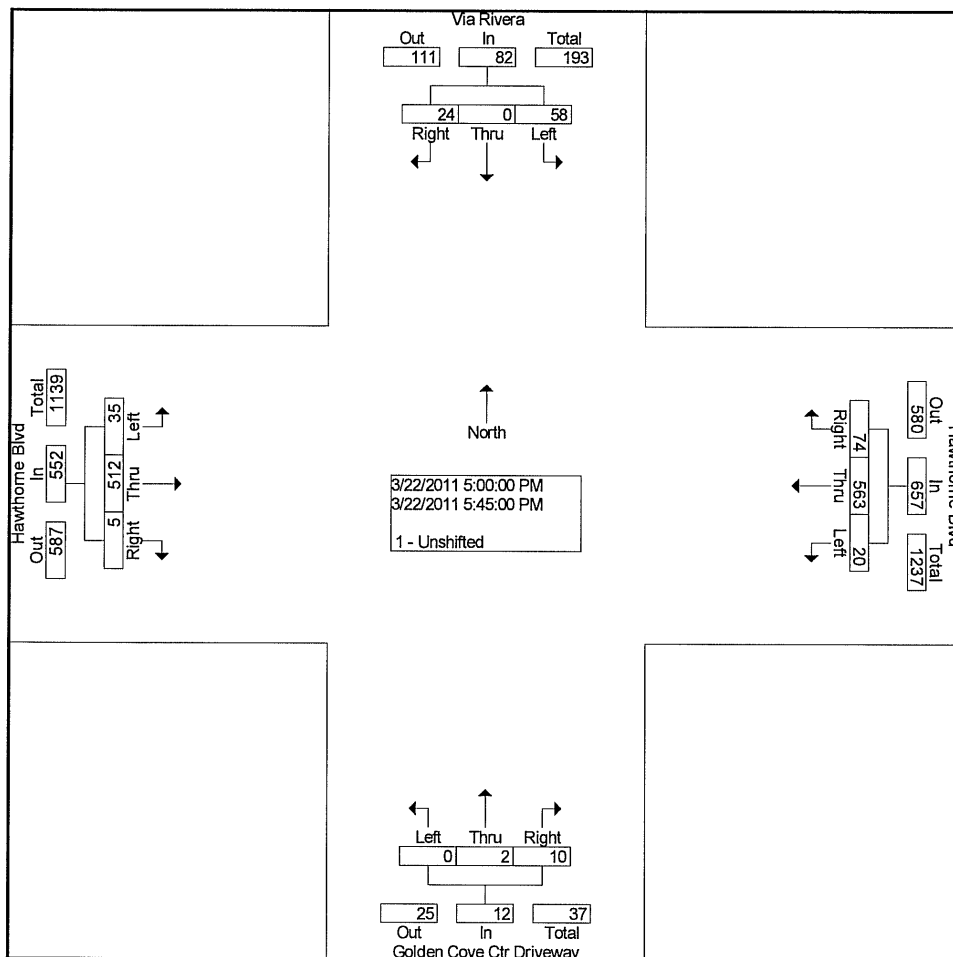
|                                                   | Via Rivera<br>Southbound |      |       |               | Hawthorne Blvd<br>Westbound |      |       |               | Golden Cove Ctr Driveway<br>Northbound |      |       |               | Hawthorne Blvd<br>Eastbound |      |       |               |               |
|---------------------------------------------------|--------------------------|------|-------|---------------|-----------------------------|------|-------|---------------|----------------------------------------|------|-------|---------------|-----------------------------|------|-------|---------------|---------------|
| Start Time                                        | Left                     | Thru | Right | App.<br>Total | Left                        | Thru | Right | App.<br>Total | Left                                   | Thru | Right | App.<br>Total | Left                        | Thru | Right | App.<br>Total | Int.<br>Total |
| Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1 |                          |      |       |               |                             |      |       |               |                                        |      |       |               |                             |      |       |               |               |
| Intersection                                      | 07:45 AM                 |      |       |               |                             |      |       |               |                                        |      |       |               |                             |      |       |               |               |
| Volume                                            | 122                      | 2    | 51    | 175           | 32                          | 429  | 171   | 632           | 0                                      | 0    | 0     | 0             | 46                          | 641  | 1     | 688           | 1495          |
| Percent                                           | 69.7                     | 1.1  | 29.1  |               | 5.1                         | 67.9 | 27.1  |               | 0.0                                    | 0.0  | 0.0   |               | 6.7                         | 93.2 | 0.1   |               |               |
| 08:15                                             |                          |      |       |               |                             |      |       |               |                                        |      |       |               |                             |      |       |               |               |
| Volume                                            | 28                       | 0    | 19    | 47            | 15                          | 81   | 78    | 174           | 0                                      | 0    | 0     | 0             | 22                          | 173  | 0     | 195           | 416           |
| Peak Factor                                       |                          |      |       |               |                             |      |       |               |                                        |      |       |               |                             |      |       |               | 0.898         |
| High Int.                                         | 08:30 AM                 |      |       |               | 07:45 AM                    |      |       |               | 6:45:00 AM                             |      |       |               | 08:15 AM                    |      |       |               |               |
| Volume                                            | 55                       | 0    | 19    | 74            | 2                           | 153  | 24    | 179           | 0                                      | 0    | 0     | 0             | 22                          | 173  | 0     | 195           |               |
| Peak Factor                                       | 0.591                    |      |       |               | 0.883                       |      |       |               |                                        |      |       |               | 0.882                       |      |       |               |               |



City Traffic Counters, LLC.  
626-256-4171

File Name : Hawthorne\_VR  
Site Code : 00000000  
Start Date : 3/22/2011  
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|                                                   | Via Rivera<br>Southbound |      |       |               | Hawthorne Blvd<br>Westbound |      |       |               | Golden Cove Ctr Driveway<br>Northbound |      |       |               | Hawthorne Blvd<br>Eastbound |      |       |               |               |
|---------------------------------------------------|--------------------------|------|-------|---------------|-----------------------------|------|-------|---------------|----------------------------------------|------|-------|---------------|-----------------------------|------|-------|---------------|---------------|
| Start Time                                        | Left                     | Thru | Right | App.<br>Total | Left                        | Thru | Right | App.<br>Total | Left                                   | Thru | Right | App.<br>Total | Left                        | Thru | Right | App.<br>Total | Int.<br>Total |
| Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1 |                          |      |       |               |                             |      |       |               |                                        |      |       |               |                             |      |       |               |               |
| Intersection                                      | 05:00 PM                 |      |       |               |                             |      |       |               |                                        |      |       |               |                             |      |       |               |               |
| Volume                                            | 58                       | 0    | 24    | 82            | 20                          | 563  | 74    | 657           | 0                                      | 2    | 10    | 12            | 35                          | 512  | 5     | 552           | 1303          |
| Percent                                           | 70.7                     | 0.0  | 29.3  |               | 3.0                         | 85.7 | 11.3  |               | 0.0                                    | 16.7 | 83.3  |               | 6.3                         | 92.8 | 0.9   |               |               |
| 05:30                                             | 12                       | 0    | 8     | 20            | 9                           | 141  | 19    | 169           | 0                                      | 1    | 5     | 6             | 12                          | 138  | 1     | 151           | 346           |
| Volume                                            |                          |      |       |               |                             |      |       |               |                                        |      |       |               |                             |      |       |               |               |
| Peak Factor                                       |                          |      |       |               |                             |      |       |               |                                        |      |       |               |                             |      |       |               | 0.941         |
| High Int.                                         | 05:00 PM                 |      |       |               | 05:45 PM                    |      |       |               | 05:30 PM                               |      |       |               | 05:30 PM                    |      |       |               |               |
| Volume                                            | 14                       | 0    | 7     | 21            | 1                           | 153  | 25    | 179           | 0                                      | 1    | 5     | 6             | 12                          | 138  | 1     | 151           |               |
| Peak Factor                                       | 0.976                    |      |       |               | 0.918                       |      |       |               | 0.500                                  |      |       |               | 0.914                       |      |       |               |               |



City Traffic Counters  
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File Name : RPVSeahill  
Site Code : 00000000  
Start Date : 5/19/2010  
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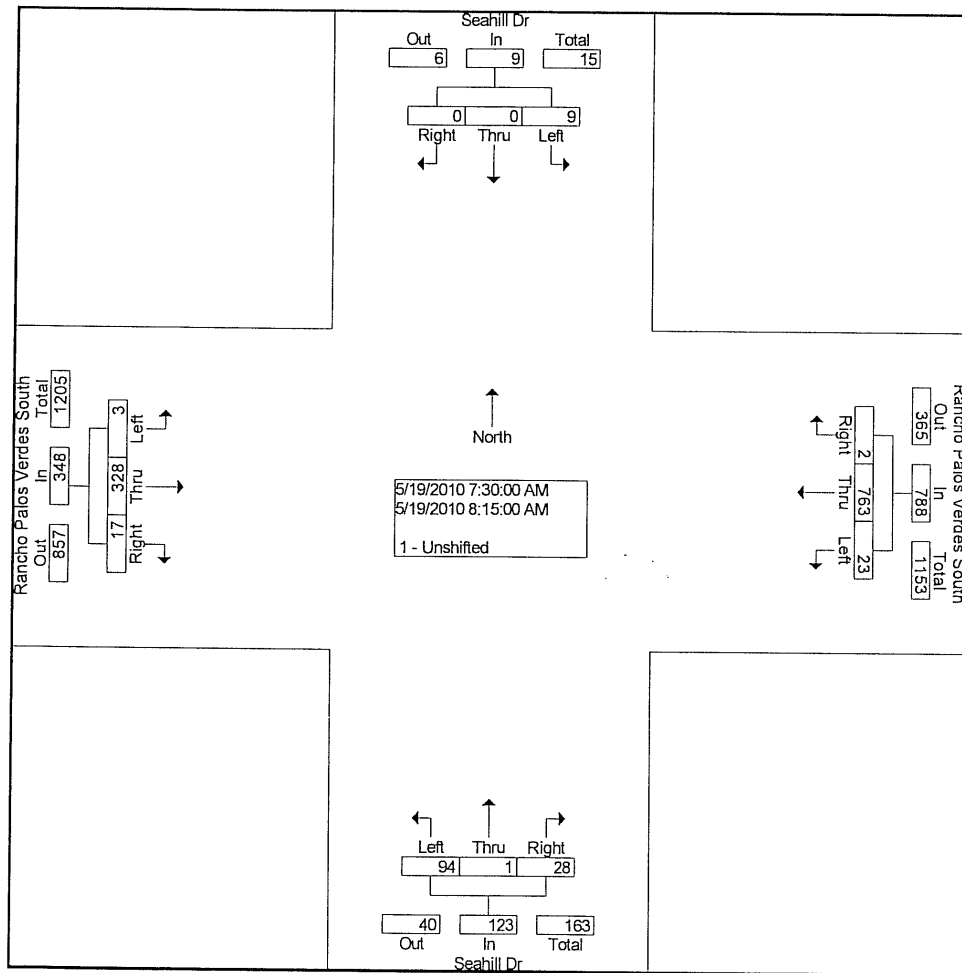
Groups Printed- 1 - Unshifted

|             | Seahill Dr<br>Southbound |      |       | Rancho Palos Verdes<br>South<br>Westbound |      |       | Seahill Dr<br>Northbound |      |       | Rancho Palos Verdes<br>South<br>Eastbound |      |       |            |
|-------------|--------------------------|------|-------|-------------------------------------------|------|-------|--------------------------|------|-------|-------------------------------------------|------|-------|------------|
| Start Time  | Left                     | Thru | Right | Left                                      | Thru | Right | Left                     | Thru | Right | Left                                      | Thru | Right | Int. Total |
| Factor      | 1.0                      | 1.0  | 1.0   | 1.0                                       | 1.0  | 1.0   | 1.0                      | 1.0  | 1.0   | 1.0                                       | 1.0  | 1.0   |            |
| 07:00 AM    | 2                        | 0    | 0     | 2                                         | 95   | 0     | 10                       | 1    | 7     | 2                                         | 53   | 4     | 176        |
| 07:15 AM    | 0                        | 0    | 2     | 4                                         | 145  | 0     | 21                       | 0    | 10    | 3                                         | 45   | 3     | 233        |
| 07:30 AM    | 2                        | 0    | 0     | 2                                         | 218  | 0     | 27                       | 1    | 8     | 1                                         | 69   | 0     | 328        |
| 07:45 AM    | 3                        | 0    | 0     | 5                                         | 195  | 1     | 21                       | 0    | 8     | 0                                         | 86   | 6     | 325        |
| Total       | 7                        | 0    | 2     | 13                                        | 653  | 1     | 79                       | 2    | 33    | 6                                         | 253  | 13    | 1062       |
| 08:00 AM    | 2                        | 0    | 0     | 9                                         | 180  | 0     | 15                       | 0    | 4     | 0                                         | 84   | 5     | 299        |
| 08:15 AM    | 2                        | 0    | 0     | 7                                         | 170  | 1     | 31                       | 0    | 8     | 2                                         | 89   | 6     | 316        |
| 08:30 AM    | 6                        | 0    | 1     | 3                                         | 133  | 0     | 10                       | 0    | 11    | 1                                         | 106  | 7     | 278        |
| 08:45 AM    | 1                        | 0    | 0     | 7                                         | 123  | 0     | 13                       | 0    | 4     | 1                                         | 100  | 8     | 257        |
| Total       | 11                       | 0    | 1     | 26                                        | 606  | 1     | 69                       | 0    | 27    | 4                                         | 379  | 26    | 1150       |
| 04:00 PM    | 0                        | 0    | 0     | 4                                         | 90   | 0     | 12                       | 0    | 3     | 1                                         | 115  | 10    | 235        |
| 04:15 PM    | 2                        | 0    | 0     | 8                                         | 104  | 0     | 11                       | 0    | 7     | 3                                         | 129  | 6     | 270        |
| 04:30 PM    | 1                        | 0    | 0     | 9                                         | 90   | 1     | 9                        | 0    | 6     | 13                                        | 126  | 12    | 267        |
| 04:45 PM    | 0                        | 0    | 0     | 6                                         | 120  | 3     | 11                       | 0    | 6     | 8                                         | 138  | 12    | 304        |
| Total       | 3                        | 0    | 0     | 27                                        | 404  | 4     | 43                       | 0    | 22    | 25                                        | 508  | 40    | 1076       |
| 05:00 PM    | 0                        | 0    | 0     | 13                                        | 100  | 0     | 16                       | 0    | 11    | 6                                         | 122  | 12    | 280        |
| 05:15 PM    | 1                        | 0    | 0     | 6                                         | 99   | 1     | 10                       | 0    | 3     | 8                                         | 148  | 14    | 290        |
| 05:30 PM    | 1                        | 0    | 0     | 15                                        | 103  | 1     | 11                       | 0    | 7     | 8                                         | 127  | 23    | 296        |
| 05:45 PM    | 0                        | 0    | 0     | 8                                         | 77   | 3     | 11                       | 0    | 7     | 9                                         | 112  | 20    | 247        |
| Total       | 2                        | 0    | 0     | 42                                        | 379  | 5     | 48                       | 0    | 28    | 31                                        | 509  | 69    | 1113       |
| Grand Total | 23                       | 0    | 3     | 108                                       | 2042 | 11    | 239                      | 2    | 110   | 66                                        | 1649 | 148   | 4401       |
| Apprch %    | 88.5                     | 0.0  | 11.5  | 5.0                                       | 94.5 | 0.5   | 68.1                     | 0.6  | 31.3  | 3.5                                       | 88.5 | 7.9   |            |
| Total %     | 0.5                      | 0.0  | 0.1   | 2.5                                       | 46.4 | 0.2   | 5.4                      | 0.0  | 2.5   | 1.5                                       | 37.5 | 3.4   |            |

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File Name : RPVSeahill  
Site Code : 00000000  
Start Date : 5/19/2010  
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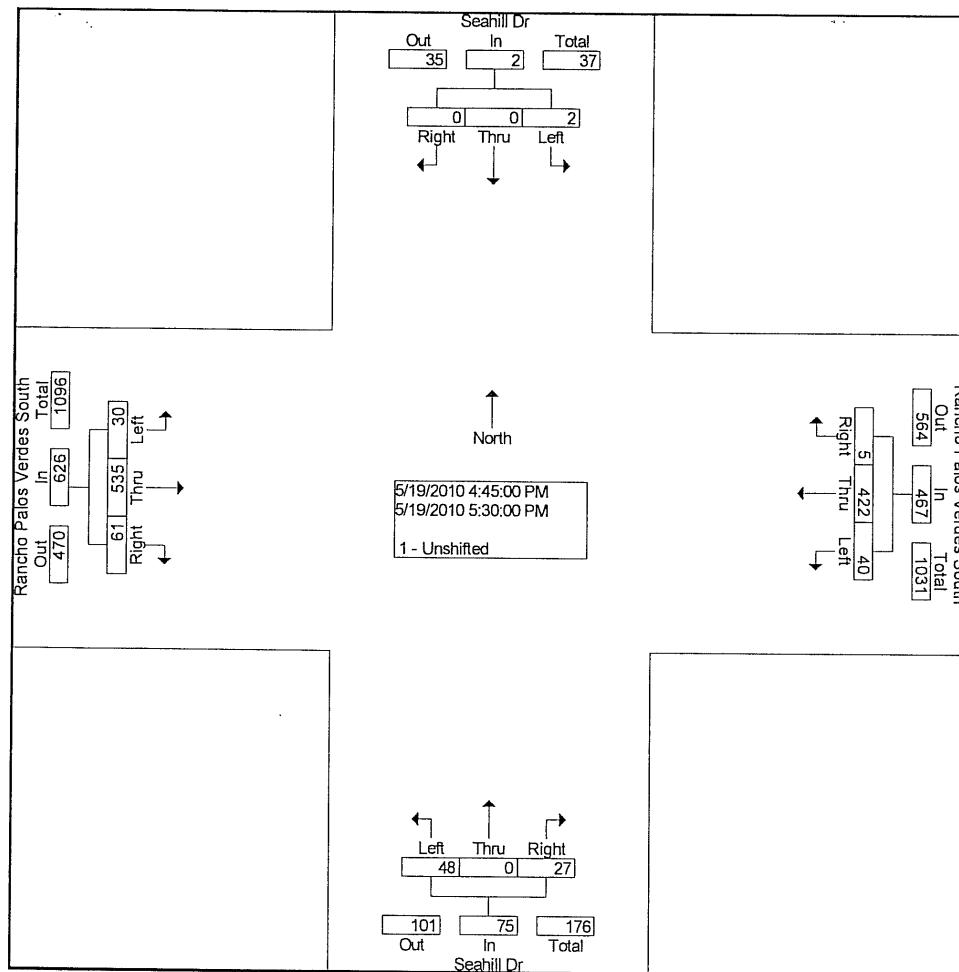
|                                                   | Seahill Dr Southbound |      |       |            | Rancho Palos Verdes South Westbound |      |       |            | Seahill Dr Northbound |      |       |            | Rancho Palos Verdes South Eastbound |      |       |            |            |
|---------------------------------------------------|-----------------------|------|-------|------------|-------------------------------------|------|-------|------------|-----------------------|------|-------|------------|-------------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                  | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Left                  | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Int. Total |
| Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1 |                       |      |       |            |                                     |      |       |            |                       |      |       |            |                                     |      |       |            |            |
| Intersection                                      | 07:30 AM              |      |       |            |                                     |      |       |            |                       |      |       |            |                                     |      |       |            |            |
| Volume                                            | 9                     | 0    | 0     | 9          | 23                                  | 763  | 2     | 788        | 94                    | 1    | 28    | 123        | 3                                   | 328  | 17    | 348        | 1268       |
| Percent                                           | 100.0                 | 0.0  | 0.0   |            | 2.9                                 | 96.8 | 0.3   |            | 76.4                  | 0.8  | 22.8  |            | 0.9                                 | 94.3 | 4.9   |            |            |
| 07:30                                             |                       |      |       |            |                                     |      |       |            |                       |      |       |            |                                     |      |       |            |            |
| Volume                                            | 2                     | 0    | 0     | 2          | 2                                   | 218  | 0     | 220        | 27                    | 1    | 8     | 36         | 1                                   | 69   | 0     | 70         | 328        |
| Peak Factor                                       |                       |      |       |            |                                     |      |       |            |                       |      |       |            |                                     |      |       |            | 0.966      |
| High Int.                                         | 07:45 AM              |      |       |            | 07:30 AM                            |      |       |            | 08:15 AM              |      |       |            | 08:15 AM                            |      |       |            |            |
| Volume                                            | 3                     | 0    | 0     | 3          | 2                                   | 218  | 0     | 220        | 31                    | 0    | 8     | 39         | 2                                   | 89   | 6     | 97         |            |
| Peak Factor                                       | 0.750                 |      |       |            | 0.895                               |      |       |            | 0.788                 |      |       |            | 0.897                               |      |       |            |            |



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File Name : RPVSeahill  
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Start Date : 5/19/2010  
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|                                                   | Seahill Dr Southbound |      |       |            | Rancho Palos Verdes South Westbound |      |       |            | Seahill Dr Northbound |      |       |            | Rancho Palos Verdes South Eastbound |      |       |            |            |
|---------------------------------------------------|-----------------------|------|-------|------------|-------------------------------------|------|-------|------------|-----------------------|------|-------|------------|-------------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                  | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Left                  | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Int. Total |
| Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1 |                       |      |       |            |                                     |      |       |            |                       |      |       |            |                                     |      |       |            |            |
| Intersection                                      | 04:45 PM              |      |       |            |                                     |      |       |            |                       |      |       |            |                                     |      |       |            |            |
| Volume                                            | 2                     | 0    | 0     | 2          | 40                                  | 422  | 5     | 467        | 48                    | 0    | 27    | 75         | 30                                  | 535  | 61    | 626        | 1170       |
| Percent                                           | 100.                  | 0.0  | 0.0   |            | 8.6                                 | 90.4 | 1.1   |            | 64.0                  | 0.0  | 36.0  |            | 4.8                                 | 85.5 | 9.7   |            |            |
| 04:45                                             |                       |      |       |            |                                     |      |       |            |                       |      |       |            |                                     |      |       |            |            |
| Volume                                            | 0                     | 0    | 0     | 0          | 6                                   | 120  | 3     | 129        | 11                    | 0    | 6     | 17         | 8                                   | 138  | 12    | 158        | 304        |
| Peak Factor                                       |                       |      |       |            |                                     |      |       |            |                       |      |       |            |                                     |      |       |            | 0.962      |
| High Int.                                         | 05:15 PM              |      |       |            | 04:45 PM                            |      |       |            | 05:00 PM              |      |       |            | 05:15 PM                            |      |       |            |            |
| Volume                                            | 1                     | 0    | 0     | 1          | 6                                   | 120  | 3     | 129        | 16                    | 0    | 11    | 27         | 8                                   | 148  | 14    | 170        |            |
| Peak Factor                                       | 0.500                 |      |       |            | 0.905                               |      |       |            | 0.694                 |      |       |            | 0.921                               |      |       |            |            |



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626.256.4171

File Name : RPVBarkentine  
Site Code : 00000000  
Start Date : 5/19/2010  
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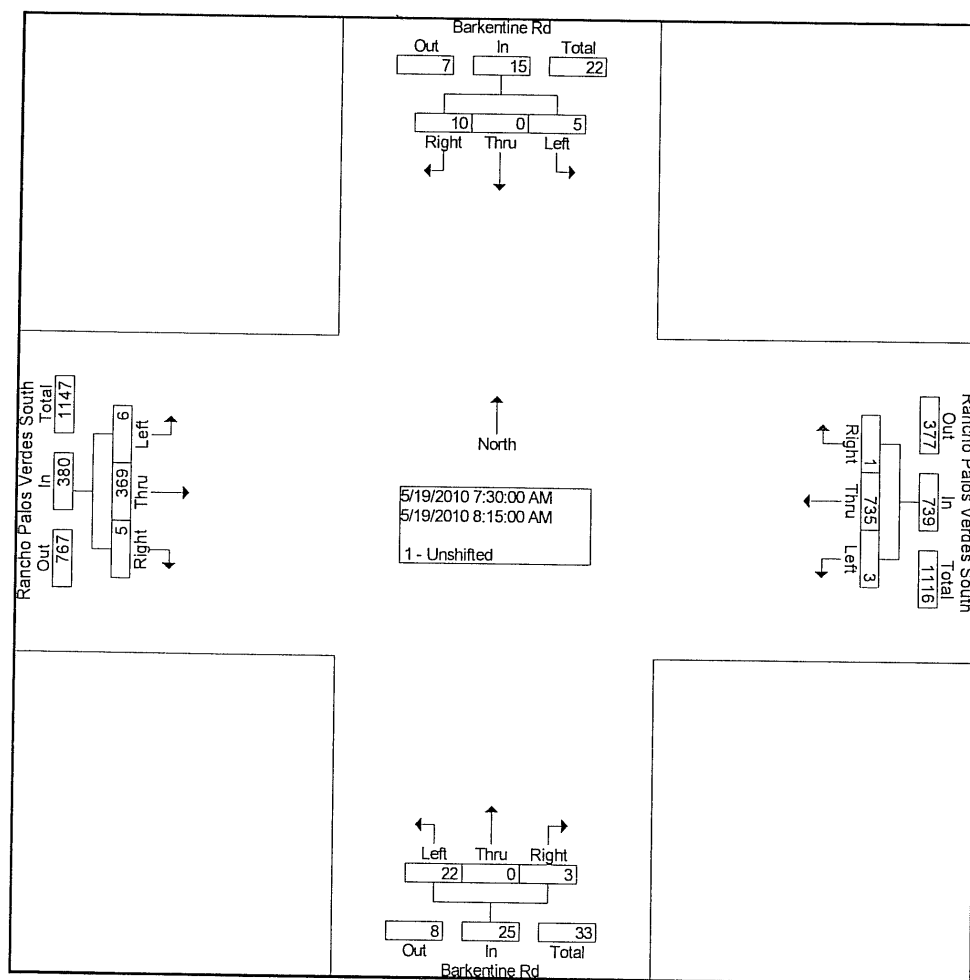
Groups Printed- 1 - Unshifted

|             | Barkentine Rd<br>Southbound |      |       | Rancho Palos Verdes<br>South<br>Westbound |      |       | Barkentine Rd<br>Northbound |      |       | Rancho Palos Verdes<br>South<br>Eastbound |      |       | Int. Total |
|-------------|-----------------------------|------|-------|-------------------------------------------|------|-------|-----------------------------|------|-------|-------------------------------------------|------|-------|------------|
| Start Time  | Left                        | Thru | Right | Left                                      | Thru | Right | Left                        | Thru | Right | Left                                      | Thru | Right |            |
| Factor      | 1.0                         | 1.0  | 1.0   | 1.0                                       | 1.0  | 1.0   | 1.0                         | 1.0  | 1.0   | 1.0                                       | 1.0  | 1.0   |            |
| 07:00 AM    | 0                           | 0    | 2     | 0                                         | 90   | 0     | 2                           | 0    | 1     | 1                                         | 58   | 1     | 155        |
| 07:15 AM    | 0                           | 0    | 1     | 0                                         | 143  | 1     | 2                           | 0    | 0     | 0                                         | 59   | 1     | 207        |
| 07:30 AM    | 0                           | 0    | 2     | 0                                         | 216  | 0     | 4                           | 0    | 1     | 1                                         | 74   | 1     | 299        |
| 07:45 AM    | 1                           | 0    | 2     | 1                                         | 195  | 1     | 5                           | 0    | 0     | 0                                         | 101  | 0     | 306        |
| Total       | 1                           | 0    | 7     | 1                                         | 644  | 2     | 13                          | 0    | 2     | 2                                         | 292  | 3     | 967        |
| 08:00 AM    | 4                           | 0    | 5     | 0                                         | 171  | 0     | 7                           | 0    | 0     | 1                                         | 96   | 1     | 285        |
| 08:15 AM    | 0                           | 0    | 1     | 2                                         | 153  | 0     | 6                           | 0    | 2     | 4                                         | 98   | 3     | 269        |
| 08:30 AM    | 0                           | 0    | 4     | 1                                         | 135  | 1     | 4                           | 0    | 2     | 2                                         | 123  | 2     | 274        |
| 08:45 AM    | 1                           | 0    | 4     | 5                                         | 128  | 2     | 2                           | 0    | 2     | 1                                         | 87   | 7     | 239        |
| Total       | 5                           | 0    | 14    | 8                                         | 587  | 3     | 19                          | 0    | 6     | 8                                         | 404  | 13    | 1067       |
| 04:00 PM    | 0                           | 0    | 1     | 2                                         | 92   | 0     | 1                           | 0    | 0     | 2                                         | 130  | 5     | 233        |
| 04:15 PM    | 0                           | 0    | 2     | 2                                         | 109  | 3     | 0                           | 0    | 1     | 2                                         | 129  | 4     | 252        |
| 04:30 PM    | 1                           | 0    | 0     | 2                                         | 90   | 1     | 3                           | 0    | 1     | 5                                         | 124  | 2     | 229        |
| 04:45 PM    | 0                           | 0    | 1     | 1                                         | 119  | 0     | 6                           | 0    | 3     | 4                                         | 138  | 4     | 276        |
| Total       | 1                           | 0    | 4     | 7                                         | 410  | 4     | 10                          | 0    | 5     | 13                                        | 521  | 15    | 990        |
| 05:00 PM    | 0                           | 0    | 2     | 3                                         | 108  | 1     | 4                           | 0    | 1     | 7                                         | 131  | 2     | 259        |
| 05:15 PM    | 0                           | 0    | 0     | 2                                         | 101  | 0     | 0                           | 0    | 0     | 4                                         | 152  | 2     | 261        |
| 05:30 PM    | 0                           | 0    | 0     | 1                                         | 109  | 1     | 4                           | 0    | 2     | 4                                         | 140  | 4     | 265        |
| 05:45 PM    | 3                           | 0    | 0     | 3                                         | 81   | 2     | 3                           | 0    | 1     | 3                                         | 108  | 2     | 206        |
| Total       | 3                           | 0    | 2     | 9                                         | 399  | 4     | 11                          | 0    | 4     | 18                                        | 531  | 10    | 991        |
| Grand Total | 10                          | 0    | 27    | 25                                        | 2040 | 13    | 53                          | 0    | 17    | 41                                        | 1748 | 41    | 4015       |
| Apprch %    | 27.0                        | 0.0  | 73.0  | 1.2                                       | 98.2 | 0.6   | 75.7                        | 0.0  | 24.3  | 2.2                                       | 95.5 | 2.2   |            |
| Total %     | 0.2                         | 0.0  | 0.7   | 0.6                                       | 50.8 | 0.3   | 1.3                         | 0.0  | 0.4   | 1.0                                       | 43.5 | 1.0   |            |

**City Traffic Counters**  
626.256.4171

File Name : RPVBarkentine  
Site Code : 00000000  
Start Date : 5/19/2010  
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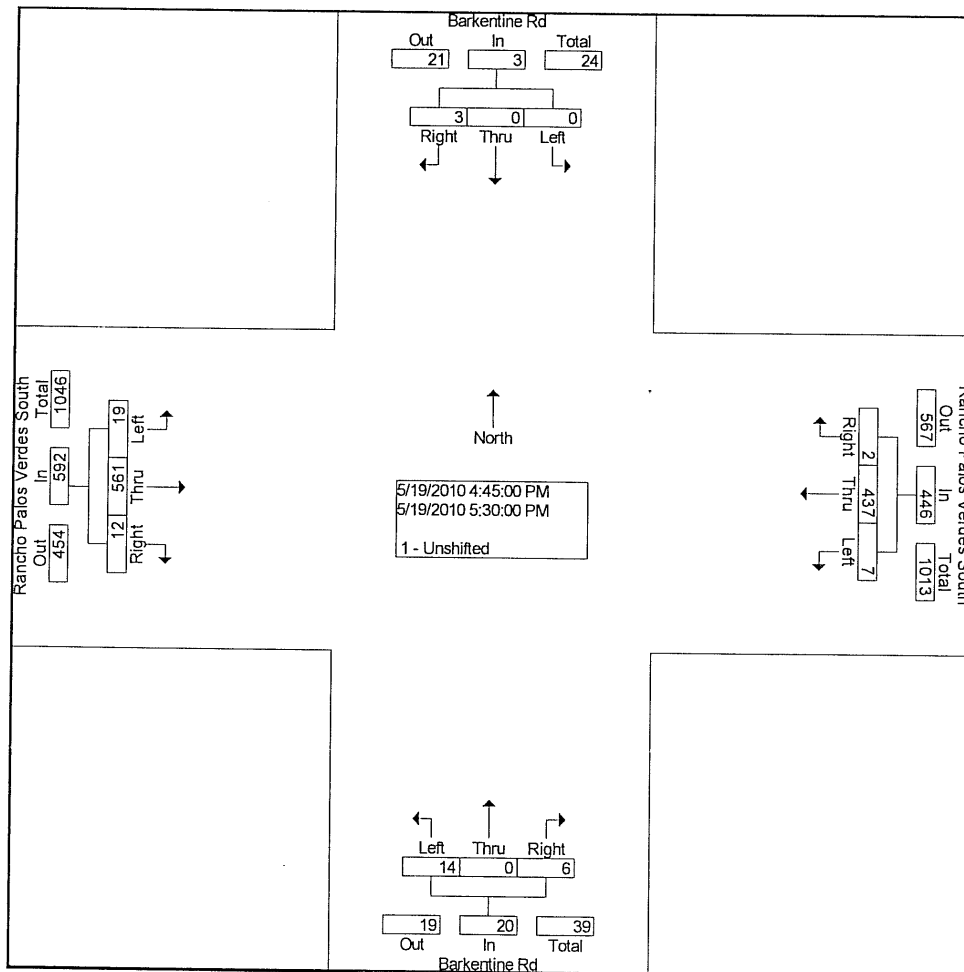
|                                                   | Barkentine Rd Southbound |      |       |            | Rancho Palos Verdes South Westbound |      |       |            | Barkentine Rd Northbound |      |       |            | Rancho Palos Verdes South Eastbound |      |       |            |            |
|---------------------------------------------------|--------------------------|------|-------|------------|-------------------------------------|------|-------|------------|--------------------------|------|-------|------------|-------------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                     | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Left                     | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Int. Total |
| Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1 |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            |            |
| Intersection                                      | 07:30 AM                 |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            |            |
| Volume                                            | 5                        | 0    | 10    | 15         | 3                                   | 735  | 1     | 739        | 22                       | 0    | 3     | 25         | 6                                   | 369  | 5     | 380        | 1159       |
| Percent                                           | 33.3                     | 0.0  | 66.7  |            | 0.4                                 | 99.5 | 0.1   |            | 88.0                     | 0.0  | 12.0  |            | 1.6                                 | 97.1 | 1.3   |            |            |
| 07:45                                             |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            |            |
| Volume                                            | 1                        | 0    | 2     | 3          | 1                                   | 195  | 1     | 197        | 5                        | 0    | 0     | 5          | 0                                   | 101  | 0     | 101        | 306        |
| Peak Factor                                       |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            | 0.947      |
| High Int.                                         | 08:00 AM                 |      |       |            | 07:30 AM                            |      |       |            | 08:15 AM                 |      |       |            | 08:15 AM                            |      |       |            |            |
| Volume                                            | 4                        | 0    | 5     | 9          | 0                                   | 216  | 0     | 216        | 6                        | 0    | 2     | 8          | 4                                   | 98   | 3     | 105        |            |
| Peak Factor                                       | 0.417                    |      |       |            | 0.855                               |      |       |            | 0.781                    |      |       |            | 0.905                               |      |       |            |            |



**City Traffic Counters**  
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File Name : RPVBarkentine  
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|                                                   | Barkentine Rd Southbound |      |       |            | Rancho Palos Verdes South Westbound |      |       |            | Barkentine Rd Northbound |      |       |            | Rancho Palos Verdes South Eastbound |      |       |            |            |
|---------------------------------------------------|--------------------------|------|-------|------------|-------------------------------------|------|-------|------------|--------------------------|------|-------|------------|-------------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                     | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Left                     | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Int. Total |
| Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1 |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            |            |
| Intersection 04:45 PM                             |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            |            |
| Volume                                            | 0                        | 0    | 3     | 3          | 7                                   | 437  | 2     | 446        | 14                       | 0    | 6     | 20         | 19                                  | 561  | 12    | 592        | 1061       |
| Percent                                           | 0.0                      | 0.0  | 100.0 |            | 1.6                                 | 98.0 | 0.4   |            | 70.0                     | 0.0  | 30.0  |            | 3.2                                 | 94.8 | 2.0   |            |            |
| 04:45                                             |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            |            |
| Volume                                            | 0                        | 0    | 1     | 1          | 1                                   | 119  | 0     | 120        | 6                        | 0    | 3     | 9          | 4                                   | 138  | 4     | 146        | 276        |
| Peak Factor                                       |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            | 0.961      |
| High Int. 05:00 PM                                |                          |      |       |            | 04:45 PM                            |      |       |            | 04:45 PM                 |      |       |            | 05:15 PM                            |      |       |            |            |
| Volume                                            | 0                        | 0    | 2     | 2          | 1                                   | 119  | 0     | 120        | 6                        | 0    | 3     | 9          | 4                                   | 152  | 2     | 158        |            |
| Peak Factor                                       |                          |      |       | 0.375      |                                     |      |       | 0.929      |                          |      |       | 0.556      |                                     |      |       | 0.937      |            |



City Traffic Counters  
626.256.4171

File Name : RPVNarcissa  
Site Code : 00000000  
Start Date : 5/19/2010  
Page No : 1

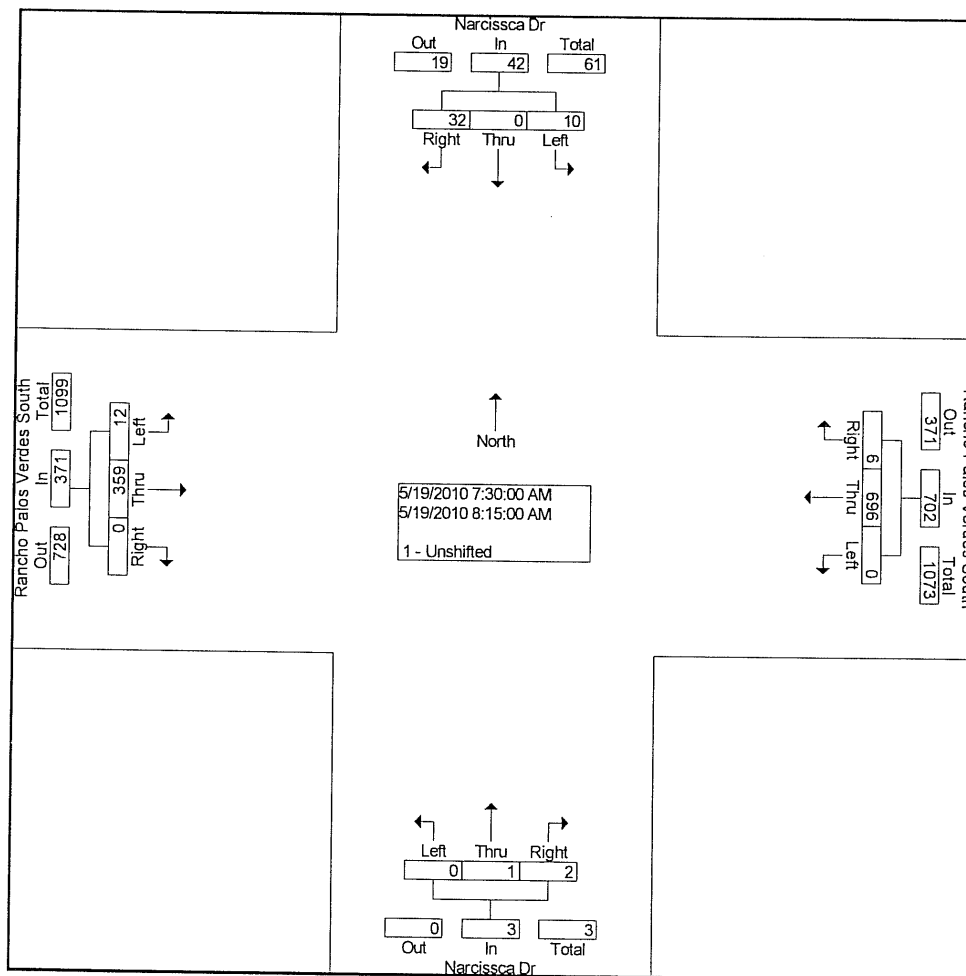
Groups Printed- 1 - Unshifted

|             | Narcissca Dr<br>Southbound |      |       | Rancho Palos Verdes<br>South<br>Westbound |      |       | Narcissca Dr<br>Northbound |      |       | Rancho Palos Verdes<br>South<br>Eastbound |      |       | Int. Total |
|-------------|----------------------------|------|-------|-------------------------------------------|------|-------|----------------------------|------|-------|-------------------------------------------|------|-------|------------|
| Start Time  | Left                       | Thru | Right | Left                                      | Thru | Right | Left                       | Thru | Right | Left                                      | Thru | Right |            |
| Factor      | 1.0                        | 1.0  | 1.0   | 1.0                                       | 1.0  | 1.0   | 1.0                        | 1.0  | 1.0   | 1.0                                       | 1.0  | 1.0   |            |
| 07:00 AM    | 0                          | 0    | 2     | 1                                         | 89   | 1     | 1                          | 0    | 0     | 0                                         | 62   | 0     | 156        |
| 07:15 AM    | 0                          | 0    | 6     | 1                                         | 143  | 2     | 0                          | 0    | 0     | 2                                         | 55   | 0     | 209        |
| 07:30 AM    | 1                          | 0    | 12    | 0                                         | 210  | 2     | 0                          | 1    | 1     | 3                                         | 70   | 0     | 300        |
| 07:45 AM    | 2                          | 0    | 8     | 0                                         | 183  | 1     | 0                          | 0    | 0     | 4                                         | 104  | 0     | 302        |
| Total       | 3                          | 0    | 28    | 2                                         | 625  | 6     | 1                          | 1    | 1     | 9                                         | 291  | 0     | 967        |
| 08:00 AM    | 4                          | 0    | 4     | 0                                         | 164  | 1     | 0                          | 0    | 0     | 1                                         | 96   | 0     | 270        |
| 08:15 AM    | 3                          | 0    | 8     | 0                                         | 139  | 2     | 0                          | 0    | 1     | 4                                         | 89   | 0     | 246        |
| 08:30 AM    | 2                          | 0    | 1     | 0                                         | 138  | 0     | 0                          | 0    | 0     | 5                                         | 122  | 0     | 268        |
| 08:45 AM    | 4                          | 0    | 4     | 0                                         | 132  | 4     | 0                          | 0    | 0     | 5                                         | 83   | 0     | 232        |
| Total       | 13                         | 0    | 17    | 0                                         | 573  | 7     | 0                          | 0    | 1     | 15                                        | 390  | 0     | 1016       |
| 04:00 PM    | 3                          | 0    | 3     | 0                                         | 92   | 4     | 0                          | 0    | 0     | 6                                         | 118  | 0     | 226        |
| 04:15 PM    | 1                          | 0    | 4     | 0                                         | 113  | 2     | 0                          | 0    | 0     | 8                                         | 117  | 0     | 245        |
| 04:30 PM    | 5                          | 0    | 11    | 0                                         | 82   | 1     | 0                          | 0    | 0     | 4                                         | 119  | 0     | 222        |
| 04:45 PM    | 2                          | 0    | 4     | 0                                         | 114  | 1     | 0                          | 0    | 0     | 4                                         | 145  | 0     | 270        |
| Total       | 11                         | 0    | 22    | 0                                         | 401  | 8     | 0                          | 0    | 0     | 22                                        | 499  | 0     | 963        |
| 05:00 PM    | 3                          | 0    | 2     | 0                                         | 101  | 1     | 0                          | 0    | 0     | 11                                        | 113  | 0     | 231        |
| 05:15 PM    | 1                          | 0    | 6     | 0                                         | 105  | 2     | 0                          | 0    | 0     | 1                                         | 156  | 0     | 271        |
| 05:30 PM    | 9                          | 0    | 3     | 0                                         | 90   | 2     | 0                          | 0    | 0     | 5                                         | 133  | 0     | 242        |
| 05:45 PM    | 4                          | 0    | 2     | 0                                         | 84   | 5     | 0                          | 0    | 0     | 3                                         | 114  | 0     | 212        |
| Total       | 17                         | 0    | 13    | 0                                         | 380  | 10    | 0                          | 0    | 0     | 20                                        | 516  | 0     | 956        |
| Grand Total | 44                         | 0    | 80    | 2                                         | 1979 | 31    | 1                          | 1    | 2     | 66                                        | 1696 | 0     | 3902       |
| Apprch %    | 35.5                       | 0.0  | 64.5  | 0.1                                       | 98.4 | 1.5   | 25.0                       | 25.0 | 50.0  | 3.7                                       | 96.3 | 0.0   |            |
| Total %     | 1.1                        | 0.0  | 2.1   | 0.1                                       | 50.7 | 0.8   | 0.0                        | 0.0  | 0.1   | 1.7                                       | 43.5 | 0.0   |            |

# City Traffic Counters 626.256.4171

File Name : RPVNarcissa  
Site Code : 00000000  
Start Date : 5/19/2010  
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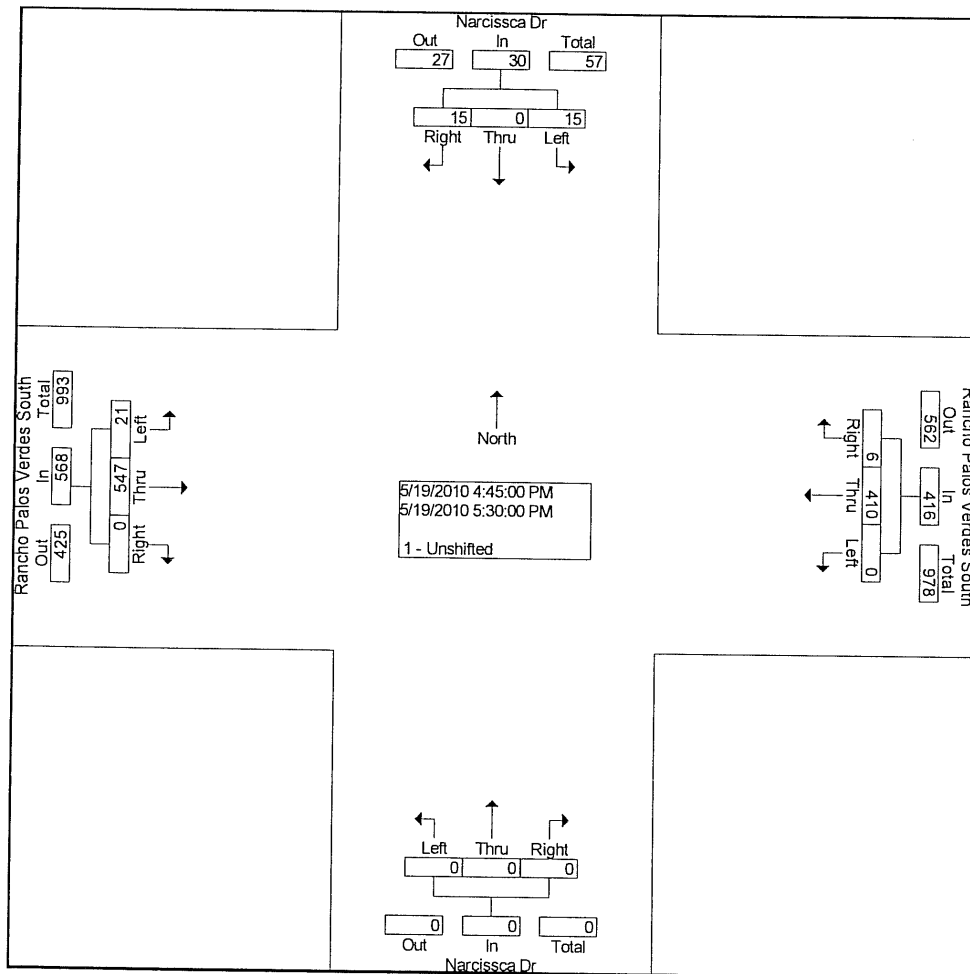
|                                                   | Narcissca Dr Southbound |      |       |            | Rancho Palos Verdes South Westbound |      |       |            | Narcissca Dr Northbound |      |       |            | Rancho Palos Verdes South Eastbound |      |       |            |            |
|---------------------------------------------------|-------------------------|------|-------|------------|-------------------------------------|------|-------|------------|-------------------------|------|-------|------------|-------------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                    | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Left                    | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Int. Total |
| Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1 |                         |      |       |            |                                     |      |       |            |                         |      |       |            |                                     |      |       |            |            |
| Intersection                                      | 07:30 AM                |      |       |            |                                     |      |       |            |                         |      |       |            |                                     |      |       |            |            |
| Volume                                            | 10                      | 0    | 32    | 42         | 0                                   | 696  | 6     | 702        | 0                       | 1    | 2     | 3          | 12                                  | 359  | 0     | 371        | 1118       |
| Percent                                           | 23.8                    | 0.0  | 76.2  |            | 0.0                                 | 99.1 | 0.9   |            | 0.0                     | 33.3 | 66.7  |            | 3.2                                 | 96.8 | 0.0   |            |            |
| 07:45                                             |                         |      |       |            |                                     |      |       |            |                         |      |       |            |                                     |      |       |            |            |
| Volume                                            | 2                       | 0    | 8     | 10         | 0                                   | 183  | 1     | 184        | 0                       | 0    | 0     | 0          | 4                                   | 104  | 0     | 108        | 302        |
| Peak Factor                                       |                         |      |       |            |                                     |      |       |            |                         |      |       |            |                                     |      |       |            | 0.925      |
| High Int.                                         | 07:30 AM                |      |       |            | 07:30 AM                            |      |       |            | 07:30 AM                |      |       |            | 07:45 AM                            |      |       |            |            |
| Volume                                            | 1                       | 0    | 12    | 13         | 0                                   | 210  | 2     | 212        | 0                       | 1    | 1     | 2          | 4                                   | 104  | 0     | 108        |            |
| Peak Factor                                       | 0.808                   |      |       |            | 0.828                               |      |       |            | 0.375                   |      |       |            | 0.859                               |      |       |            |            |



**City Traffic Counters**  
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File Name : RPVNarcissa  
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|                                                   | Narcissca Dr Southbound |      |       |            | Rancho Palos Verdes South Westbound |      |       |            | Narcissca Dr Northbound |      |       |            | Rancho Palos Verdes South Eastbound |      |       |            |            |
|---------------------------------------------------|-------------------------|------|-------|------------|-------------------------------------|------|-------|------------|-------------------------|------|-------|------------|-------------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                    | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Left                    | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Int. Total |
| Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1 |                         |      |       |            |                                     |      |       |            |                         |      |       |            |                                     |      |       |            |            |
| Intersection                                      | 04:45 PM                |      |       |            |                                     |      |       |            |                         |      |       |            |                                     |      |       |            |            |
| Volume                                            | 15                      | 0    | 15    | 30         | 0                                   | 410  | 6     | 416        | 0                       | 0    | 0     | 0          | 21                                  | 547  | 0     | 568        | 1014       |
| Percent                                           | 50.0                    | 0.0  | 50.0  |            | 0.0                                 | 98.6 | 1.4   |            | 0.0                     | 0.0  | 0.0   |            | 3.7                                 | 96.3 | 0.0   |            |            |
| 05:15                                             | 1                       | 0    | 6     | 7          | 0                                   | 105  | 2     | 107        | 0                       | 0    | 0     | 0          | 1                                   | 156  | 0     | 157        | 271        |
| Volume                                            |                         |      |       |            |                                     |      |       |            |                         |      |       |            |                                     |      |       |            |            |
| Peak Factor                                       |                         |      |       |            |                                     |      |       |            |                         |      |       |            |                                     |      |       |            | 0.935      |
| High Int.                                         | 05:30 PM                |      |       |            | 04:45 PM                            |      |       |            |                         |      |       |            | 05:15 PM                            |      |       |            |            |
| Volume                                            | 9                       | 0    | 3     | 12         | 0                                   | 114  | 1     | 115        | 0                       | 0    | 0     | 0          | 1                                   | 156  | 0     | 157        |            |
| Peak Factor                                       |                         |      |       | 0.625      |                                     |      |       | 0.904      |                         |      |       |            |                                     |      |       | 0.904      |            |



City Traffic Counters  
626.256.4171

File Name : RPVPepper  
Site Code : 00000000  
Start Date : 5/19/2010  
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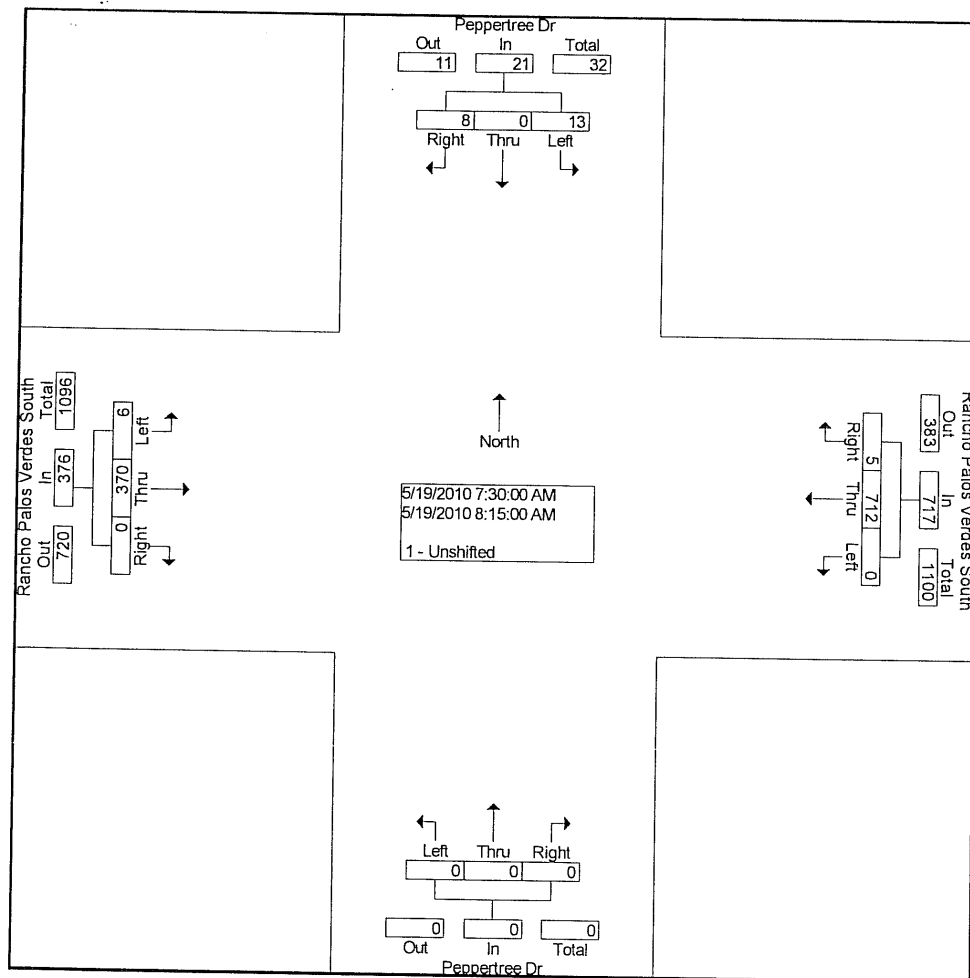
Groups Printed- 1 - Unshifted

|             | Peppertree Dr<br>Southbound |      |       | Rancho Palos Verdes<br>South<br>Westbound |      |       | Peppertree Dr<br>Northbound |      |       | Rancho Palos Verdes<br>South<br>Eastbound |      |       | Int. Total |
|-------------|-----------------------------|------|-------|-------------------------------------------|------|-------|-----------------------------|------|-------|-------------------------------------------|------|-------|------------|
| Start Time  | Left                        | Thru | Right | Left                                      | Thru | Right | Left                        | Thru | Right | Left                                      | Thru | Right |            |
| Factor      | 1.0                         | 1.0  | 1.0   | 1.0                                       | 1.0  | 1.0   | 1.0                         | 1.0  | 1.0   | 1.0                                       | 1.0  | 1.0   |            |
| 07:00 AM    | 2                           | 0    | 2     | 0                                         | 89   | 2     | 0                           | 0    | 0     | 1                                         | 61   | 0     | 157        |
| 07:15 AM    | 1                           | 0    | 2     | 0                                         | 144  | 1     | 0                           | 0    | 0     | 1                                         | 51   | 0     | 200        |
| 07:30 AM    | 4                           | 0    | 3     | 0                                         | 215  | 1     | 0                           | 0    | 0     | 2                                         | 75   | 0     | 300        |
| 07:45 AM    | 5                           | 0    | 0     | 0                                         | 185  | 1     | 0                           | 0    | 0     | 0                                         | 101  | 0     | 292        |
| Total       | 12                          | 0    | 7     | 0                                         | 633  | 5     | 0                           | 0    | 0     | 4                                         | 288  | 0     | 949        |
| 08:00 AM    | 2                           | 0    | 3     | 0                                         | 164  | 2     | 0                           | 0    | 0     | 4                                         | 103  | 0     | 278        |
| 08:15 AM    | 2                           | 0    | 2     | 0                                         | 148  | 1     | 0                           | 0    | 0     | 0                                         | 91   | 0     | 244        |
| 08:30 AM    | 8                           | 0    | 4     | 0                                         | 127  | 2     | 0                           | 0    | 0     | 5                                         | 118  | 0     | 264        |
| 08:45 AM    | 4                           | 0    | 0     | 0                                         | 137  | 5     | 0                           | 0    | 0     | 1                                         | 86   | 0     | 233        |
| Total       | 16                          | 0    | 9     | 0                                         | 576  | 10    | 0                           | 0    | 0     | 10                                        | 398  | 0     | 1019       |
| 04:00 PM    | 2                           | 0    | 2     | 0                                         | 110  | 4     | 0                           | 0    | 0     | 2                                         | 124  | 0     | 244        |
| 04:15 PM    | 6                           | 0    | 6     | 0                                         | 105  | 4     | 0                           | 0    | 0     | 3                                         | 123  | 0     | 247        |
| 04:30 PM    | 6                           | 0    | 1     | 0                                         | 83   | 3     | 0                           | 0    | 0     | 0                                         | 119  | 0     | 212        |
| 04:45 PM    | 6                           | 0    | 2     | 0                                         | 117  | 5     | 0                           | 0    | 0     | 5                                         | 149  | 0     | 284        |
| Total       | 20                          | 0    | 11    | 0                                         | 415  | 16    | 0                           | 0    | 0     | 10                                        | 515  | 0     | 987        |
| 05:00 PM    | 2                           | 0    | 1     | 0                                         | 100  | 2     | 0                           | 0    | 0     | 3                                         | 112  | 0     | 220        |
| 05:15 PM    | 2                           | 0    | 2     | 0                                         | 107  | 4     | 0                           | 0    | 0     | 0                                         | 156  | 0     | 271        |
| 05:30 PM    | 5                           | 0    | 1     | 0                                         | 103  | 2     | 0                           | 0    | 0     | 1                                         | 145  | 0     | 257        |
| 05:45 PM    | 1                           | 0    | 1     | 0                                         | 86   | 2     | 0                           | 0    | 0     | 1                                         | 121  | 0     | 212        |
| Total       | 10                          | 0    | 5     | 0                                         | 396  | 10    | 0                           | 0    | 0     | 5                                         | 534  | 0     | 960        |
| Grand Total | 58                          | 0    | 32    | 0                                         | 2020 | 41    | 0                           | 0    | 0     | 29                                        | 1735 | 0     | 3915       |
| Apprch %    | 64.4                        | 0.0  | 35.6  | 0.0                                       | 98.0 | 2.0   | 0.0                         | 0.0  | 0.0   | 1.6                                       | 98.4 | 0.0   |            |
| Total %     | 1.5                         | 0.0  | 0.8   | 0.0                                       | 51.6 | 1.0   | 0.0                         | 0.0  | 0.0   | 0.7                                       | 44.3 | 0.0   |            |

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File Name : RPVPepper  
Site Code : 00000000  
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|                                                   | Peppertree Dr Southbound |      |       |            | Rancho Palos Verdes South Westbound |      |       |            | Peppertree Dr Northbound |      |       |            | Rancho Palos Verdes South Eastbound |      |       |            |            |
|---------------------------------------------------|--------------------------|------|-------|------------|-------------------------------------|------|-------|------------|--------------------------|------|-------|------------|-------------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                     | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Left                     | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Int. Total |
| Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1 |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            |            |
| Intersection                                      | 07:30 AM                 |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            |            |
| Volume                                            | 13                       | 0    | 8     | 21         | 0                                   | 712  | 5     | 717        | 0                        | 0    | 0     | 0          | 6                                   | 370  | 0     | 376        | 1114       |
| Percent                                           | 61.9                     | 0.0  | 38.1  |            | 0.0                                 | 99.3 | 0.7   |            | 0.0                      | 0.0  | 0.0   |            | 1.6                                 | 98.4 | 0.0   |            |            |
| 07:30                                             |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            |            |
| Volume                                            | 4                        | 0    | 3     | 7          | 0                                   | 215  | 1     | 216        | 0                        | 0    | 0     | 0          | 2                                   | 75   | 0     | 77         | 300        |
| Peak Factor                                       |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            | 0.928      |
| High Int.                                         | 07:30 AM                 |      |       |            | 07:30 AM                            |      |       |            | 6:45:00 AM               |      |       |            | 08:00 AM                            |      |       |            |            |
| Volume                                            | 4                        | 0    | 3     | 7          | 0                                   | 215  | 1     | 216        | 0                        | 0    | 0     | 0          | 4                                   | 103  | 0     | 107        |            |
| Peak Factor                                       | 0.750                    |      |       |            | 0.830                               |      |       |            |                          |      |       |            | 0.879                               |      |       |            |            |

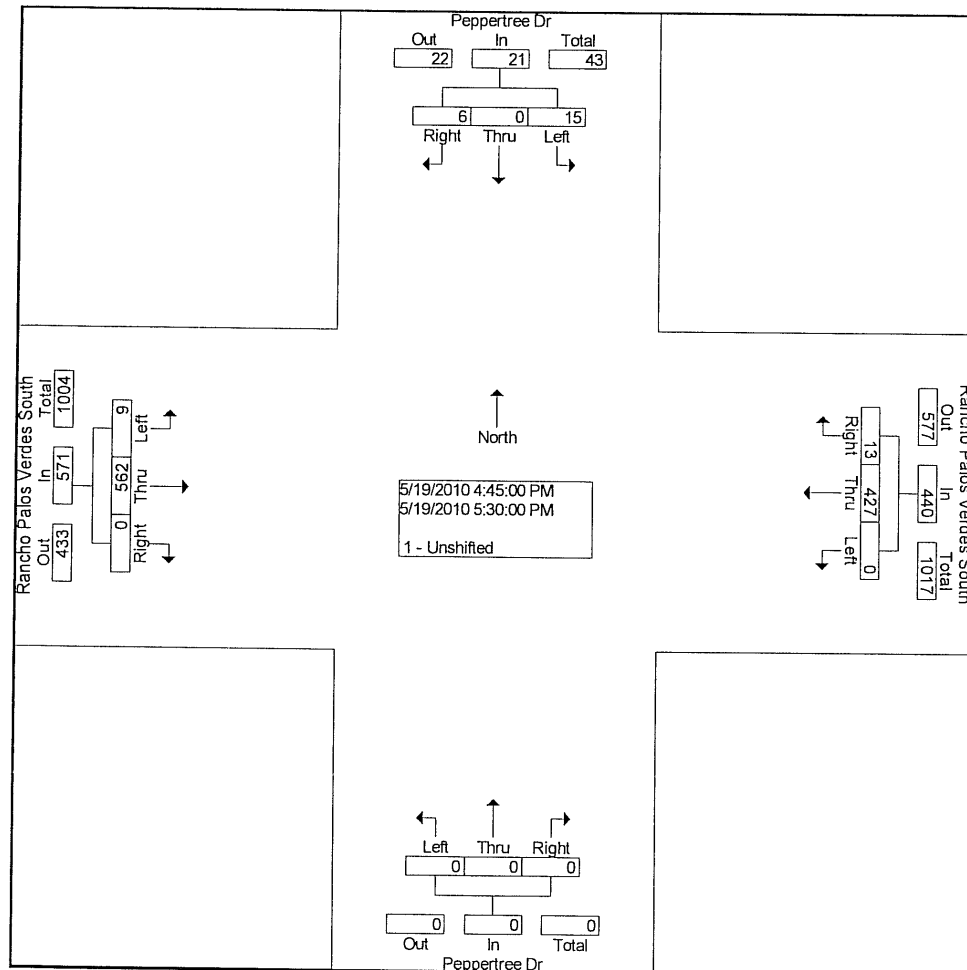


# City Traffic Counters

626.256.4171

File Name : RPVPepper  
 Site Code : 00000000  
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|                                                   | Peppertree Dr Southbound |      |       |            | Rancho Palos Verdes South Westbound |      |       |            | Peppertree Dr Northbound |      |       |            | Rancho Palos Verdes South Eastbound |      |       |            |            |
|---------------------------------------------------|--------------------------|------|-------|------------|-------------------------------------|------|-------|------------|--------------------------|------|-------|------------|-------------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                     | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Left                     | Thru | Right | App. Total | Left                                | Thru | Right | App. Total | Int. Total |
| Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1 |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            |            |
| Intersection                                      | 04:45 PM                 |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            |            |
| Volume                                            | 15                       | 0    | 6     | 21         | 0                                   | 427  | 13    | 440        | 0                        | 0    | 0     | 0          | 9                                   | 562  | 0     | 571        | 1032       |
| Percent                                           | 71.4                     | 0.0  | 28.6  |            | 0.0                                 | 97.0 | 3.0   |            | 0.0                      | 0.0  | 0.0   |            | 1.6                                 | 98.4 | 0.0   |            |            |
| 04:45                                             | 6                        | 0    | 2     | 8          | 0                                   | 117  | 5     | 122        | 0                        | 0    | 0     | 0          | 5                                   | 149  | 0     | 154        | 284        |
| Peak Factor                                       |                          |      |       |            |                                     |      |       |            |                          |      |       |            |                                     |      |       |            | 0.908      |
| High Int.                                         | 04:45 PM                 |      |       |            | 04:45 PM                            |      |       |            |                          |      |       |            | 05:15 PM                            |      |       |            |            |
| Volume                                            | 6                        | 0    | 2     | 8          | 0                                   | 117  | 5     | 122        | 0                        | 0    | 0     | 0          | 0                                   | 156  | 0     | 156        |            |
| Peak Factor                                       | 0.656                    |      |       |            | 0.902                               |      |       |            |                          |      |       |            | 0.915                               |      |       |            |            |



City Traffic Counters  
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File Name : PVD\_Forr  
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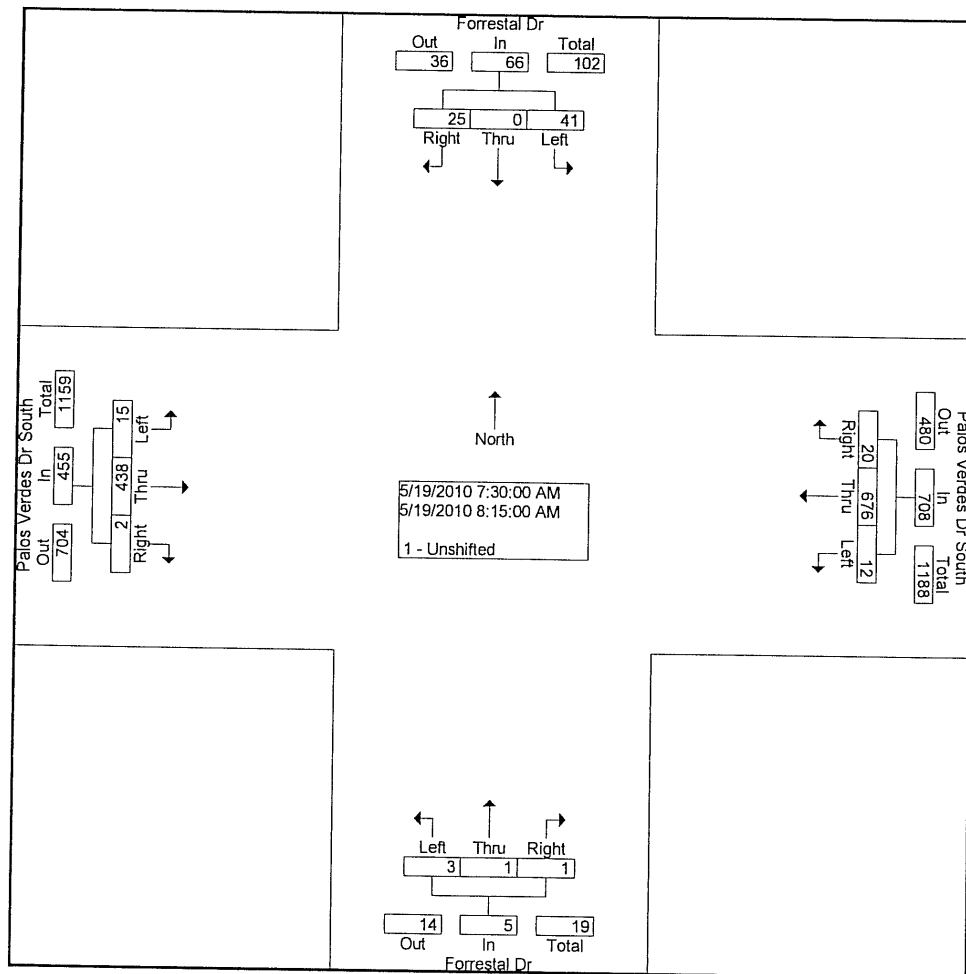
Groups Printed- 1 - Unshifted

|             | Forrestal Dr Southbound |      |       | Palos Verdes Dr South Westbound |      |       | Forrestal Dr Northbound |      |       | Palos Verdes Dr South Eastbound |      |       | Int. Total |
|-------------|-------------------------|------|-------|---------------------------------|------|-------|-------------------------|------|-------|---------------------------------|------|-------|------------|
| Start Time  | Left                    | Thru | Right | Left                            | Thru | Right | Left                    | Thru | Right | Left                            | Thru | Right |            |
| Factor      | 1.0                     | 1.0  | 1.0   | 1.0                             | 1.0  | 1.0   | 1.0                     | 1.0  | 1.0   | 1.0                             | 1.0  | 1.0   |            |
| 07:00 AM    | 9                       | 1    | 4     | 1                               | 96   | 2     | 0                       | 0    | 1     | 4                               | 71   | 1     | 190        |
| 07:15 AM    | 11                      | 0    | 6     | 1                               | 158  | 4     | 0                       | 0    | 1     | 0                               | 69   | 1     | 251        |
| 07:30 AM    | 9                       | 0    | 6     | 6                               | 183  | 2     | 0                       | 1    | 1     | 3                               | 87   | 0     | 298        |
| 07:45 AM    | 10                      | 0    | 5     | 3                               | 174  | 5     | 1                       | 0    | 0     | 3                               | 129  | 1     | 331        |
| Total       | 39                      | 1    | 21    | 11                              | 611  | 13    | 1                       | 1    | 3     | 10                              | 356  | 3     | 1070       |
| 08:00 AM    | 12                      | 0    | 10    | 0                               | 167  | 6     | 0                       | 0    | 0     | 5                               | 114  | 0     | 314        |
| 08:15 AM    | 10                      | 0    | 4     | 3                               | 152  | 7     | 2                       | 0    | 0     | 4                               | 108  | 1     | 291        |
| 08:30 AM    | 13                      | 0    | 2     | 4                               | 127  | 10    | 0                       | 0    | 0     | 9                               | 131  | 2     | 298        |
| 08:45 AM    | 15                      | 0    | 6     | 5                               | 126  | 14    | 1                       | 0    | 2     | 8                               | 99   | 4     | 280        |
| Total       | 50                      | 0    | 22    | 12                              | 572  | 37    | 3                       | 0    | 2     | 26                              | 452  | 7     | 1183       |
| 04:00 PM    | 28                      | 0    | 8     | 6                               | 103  | 9     | 3                       | 0    | 8     | 3                               | 132  | 1     | 301        |
| 04:15 PM    | 9                       | 0    | 8     | 5                               | 104  | 10    | 5                       | 0    | 1     | 4                               | 118  | 4     | 268        |
| 04:30 PM    | 17                      | 0    | 6     | 2                               | 91   | 17    | 0                       | 0    | 4     | 4                               | 121  | 3     | 265        |
| 04:45 PM    | 8                       | 0    | 4     | 6                               | 113  | 12    | 6                       | 0    | 12    | 5                               | 154  | 3     | 323        |
| Total       | 62                      | 0    | 26    | 19                              | 411  | 48    | 14                      | 0    | 25    | 16                              | 525  | 11    | 1157       |
| 05:00 PM    | 8                       | 0    | 8     | 9                               | 106  | 15    | 5                       | 0    | 8     | 3                               | 109  | 3     | 274        |
| 05:15 PM    | 6                       | 0    | 3     | 7                               | 110  | 11    | 4                       | 0    | 4     | 8                               | 146  | 5     | 304        |
| 05:30 PM    | 12                      | 1    | 9     | 5                               | 96   | 8     | 2                       | 0    | 5     | 7                               | 148  | 2     | 295        |
| 05:45 PM    | 7                       | 0    | 1     | 4                               | 100  | 14    | 4                       | 0    | 5     | 3                               | 110  | 3     | 251        |
| Total       | 33                      | 1    | 21    | 25                              | 412  | 48    | 15                      | 0    | 22    | 21                              | 513  | 13    | 1124       |
| Grand Total | 184                     | 2    | 90    | 67                              | 2006 | 146   | 33                      | 1    | 52    | 73                              | 1846 | 34    | 4534       |
| Apprch %    | 66.7                    | 0.7  | 32.6  | 3.0                             | 90.4 | 6.6   | 38.4                    | 1.2  | 60.5  | 3.7                             | 94.5 | 1.7   |            |
| Total %     | 4.1                     | 0.0  | 2.0   | 1.5                             | 44.2 | 3.2   | 0.7                     | 0.0  | 1.1   | 1.6                             | 40.7 | 0.7   |            |

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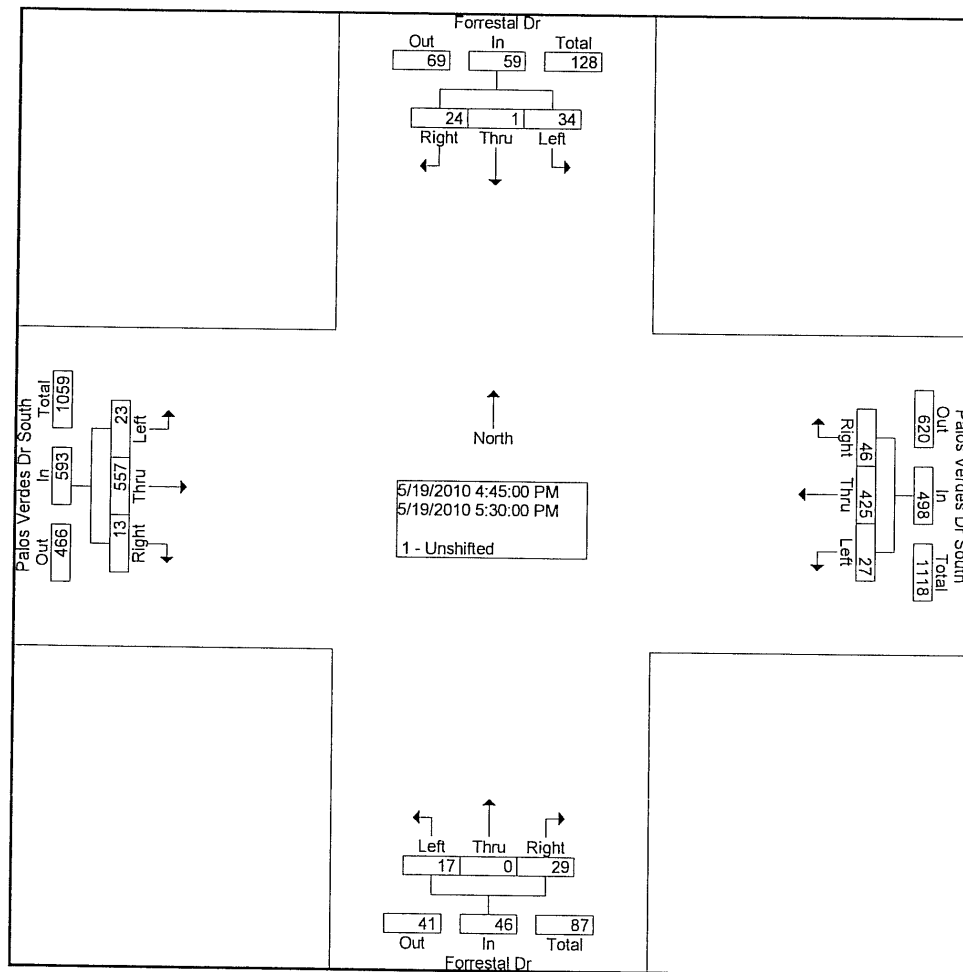
|                                                   | Forrestal Dr Southbound |      |       |            | Palos Verdes Dr South Westbound |      |       |            | Forrestal Dr Northbound |      |       |            | Palos Verdes Dr South Eastbound |      |       |            |            |
|---------------------------------------------------|-------------------------|------|-------|------------|---------------------------------|------|-------|------------|-------------------------|------|-------|------------|---------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                    | Thru | Right | App. Total | Left                            | Thru | Right | App. Total | Left                    | Thru | Right | App. Total | Left                            | Thru | Right | App. Total | Int. Total |
| Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1 |                         |      |       |            |                                 |      |       |            |                         |      |       |            |                                 |      |       |            |            |
| Intersection 07:30 AM                             |                         |      |       |            |                                 |      |       |            |                         |      |       |            |                                 |      |       |            |            |
| Volume                                            | 41                      | 0    | 25    | 66         | 12                              | 676  | 20    | 708        | 3                       | 1    | 1     | 5          | 15                              | 438  | 2     | 455        | 1234       |
| Percent                                           | 62.1                    | 0.0  | 37.9  |            | 1.7                             | 95.5 | 2.8   |            | 60.0                    | 20.0 | 20.0  |            | 3.3                             | 96.3 | 0.4   |            |            |
| 07:45                                             |                         |      |       |            |                                 |      |       |            |                         |      |       |            |                                 |      |       |            |            |
| Volume                                            | 10                      | 0    | 5     | 15         | 3                               | 174  | 5     | 182        | 1                       | 0    | 0     | 1          | 3                               | 129  | 1     | 133        | 331        |
| Peak Factor                                       |                         |      |       |            |                                 |      |       |            |                         |      |       |            |                                 |      |       |            | 0.932      |
| High Int. 08:00 AM                                |                         |      |       |            | 07:30 AM                        |      |       |            | 07:30 AM                |      |       |            | 07:45 AM                        |      |       |            |            |
| Volume                                            | 12                      | 0    | 10    | 22         | 6                               | 183  | 2     | 191        | 0                       | 1    | 1     | 2          | 3                               | 129  | 1     | 133        |            |
| Peak Factor                                       |                         |      |       | 0.750      |                                 |      |       | 0.927      |                         |      |       | 0.625      |                                 |      |       | 0.855      |            |



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|                                                   | Forrestal Dr Southbound |      |       |            | Palos Verdes Dr South Westbound |      |       |            | Forrestal Dr Northbound |      |       |            | Palos Verdes Dr South Eastbound |      |       |            |            |
|---------------------------------------------------|-------------------------|------|-------|------------|---------------------------------|------|-------|------------|-------------------------|------|-------|------------|---------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                    | Thru | Right | App. Total | Left                            | Thru | Right | App. Total | Left                    | Thru | Right | App. Total | Left                            | Thru | Right | App. Total | Int. Total |
| Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1 |                         |      |       |            |                                 |      |       |            |                         |      |       |            |                                 |      |       |            |            |
| Intersection                                      | 04:45 PM                |      |       |            |                                 |      |       |            |                         |      |       |            |                                 |      |       |            |            |
| Volume                                            | 34                      | 1    | 24    | 59         | 27                              | 425  | 46    | 498        | 17                      | 0    | 29    | 46         | 23                              | 557  | 13    | 593        | 1196       |
| Percent                                           | 57.6                    | 1.7  | 40.7  |            | 5.4                             | 85.3 | 9.2   |            | 37.0                    | 0.0  | 63.0  |            | 3.9                             | 93.9 | 2.2   |            |            |
| 04:45                                             | 8                       | 0    | 4     | 12         | 6                               | 113  | 12    | 131        | 6                       | 0    | 12    | 18         | 5                               | 154  | 3     | 162        | 323        |
| Volume                                            |                         |      |       |            |                                 |      |       |            |                         |      |       |            |                                 |      |       |            |            |
| Peak Factor                                       |                         |      |       |            |                                 |      |       |            |                         |      |       |            |                                 |      |       |            | 0.926      |
| High Int.                                         | 05:30 PM                |      |       |            | 04:45 PM                        |      |       |            | 04:45 PM                |      |       |            | 04:45 PM                        |      |       |            |            |
| Volume                                            | 12                      | 1    | 9     | 22         | 6                               | 113  | 12    | 131        | 6                       | 0    | 12    | 18         | 5                               | 154  | 3     | 162        |            |
| Peak Factor                                       |                         |      |       | 0.670      |                                 |      |       | 0.950      |                         |      |       | 0.639      |                                 |      |       | 0.915      |            |



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File Name : PVD\_PVD  
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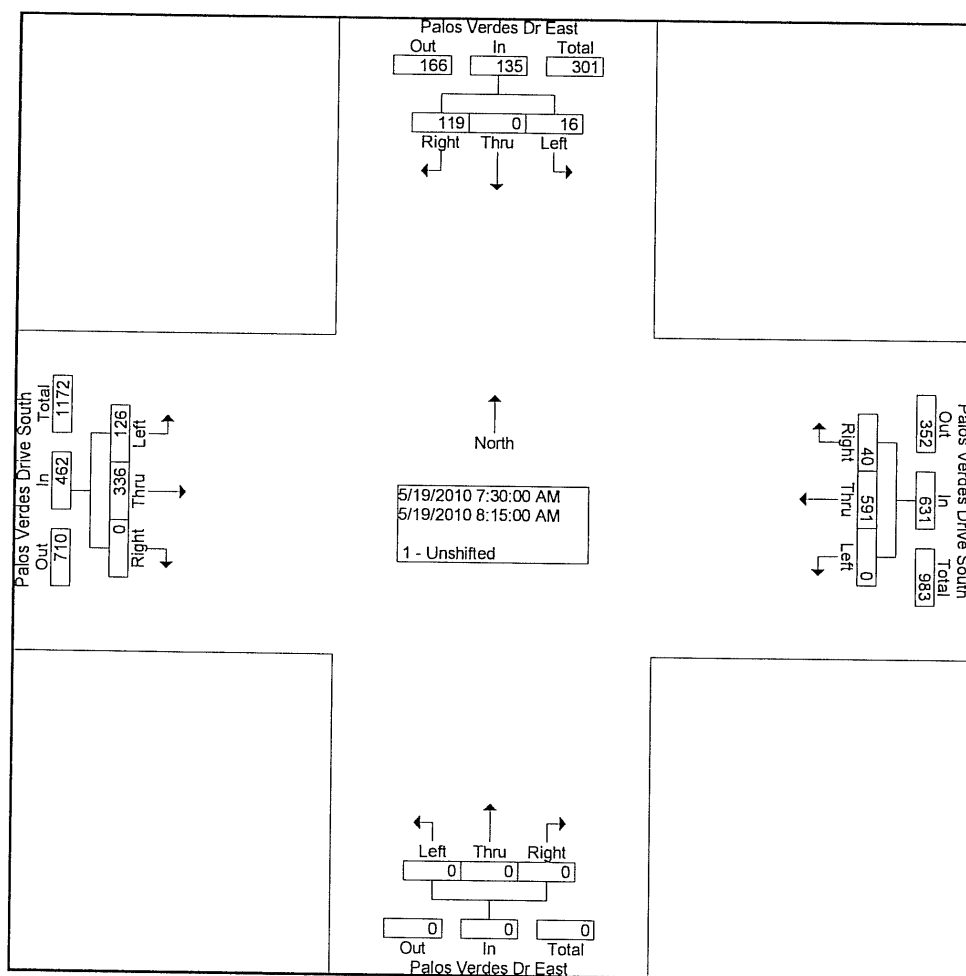
Groups Printed- 1 - Unshifted

|             | Palos Verdes Dr East<br>Southbound |      |       | Palos Verdes Drive South<br>Westbound |      |       | Palos Verdes Dr East<br>Northbound |      |       | Palos Verdes Drive South<br>Eastbound |      |       | Int. Total |
|-------------|------------------------------------|------|-------|---------------------------------------|------|-------|------------------------------------|------|-------|---------------------------------------|------|-------|------------|
| Start Time  | Left                               | Thru | Right | Left                                  | Thru | Right | Left                               | Thru | Right | Left                                  | Thru | Right |            |
| Factor      | 1.0                                | 1.0  | 1.0   | 1.0                                   | 1.0  | 1.0   | 1.0                                | 1.0  | 1.0   | 1.0                                   | 1.0  | 1.0   |            |
| 07:00 AM    | 3                                  | 0    | 22    | 0                                     | 77   | 3     | 0                                  | 0    | 0     | 11                                    | 60   | 0     | 176        |
| 07:15 AM    | 4                                  | 0    | 39    | 0                                     | 138  | 4     | 0                                  | 0    | 0     | 8                                     | 67   | 0     | 260        |
| 07:30 AM    | 5                                  | 0    | 39    | 0                                     | 166  | 7     | 0                                  | 0    | 0     | 20                                    | 81   | 0     | 318        |
| 07:45 AM    | 3                                  | 0    | 29    | 0                                     | 150  | 11    | 0                                  | 0    | 0     | 51                                    | 84   | 0     | 328        |
| Total       | 15                                 | 0    | 129   | 0                                     | 531  | 25    | 0                                  | 0    | 0     | 90                                    | 292  | 0     | 1082       |
| 08:00 AM    | 2                                  | 0    | 30    | 0                                     | 141  | 7     | 0                                  | 0    | 0     | 37                                    | 91   | 0     | 308        |
| 08:15 AM    | 6                                  | 0    | 21    | 0                                     | 134  | 15    | 0                                  | 0    | 0     | 18                                    | 80   | 0     | 274        |
| 08:30 AM    | 3                                  | 0    | 22    | 0                                     | 114  | 22    | 0                                  | 0    | 0     | 39                                    | 99   | 0     | 299        |
| 08:45 AM    | 8                                  | 0    | 28    | 0                                     | 117  | 12    | 0                                  | 0    | 0     | 15                                    | 84   | 0     | 264        |
| Total       | 19                                 | 0    | 101   | 0                                     | 506  | 56    | 0                                  | 0    | 0     | 109                                   | 354  | 0     | 1145       |
| 04:00 PM    | 8                                  | 0    | 10    | 0                                     | 85   | 8     | 0                                  | 0    | 0     | 20                                    | 120  | 0     | 251        |
| 04:15 PM    | 10                                 | 0    | 16    | 0                                     | 108  | 7     | 0                                  | 0    | 0     | 20                                    | 102  | 0     | 263        |
| 04:30 PM    | 10                                 | 0    | 13    | 0                                     | 100  | 2     | 0                                  | 0    | 0     | 14                                    | 118  | 0     | 257        |
| 04:45 PM    | 7                                  | 0    | 16    | 0                                     | 117  | 11    | 0                                  | 0    | 0     | 15                                    | 146  | 0     | 312        |
| Total       | 35                                 | 0    | 55    | 0                                     | 410  | 28    | 0                                  | 0    | 0     | 69                                    | 486  | 0     | 1083       |
| 05:00 PM    | 9                                  | 0    | 21    | 0                                     | 107  | 11    | 0                                  | 0    | 0     | 12                                    | 100  | 0     | 260        |
| 05:15 PM    | 6                                  | 0    | 14    | 0                                     | 95   | 8     | 0                                  | 0    | 0     | 9                                     | 104  | 0     | 236        |
| 05:30 PM    | 10                                 | 0    | 12    | 0                                     | 92   | 3     | 0                                  | 0    | 0     | 10                                    | 94   | 0     | 221        |
| 05:45 PM    | 10                                 | 0    | 15    | 0                                     | 97   | 9     | 0                                  | 0    | 0     | 11                                    | 84   | 0     | 226        |
| Total       | 35                                 | 0    | 62    | 0                                     | 391  | 31    | 0                                  | 0    | 0     | 42                                    | 382  | 0     | 943        |
| Grand Total | 104                                | 0    | 347   | 0                                     | 1838 | 140   | 0                                  | 0    | 0     | 310                                   | 1514 | 0     | 4253       |
| Apprch %    | 23.1                               | 0.0  | 76.9  | 0.0                                   | 92.9 | 7.1   | 0.0                                | 0.0  | 0.0   | 17.0                                  | 83.0 | 0.0   |            |
| Total %     | 2.4                                | 0.0  | 8.2   | 0.0                                   | 43.2 | 3.3   | 0.0                                | 0.0  | 0.0   | 7.3                                   | 35.6 | 0.0   |            |

City Traffic Counters  
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File Name : PVD\_PVD  
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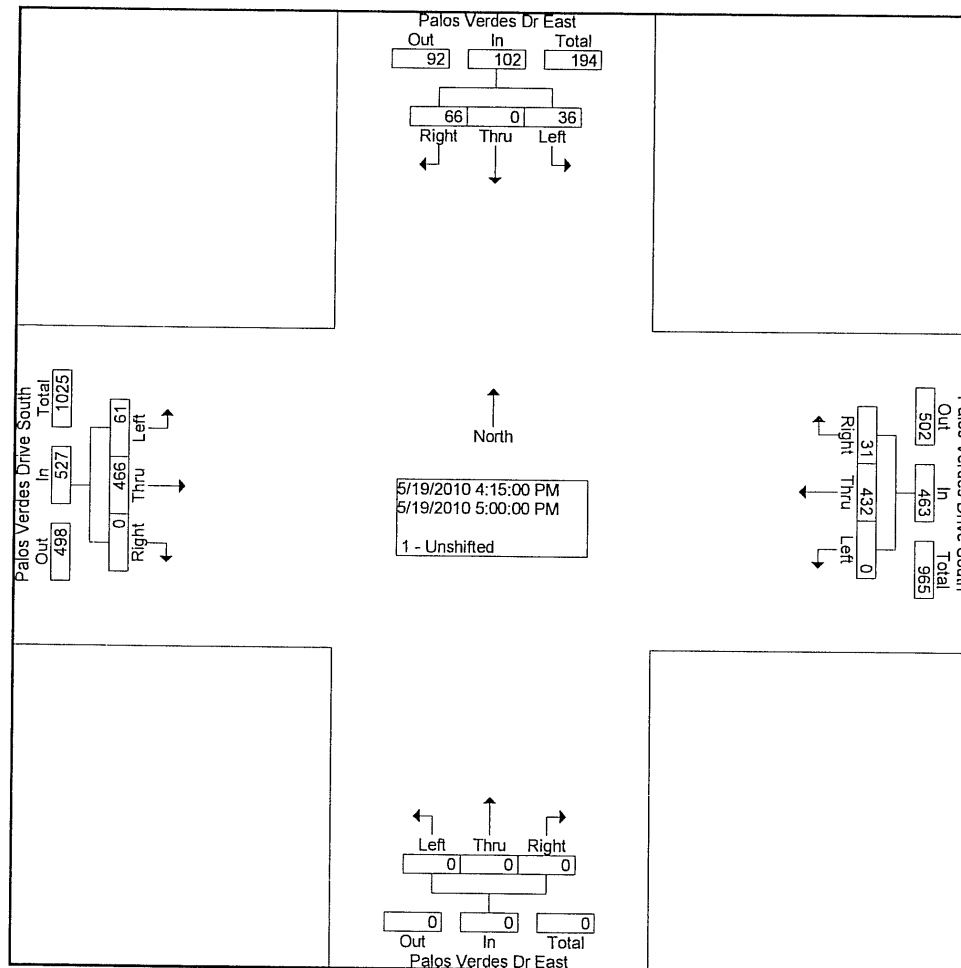
|                                                   | Palos Verdes Dr East Southbound |      |       |            | Palos Verdes Drive South Westbound |      |       |            | Palos Verdes Dr East Northbound |      |       |            | Palos Verdes Drive South Eastbound |      |       |            |            |
|---------------------------------------------------|---------------------------------|------|-------|------------|------------------------------------|------|-------|------------|---------------------------------|------|-------|------------|------------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                            | Thru | Right | App. Total | Left                               | Thru | Right | App. Total | Left                            | Thru | Right | App. Total | Left                               | Thru | Right | App. Total | Int. Total |
| Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1 |                                 |      |       |            |                                    |      |       |            |                                 |      |       |            |                                    |      |       |            |            |
| Intersection                                      | 07:30 AM                        |      |       |            |                                    |      |       |            |                                 |      |       |            |                                    |      |       |            |            |
| Volume                                            | 16                              | 0    | 119   | 135        | 0                                  | 591  | 40    | 631        | 0                               | 0    | 0     | 0          | 126                                | 336  | 0     | 462        | 1228       |
| Percent                                           | 11.9                            | 0.0  | 88.1  |            | 0.0                                | 93.7 | 6.3   |            | 0.0                             | 0.0  | 0.0   |            | 27.3                               | 72.7 | 0.0   |            |            |
| 07:45                                             |                                 |      |       |            |                                    |      |       |            |                                 |      |       |            |                                    |      |       |            |            |
| Volume                                            | 3                               | 0    | 29    | 32         | 0                                  | 150  | 11    | 161        | 0                               | 0    | 0     | 0          | 51                                 | 84   | 0     | 135        | 328        |
| Peak Factor                                       |                                 |      |       |            |                                    |      |       |            |                                 |      |       |            |                                    |      |       |            | 0.936      |
| High Int.                                         | 07:30 AM                        |      |       |            | 07:30 AM                           |      |       |            | 6:45:00 AM                      |      |       |            | 07:45 AM                           |      |       |            |            |
| Volume                                            | 5                               | 0    | 39    | 44         | 0                                  | 166  | 7     | 173        | 0                               | 0    | 0     | 0          | 51                                 | 84   | 0     | 135        |            |
| Peak Factor                                       |                                 |      |       |            |                                    |      |       |            |                                 |      |       |            |                                    |      |       |            | 0.856      |



# City Traffic Counters 626.256.4171

File Name : PVD\_PVD  
Site Code : 00000000  
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|                                                   | Palos Verdes Dr East Southbound |      |       |            | Palos Verdes Drive South Westbound |      |       |            | Palos Verdes Dr East Northbound |      |       |            | Palos Verdes Drive South Eastbound |      |       |            |            |
|---------------------------------------------------|---------------------------------|------|-------|------------|------------------------------------|------|-------|------------|---------------------------------|------|-------|------------|------------------------------------|------|-------|------------|------------|
| Start Time                                        | Left                            | Thru | Right | App. Total | Left                               | Thru | Right | App. Total | Left                            | Thru | Right | App. Total | Left                               | Thru | Right | App. Total | Int. Total |
| Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1 |                                 |      |       |            |                                    |      |       |            |                                 |      |       |            |                                    |      |       |            |            |
| Intersection                                      | 04:15 PM                        |      |       |            |                                    |      |       |            |                                 |      |       |            |                                    |      |       |            |            |
| Volume                                            | 36                              | 0    | 66    | 102        | 0                                  | 432  | 31    | 463        | 0                               | 0    | 0     | 0          | 61                                 | 466  | 0     | 527        | 1092       |
| Percent                                           | 35.3                            | 0.0  | 64.7  |            | 0.0                                | 93.3 | 6.7   |            | 0.0                             | 0.0  | 0.0   |            | 11.6                               | 88.4 | 0.0   |            |            |
| 04:45                                             |                                 |      |       |            |                                    |      |       |            |                                 |      |       |            |                                    |      |       |            |            |
| Volume                                            | 7                               | 0    | 16    | 23         | 0                                  | 117  | 11    | 128        | 0                               | 0    | 0     | 0          | 15                                 | 146  | 0     | 161        | 312        |
| Peak Factor                                       |                                 |      |       |            |                                    |      |       |            |                                 |      |       |            |                                    |      |       |            | 0.875      |
| High Int.                                         | 05:00 PM                        |      |       |            | 04:45 PM                           |      |       |            |                                 |      |       |            | 04:45 PM                           |      |       |            |            |
| Volume                                            | 9                               | 0    | 21    | 30         | 0                                  | 117  | 11    | 128        | 0                               | 0    | 0     | 0          | 15                                 | 146  | 0     | 161        |            |
| Peak Factor                                       | 0.850                           |      |       |            | 0.904                              |      |       |            |                                 |      |       |            | 0.818                              |      |       |            |            |



City Traffic Counters  
626.256.4171

Site Code : 000000000178  
Start Date: 05/26/2010  
File I.D. : E:\DATA\ALL F  
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Street name : Palos Verdes Dr South Cross street: E/O Cherry Hill Ln Direction 1

| Begin Time  | <----- West |         | -----> East |        | -----> Combined |         | -----> |  | Wednesday |
|-------------|-------------|---------|-------------|--------|-----------------|---------|--------|--|-----------|
|             | A.M.        | P.M.    | A.M.        | P.M.   | A.M.            | P.M.    |        |  |           |
| 12:00 05/26 | 5           | 90      | 6           | 70     | 11              | 160     |        |  |           |
| 12:15       | 6           | 75      | 12          | 83     | 18              | 158     |        |  |           |
| 12:30       | 5           | 82      | 4           | 79     | 9               | 161     |        |  |           |
| 12:45       | 6           | 22 99   | 8           | 30 85  | 14              | 52 184  | 663    |  |           |
| 01:00       | 0           | 97      | 5           | 78     | 5               | 175     |        |  |           |
| 01:15       | 4           | 86      | 4           | 89     | 8               | 175     |        |  |           |
| 01:30       | 2           | 83      | 2           | 96     | 4               | 179     |        |  |           |
| 01:45       | 4           | 10 99   | 4           | 15 92  | 8               | 25 191  | 720    |  |           |
| 02:00       | 1           | 95      | 2           | 77     | 3               | 172     |        |  |           |
| 02:15       | 3           | 77      | 2           | 121    | 5               | 198     |        |  |           |
| 02:30       | 2           | 99      | 1           | 113    | 3               | 212     |        |  |           |
| 02:45       | 6           | 12 125  | 0           | 5 124  | 6               | 17 249  | 831    |  |           |
| 03:00       | 3           | 99      | 3           | 121    | 6               | 220     |        |  |           |
| 03:15       | 2           | 100     | 1           | 146    | 3               | 246     |        |  |           |
| 03:30       | 1           | 109     | 1           | 119    | 2               | 228     |        |  |           |
| 03:45       | 6           | 12 87   | 0           | 5 138  | 6               | 17 225  | 919    |  |           |
| 04:00       | 1           | 101     | 0           | 127    | 1               | 228     |        |  |           |
| 04:15       | 3           | 106     | 2           | 130    | 5               | 236     |        |  |           |
| 04:30       | 3           | 106     | 3           | 124    | 6               | 230     |        |  |           |
| 04:45       | 6           | 13 109  | 4           | 9 147  | 10              | 22 256  | 950    |  |           |
| 05:00       | 3           | 74      | 7           | 140    | 10              | 214     |        |  |           |
| 05:15       | 9           | 100     | 6           | 129    | 15              | 229     |        |  |           |
| 05:30       | 13          | 119     | 15          | 136    | 28              | 255     |        |  |           |
| 05:45       | 19          | 44 132  | 14          | 42 142 | 33              | 86 274  | 972    |  |           |
| 06:00       | 28          | 83      | 24          | 114    | 52              | 197     |        |  |           |
| 06:15       | 37          | 81      | 31          | 115    | 68              | 196     |        |  |           |
| 06:30       | 64          | 90      | 29          | 87     | 93              | 177     |        |  |           |
| 06:45       | 99          | 228 106 | 29          | 113 78 | 128             | 341 184 | 754    |  |           |
| 07:00       | 71          | 79      | 55          | 69     | 126             | 148     |        |  |           |
| 07:15       | 150         | 67      | 61          | 81     | 211             | 148     |        |  |           |
| 07:30       | 228         | 66      | 60          | 79     | 288             | 145     |        |  |           |
| 07:45       | 211         | 660 52  | 94          | 270 45 | 305             | 930 97  | 538    |  |           |
| 08:00       | 144         | 58      | 131         | 69     | 275             | 127     |        |  |           |
| 08:15       | 166         | 63      | 91          | 82     | 257             | 145     |        |  |           |
| 08:30       | 114         | 42      | 92          | 55     | 206             | 97      |        |  |           |
| 08:45       | 135         | 559 41  | 101         | 415 45 | 236             | 974 86  | 455    |  |           |
| 09:00       | 92          | 38      | 78          | 44     | 170             | 82      |        |  |           |
| 09:15       | 90          | 40      | 68          | 74     | 158             | 114     |        |  |           |
| 09:30       | 85          | 38      | 59          | 50     | 144             | 88      |        |  |           |
| 09:45       | 84          | 351 20  | 79          | 284 56 | 163             | 635 76  | 360    |  |           |
| 10:00       | 65          | 26      | 42          | 25     | 107             | 51      |        |  |           |
| 10:15       | 67          | 18      | 82          | 33     | 149             | 51      |        |  |           |
| 10:30       | 56          | 23      | 51          | 26     | 107             | 49      |        |  |           |
| 10:45       | 79          | 267 25  | 59          | 234 24 | 138             | 501 49  | 200    |  |           |
| 11:00       | 85          | 33      | 66          | 20     | 151             | 53      |        |  |           |
| 11:15       | 79          | 16      | 70          | 18     | 149             | 34      |        |  |           |
| 11:30       | 67          | 10      | 75          | 15     | 142             | 25      |        |  |           |
| 11:45       | 109         | 340 10  | 63          | 274 12 | 172             | 614 22  | 134    |  |           |
| Totals      | 2518        | 3474    | 1696        | 4022   | 4214            | 7496    |        |  |           |
| Day Totals  |             | 5992    |             | 5718   |                 | 11710   |        |  |           |
| Split %     | 59.7%       | 46.3%   | 40.2%       | 53.6%  |                 |         |        |  |           |
| Peak Hour   | 07:30       | 05:15   | 08:00       | 04:45  | 07:30           | 05:00   |        |  |           |
| Volume      | 749         | 434     | 415         | 552    | 1125            | 972     |        |  |           |
| P.H.F.      | .82         | .82     | .79         | .93    | .92             | .88     |        |  |           |

City Traffic Counters  
626.256.4171

Site Code : 00000000135  
Start Date: 05/26/2010  
File I.D. : E:\DATA\ALL F  
Page : 1

| Street name : Palos Verdes Dr South Cross street: E/O Seacove Direction 1 |                    |      |       |     |                    |      |       |     |                        |       |       |      |
|---------------------------------------------------------------------------|--------------------|------|-------|-----|--------------------|------|-------|-----|------------------------|-------|-------|------|
| Begin Time                                                                | <----- West -----> |      |       |     | <----- East -----> |      |       |     | <----- Combined -----> |       |       |      |
|                                                                           | A.M.               |      | P.M.  |     | A.M.               |      | P.M.  |     | A.M.                   |       | P.M.  |      |
| 12:00 05/26                                                               | 5                  |      | 86    |     | 4                  |      | 72    |     | 9                      |       | 158   |      |
| 12:15                                                                     | 7                  |      | 84    |     | 14                 |      | 79    |     | 21                     |       | 163   |      |
| 12:30                                                                     | 7                  |      | 82    |     | 4                  |      | 74    |     | 11                     |       | 156   |      |
| 12:45                                                                     | 5                  | 24   | 83    | 335 | 11                 | 33   | 80    | 305 | 16                     | 57    | 163   | 640  |
| 01:00                                                                     | 1                  |      | 101   |     | 4                  |      | 95    |     | 5                      |       | 196   |      |
| 01:15                                                                     | 3                  |      | 91    |     | 4                  |      | 95    |     | 7                      |       | 186   |      |
| 01:30                                                                     | 3                  |      | 84    |     | 2                  |      | 97    |     | 5                      |       | 181   |      |
| 01:45                                                                     | 3                  | 10   | 102   | 378 | 3                  | 13   | 95    | 382 | 6                      | 23    | 197   | 760  |
| 02:00                                                                     | 2                  |      | 81    |     | 2                  |      | 95    |     | 4                      |       | 176   |      |
| 02:15                                                                     | 2                  |      | 91    |     | 2                  |      | 137   |     | 4                      |       | 228   |      |
| 02:30                                                                     | 1                  |      | 98    |     | 1                  |      | 122   |     | 2                      |       | 220   |      |
| 02:45                                                                     | 7                  | 12   | 134   | 404 | 0                  | 5    | 117   | 471 | 7                      | 17    | 251   | 875  |
| 03:00                                                                     | 3                  |      | 103   |     | 3                  |      | 142   |     | 6                      |       | 245   |      |
| 03:15                                                                     | 3                  |      | 108   |     | 1                  |      | 162   |     | 4                      |       | 270   |      |
| 03:30                                                                     | 2                  |      | 110   |     | 1                  |      | 130   |     | 3                      |       | 240   |      |
| 03:45                                                                     | 5                  | 13   | 93    | 414 | 0                  | 5    | 150   | 584 | 5                      | 18    | 243   | 998  |
| 04:00                                                                     | 1                  |      | 113   |     | 0                  |      | 127   |     | 1                      |       | 240   |      |
| 04:15                                                                     | 2                  |      | 105   |     | 0                  |      | 122   |     | 2                      |       | 227   |      |
| 04:30                                                                     | 4                  |      | 102   |     | 4                  |      | 138   |     | 8                      |       | 240   |      |
| 04:45                                                                     | 4                  | 11   | 97    | 417 | 3                  | 7    | 148   | 535 | 7                      | 18    | 245   | 952  |
| 05:00                                                                     | 5                  |      | 108   |     | 6                  |      | 142   |     | 11                     |       | 250   |      |
| 05:15                                                                     | 9                  |      | 103   |     | 10                 |      | 140   |     | 19                     |       | 243   |      |
| 05:30                                                                     | 11                 |      | 116   |     | 10                 |      | 147   |     | 21                     |       | 263   |      |
| 05:45                                                                     | 19                 | 44   | 122   | 449 | 18                 | 44   | 145   | 574 | 37                     | 88    | 267   | 1023 |
| 06:00                                                                     | 22                 |      | 84    |     | 21                 |      | 126   |     | 43                     |       | 210   |      |
| 06:15                                                                     | 37                 |      | 91    |     | 30                 |      | 101   |     | 67                     |       | 192   |      |
| 06:30                                                                     | 45                 |      | 81    |     | 33                 |      | 94    |     | 78                     |       | 175   |      |
| 06:45                                                                     | 102                | 206  | 111   | 367 | 25                 | 109  | 85    | 406 | 127                    | 315   | 196   | 773  |
| 07:00                                                                     | 74                 |      | 77    |     | 40                 |      | 78    |     | 114                    |       | 155   |      |
| 07:15                                                                     | 136                |      | 62    |     | 64                 |      | 76    |     | 200                    |       | 138   |      |
| 07:30                                                                     | 214                |      | 57    |     | 56                 |      | 73    |     | 270                    |       | 130   |      |
| 07:45                                                                     | 206                | 630  | 51    | 247 | 118                | 278  | 53    | 280 | 324                    | 908   | 104   | 527  |
| 08:00                                                                     | 152                |      | 60    |     | 118                |      | 65    |     | 270                    |       | 125   |      |
| 08:15                                                                     | 164                |      | 56    |     | 94                 |      | 85    |     | 258                    |       | 141   |      |
| 08:30                                                                     | 117                |      | 46    |     | 101                |      | 43    |     | 218                    |       | 89    |      |
| 08:45                                                                     | 123                | 556  | 43    | 205 | 117                | 430  | 42    | 235 | 240                    | 986   | 85    | 440  |
| 09:00                                                                     | 95                 |      | 36    |     | 70                 |      | 51    |     | 165                    |       | 87    |      |
| 09:15                                                                     | 85                 |      | 37    |     | 55                 |      | 76    |     | 140                    |       | 113   |      |
| 09:30                                                                     | 89                 |      | 36    |     | 63                 |      | 51    |     | 152                    |       | 87    |      |
| 09:45                                                                     | 80                 | 349  | 19    | 128 | 76                 | 264  | 53    | 231 | 156                    | 613   | 72    | 359  |
| 10:00                                                                     | 61                 |      | 24    |     | 53                 |      | 29    |     | 114                    |       | 53    |      |
| 10:15                                                                     | 60                 |      | 24    |     | 76                 |      | 33    |     | 136                    |       | 57    |      |
| 10:30                                                                     | 66                 |      | 25    |     | 54                 |      | 31    |     | 120                    |       | 56    |      |
| 10:45                                                                     | 78                 | 265  | 22    | 95  | 70                 | 253  | 25    | 118 | 148                    | 518   | 47    | 213  |
| 11:00                                                                     | 83                 |      | 29    |     | 77                 |      | 18    |     | 160                    |       | 47    |      |
| 11:15                                                                     | 72                 |      | 20    |     | 70                 |      | 17    |     | 142                    |       | 37    |      |
| 11:30                                                                     | 65                 |      | 9     |     | 78                 |      | 14    |     | 143                    |       | 23    |      |
| 11:45                                                                     | 90                 | 310  | 7     | 65  | 63                 | 288  | 12    | 61  | 153                    | 598   | 19    | 126  |
| Totals                                                                    | 2430               |      | 3504  |     | 1729               |      | 4182  |     | 4159                   |       | 7686  |      |
| Day Totals                                                                |                    | 5934 |       |     |                    | 5911 |       |     |                        | 11845 |       |      |
| Split %                                                                   | 58.4%              |      | 45.5% |     | 41.5%              |      | 54.4% |     |                        |       |       |      |
| Peak Hour                                                                 | 07:30              |      | 02:45 |     | 07:45              |      | 03:00 |     | 07:30                  |       | 05:00 |      |
| Volume                                                                    | 736                |      | 455   |     | 431                |      | 584   |     | 1122                   |       | 1023  |      |
| P.H.F.                                                                    | .85                |      | .84   |     | .91                |      | .90   |     | .86                    |       | .95   |      |

## **APPENDIX B**

### **INTERSECTION LEVELS OF SERVICE DATA WORKSHEETS HCM AND LEVELS OF SERVICE EXPLANATION ICU AND LEVELS OF SERVICE EXPLANATION**

## LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

| Level of Service Criteria for TWSC/AWSC Intersections |                                    |
|-------------------------------------------------------|------------------------------------|
| Level of Service                                      | Average Control Delay<br>(Sec/Veh) |
| A                                                     | $\leq 10$                          |
| B                                                     | $> 10 \text{ and } \leq 15$        |
| C                                                     | $> 15 \text{ and } \leq 25$        |
| D                                                     | $> 25 \text{ and } \leq 35$        |
| E                                                     | $> 35 \text{ and } \leq 50$        |
| F                                                     | $> 50$                             |

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

**LOS A** describes operations with very low control delay, up to 10 seconds per vehicle.

**LOS B** describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

**LOS C** describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

**LOS D** describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

**LOS E** describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

**LOS F** describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.

## INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing. The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

| Intersection Capacity Utilization Characteristics |                |                |
|---------------------------------------------------|----------------|----------------|
| Level of Service                                  | Load Factor    | Equivalent ICU |
| A                                                 | 0.0            | 0.00 - 0.60    |
| B                                                 | 0.0 - 0.1      | 0.61 - 0.70    |
| C                                                 | 0.1 - 0.3      | 0.71 - 0.80    |
| D                                                 | 0.3 - 0.7      | 0.81 - 0.90    |
| E                                                 | 0.7 - 1.0      | 0.91 - 1.00    |
| F                                                 | Not Applicable | Not Applicable |

### SERVICE LEVEL A

There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

### SERVICE LEVEL B

This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

### SERVICE LEVEL C

At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

### SERVICE LEVEL D

This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

### SERVICE LEVEL E

This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

### SERVICE LEVEL F

Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

## **APPENDIX B-1**

### **EXISTING CONDITIONS**

Existing AM Wed Mar 23, 2011 17:51:40 Page 3-1

Existing Traffic Conditions  
AM Peak Hour

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

\*\*\*\*\*  
Intersection #6 Via Rivera/Hawthorne Boulevard  
\*\*\*\*\*  
Average Delay (sec/veh): 5.0 Worst Case Level Of Service: E [ 38.6]  
\*\*\*\*\*

Street Name: Via Rivera Hawthorne Boulevard  
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 1 0 0 1 0 0 1 0 1 0 1 0 1 0 2 0 1

Volume Module:  
Base Vol: 0 0 0 122 2 51 46 641 1 32 429 171  
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 0 122 2 51 46 641 1 32 429 171  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 122 2 51 46 641 1 32 429 171  
User Adj: 1.00 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 0 133 2 55 50 697 1 35 466 186  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 0 133 2 55 50 697 1 35 466 186

Critical Gap Module:  
Critical Gap:xxxxx 6.9 6.8 6.5 6.9 4.1 xxxxx 4.1 xxxxx  
FollowUpTm:xxxxx 3.3 3.5 4.0 3.3 2.2 xxxxx 2.2 xxxxx

Capacity Module:  
Conflict Vol: xxxxx 349 984 1334 233 652 xxxxx 698 xxxxx  
Potent Cap.: xxxxx 653 249 155 775 944 xxxxx 908 xxxxx  
Move Cap.: xxxxx 653 232 141 775 944 xxxxx 908 xxxxx  
Volume/Cap: xxxxx 0.00 0.57 0.02 0.07 0.05 xxxxx 0.04 xxxxx

Level Of Service Module:  
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.2 xxxxx xxxxx 0.1 xxxxx xxxxx  
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx 9.0 xxxxx xxxxx 9.1 xxxxx xxxxx  
LOS by Move: \* \* \* \* \* A \* \* A \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx xxxxx 289 xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxx xxxxx xxxxx 4.3 xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel:xxxxx xxxxx xxxxx 38.6 xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* \* \* E \* \* \* \* \*  
ApproachDel: xxxxxx 38.6 xxxxxx xxxxxx  
ApproachLOS: \* \* \* \* \*  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Existing AM Wed Mar 23, 2011 17:51:40 Page 4-1

Existing Traffic Conditions  
AM Peak Hour

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

\*\*\*\*\*  
Intersection #11 Tramonto Drive-Seahill Drive/Palos Verdes Drive South  
\*\*\*\*\*  
Average Delay (sec/veh): 2.7 Worst Case Level Of Service: D [ 27.6]  
\*\*\*\*\*

Street Name: Tramonto Drive-Seahill Drive Palos Verdes Drive South  
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 1 0 0 1 1 0 0 0 1 0 1 1 0 1 0 2 0 1

Volume Module:  
Base Vol: 94 1 28 9 0 0 3 328 17 23 763 2  
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: 94 1 28 9 0 0 3 328 17 23 763 2  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 94 1 28 9 0 0 3 328 17 23 763 2  
User Adj: 1.00 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: 102 1 30 10 0 0 3 357 18 25 829 2  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 102 1 30 10 0 0 3 357 18 25 829 2

Critical Gap Module:  
Critical Gap: 7.5 6.5 6.9 7.5 xxxxx xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx  
FollowUpTm: 3.5 4.0 3.3 3.5 xxxxx xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:  
Conflict Vol: 837 1254 187 1065 xxxxx xxxxx 832 xxxxx xxxxx 375 xxxxx xxxxx  
Potent Cap.: 263 173 829 180 xxxxx xxxxx 810 xxxxx xxxxx 1195 xxxxx xxxxx  
Move Cap.: 258 169 829 169 xxxxx xxxxx 810 xxxxx xxxxx 1195 xxxxx xxxxx  
Volume/Cap: 0.40 0.01 0.04 0.06 xxxxx xxxxx 0.00 xxxxx xxxxx 0.02 xxxxx xxxxx

Level Of Service Module:  
2Way95thQ: xxxxx xxxxx 0.1 0.2 xxxxx xxxxx 0.0 xxxxx xxxxx 0.1 xxxxx xxxxx  
Control Del:xxxxx xxxxx 9.5 27.6 xxxxx xxxxx 9.5 xxxxx xxxxx 8.1 xxxxx xxxxx  
LOS by Move: \* \* \* \* \* A D \* \* A \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: 256 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue: 1.8 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: 28.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: D \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 23.9 27.6 xxxxxx xxxxxx  
ApproachLOS: C D \* \* \* \* \*  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
\*\*\*\*\*  
Intersection #12 Barkentine Road/Palos Verdes Drive South  
\*\*\*\*\*  
Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C [ 18.9]  
\*\*\*\*\*  
Street Name: Barkentine Road Palos Verdes Drive South  
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 1 0 0 0 0 1 0 0 1 0 1 0 1 0 1 0 2 0 1  
Volume Module:  
Base Vol: 22 0 3 5 0 10 6 369 5 3 735 1  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 22 0 3 5 0 10 6 369 5 3 735 1  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 22 0 3 5 0 10 6 369 5 3 735 1  
User Adj: 1.00 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 0 3 5 0 11 7 401 5 3 799 1  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 24 0 3 5 0 11 7 401 5 3 799 1  
Critical Gap Module:  
Critical Gap: 7.5 6.5 6.9 7.5 6.5 6.9 4.1 xxxx xxxx 4.1 xxxx xxxx  
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxx 2.2 xxxx xxxx  
Capacity Module:  
Conflict Vol: 823 1223 203 1019 1225 399 800 xxxx xxxx 407 xxxx xxxx  
Potent Cap.: 269 181 810 194 180 606 832 xxxx xxxx 1163 xxxx xxxx  
Move Cap.: 262 179 810 192 178 606 832 xxxx xxxx 1163 xxxx xxxx  
Volume/Cap: 0.09 0.00 0.00 0.03 0.00 0.02 0.01 xxxx xxxx 0.00 xxxx xxxx  
Level Of Service Module:  
2Way95thQ: xxxx xxxx xxxx xxxx xxxx 0.0 xxxx xxxx 0.0 xxxx xxxx  
Control Del:xxxx xxxx xxxx xxxx xxxx 9.4 xxxx xxxx 8.1 xxxx xxxx  
LOS by Move: \* \* \* \* \* A \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxx 285 xxxx 352 xxxx xxxx 352 xxxx xxxx 352 xxxx xxxx  
SharedQueue:xxxx 0.3 xxxx xxxx 0.1 xxxx xxxx 0.1 xxxx xxxx 0.1 xxxx xxxx  
Shrd ConDel:xxxx 18.9 xxxx xxxx 15.7 xxxx xxxx 15.7 xxxx xxxx 15.7 xxxx xxxx  
Shared LOS: \* C \* \* \* C \* \* \* \* \*  
ApproachDel: 18.9 15.7 15.7 15.7  
ApproachLOS: C C C C  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
\*\*\*\*\*  
Intersection #15 Forrestal Drive/Palos Verdes Drive South  
\*\*\*\*\*  
Average Delay (sec/veh): 2.0 Worst Case Level Of Service: D [ 31.3]  
\*\*\*\*\*  
Street Name: Forrestal Drive Palos Verdes Drive South  
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: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1  
Volume Module:  
Base Vol: 3 1 1 41 0 25 15 438 2 12 676 20  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 3 1 1 41 0 25 15 438 2 12 676 20  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 3 1 1 41 0 25 15 438 2 12 676 20  
User Adj: 1.00 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: 3 1 1 45 0 27 16 476 2 13 735 22  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 3 1 1 45 0 27 16 476 2 13 735 22  
Critical Gap Module:  
Critical Gap: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxx 4.1 xxxx xxxx  
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxx 2.2 xxxx xxxx  
Capacity Module:  
Conflict Vol: 1294 1291 476 1272 1272 735 757 xxxx xxxx 478 xxxx xxxx  
Potent Cap.: 141 165 593 146 169 423 863 xxxx xxxx 1095 xxxx xxxx  
Move Cap.: 129 160 593 142 164 423 863 xxxx xxxx 1095 xxxx xxxx  
Volume/Cap: 0.03 0.01 0.00 0.31 0.00 0.06 0.02 xxxx xxxx 0.01 xxxx xxxx  
Level Of Service Module:  
2Way95thQ: 0.1 xxxx xxxx 1.3 xxxx xxxx 0.1 xxxx xxxx 0.0 xxxx xxxx  
Control Del: 33.7 xxxx xxxx 41.7 xxxx xxxx 9.2 xxxx xxxx 8.3 xxxx xxxx  
LOS by Move: D \* \* E \* \* A \* \* A \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxx 252 xxxx xxxx 423 xxxx xxxx 423 xxxx xxxx 423 xxxx xxxx  
SharedQueue:xxxx 0.0 xxxx xxxx 0.2 xxxx xxxx 0.2 xxxx xxxx 0.2 xxxx xxxx  
Shrd ConDel:xxxx 19.4 xxxx xxxx 14.1 xxxx xxxx 14.1 xxxx xxxx 14.1 xxxx xxxx  
Shared LOS: \* \* C \* \* B \* \* \* \*  
ApproachDel: 28.0 31.3 31.3 31.3  
ApproachLOS: D D D D  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

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Existing Traffic Conditions  
AM Peak Hour  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #16 Palos Verdes Drive East/Palos Verdes Drive South  
Average Delay (sec/veh): 2.9 Worst Case Level Of Service: C [17.0]  
Street Name: Palos Verdes Drive East Palos Verdes Drive South  
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 1 0 0 0 1 1 0 1 0 0 0 0 1 0 1  
Volume Module:  
Base Vol: 0 0 0 16 0 119 126 336 0 0 591 40  
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 16 0 119 126 336 0 0 591 40  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 16 0 119 126 336 0 0 591 40  
User Adj: 1.00 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 17 0 129 137 365 0 0 642 43  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 0 17 0 129 137 365 0 0 642 43  
Critical Gap Module:  
Critical Gap:xxxxx 6.4 xxxx 6.2 4.1 xxxx xxxxx xxxxx xxxxx  
FollowUpTim:xxxxx xxxx xxxxx 3.5 xxxx 3.3 2.2 xxxx xxxxx xxxxx xxxxx  
Capacity Module:  
Conflict Vol: xxxx xxxx xxxxx 1282 xxxx 642 686 xxxx xxxxx xxxxx xxxxx  
Potent Cap.: xxxx xxxx xxxxx 184 xxxx 477 917 xxxx xxxxx xxxxx xxxxx  
Move Cap.: xxxx xxxx xxxxx 163 xxxx 477 917 xxxx xxxxx xxxxx xxxxx  
Volume/Cap: xxxx xxxx xxxxx 0.11 xxxx 0.27 0.15 xxxx xxxxx xxxxx xxxxx  
Level Of Service Module:  
2Way95thQ: xxxx xxxx xxxxx 0.4 xxxx 1.1 0.5 xxxx xxxxx xxxxx xxxxx  
Control Del:xxxxx xxxx xxxxx 29.7 xxxx 15.3 9.6 xxxx xxxxx xxxxx xxxxx  
LOS by Move: \* \* \* D \* C A \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: xxxxxx 17.0 xxxxxx xxxxxx  
ApproachLOS: \* C \* \* \*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

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Existing Traffic Conditions  
AM Peak Hour  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #48 Narcissa Drive/Palos Verdes Drive South  
Average Delay (sec/veh): 0.8 Worst Case Level Of Service: C [17.8]  
Street Name: Narcissa Drive Palos Verdes Drive South  
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 1 0 0 1 0 0 1 1 0 0 1 0 1 0 1  
Volume Module:  
Base Vol: 0 1 2 10 0 32 12 359 0 0 696 6  
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 1 2 10 0 32 12 359 0 0 696 6  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1 2 10 0 32 12 359 0 0 696 6  
User Adj: 1.00 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 1 2 11 0 35 13 390 0 0 757 7  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 1 2 11 0 35 13 390 0 0 757 7  
Critical Gap Module:  
Critical Gap:xxxxx 6.5 6.2 7.1 6.5 6.2 4.1 xxxxx xxxxx xxxxx xxxxx  
FollowUpTim:xxxxx 4.0 3.3 3.5 4.0 3.3 2.2 xxxxx xxxxx xxxxx xxxxx  
Capacity Module:  
Conflict Vol: xxxx 1179 390 1174 1173 757 763 xxxxx xxxxx xxxxx xxxxx  
Potent Cap.: xxxx 192 663 170 194 411 859 xxxxx xxxxx xxxxx xxxxx  
Move Cap.: xxxx 189 663 167 191 411 859 xxxxx xxxxx xxxxx xxxxx  
Volume/Cap: xxxxx 0.01 0.00 0.07 0.00 0.08 0.02 xxxxx xxxxx xxxxx xxxxx  
Level Of Service Module:  
2Way95thQ: xxxx xxxx xxxxx xxxxx xxxxx 0.3 0.0 xxxxx xxxxx xxxxx xxxxx  
Control Del:xxxxx xxxx xxxxx xxxxx xxxxx 14.6 9.3 xxxxx xxxxx xxxxx xxxxx  
LOS by Move: \* \* \* \* \* B A \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxx xxxx 361 167 xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxx xxxxx 0.0 0.2 xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel:xxxxx xxxxx 15.1 28.1 xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* C D \* \* \* \* \*  
ApproachDel: 15.1 17.8 xxxxxx xxxxxx  
ApproachLOS: C C \* \* \*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

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Existing Traffic Conditions

AM Peak Hour

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #74 Peppertree Drive/Palos Verdes Drive South

\*\*\*\*\*

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: C [ 20.0]

\*\*\*\*\*

Street Name: Peppertree Drive Palos Verdes Drive South

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 1 1 0 1 0 0 0 0 1 0 1

-----

Volume Module:

Base Vol: 0 0 0 13 0 8 6 370 0 0 712 5

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 13 0 8 6 370 0 0 712 5

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 13 0 8 6 370 0 0 712 5

User Adj: 1.00 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 14 0 9 7 402 0 0 774 5

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 14 0 9 7 402 0 0 774 5

-----

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxx xxxxx

FollowUpPrim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx

-----

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx 1189 1189 774 779 xxxx xxxxx xxxx xxxx xxxxx

Potent Cap.: xxxx xxxx xxxxx 210 189 402 847 xxxx xxxxx xxxx xxxx xxxxx

Move Cap.: xxxx xxxx xxxxx 208 188 402 847 xxxx xxxxx xxxx xxxx xxxxx

Volume/Cap: xxxx xxxx xxxxx 0.07 0.00 0.02 0.01 xxxxx xxxx xxxx xxxx xxxxx

-----

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxxx 0.1 0.0 xxxx xxxxx xxxx xxxx xxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxxx 14.2 9.3 xxxx xxxxx xxxxx xxxx xxxxx

LOS by Move: \* \* \* \* \* B A \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx 208 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue:xxxxx xxxx xxxxx 0.2 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel:xxxxx xxxx xxxxx 23.5 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: \* \* \* C \* \* \* \* \* \* \* \* \*

ApproachDel: xxxxxx 20.0 xxxxxx xxxxxx

ApproachLOS: \* C \*

\*\*\*\*\*

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

\*\*\*\*\*

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Existing Traffic Conditions  
PM Peak Hour

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

\*\*\*\*\*  
Intersection #6 Via Rivera/Hawthorne Boulevard  
\*\*\*\*\*  
Average Delay (sec/veh): 2.3 Worst Case Level Of Service: D [ 29.4]  
\*\*\*\*\*  
Street Name: Via Rivera Hawthorne Boulevard  
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 1 0 0 1 0 0 1 0 1 0 1 0 1 0 2 0 1  
-----  
Volume Module:  
Base Vol: 0 0 12 58 0 24 35 512 5 20 563 74  
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 12 58 0 24 35 512 5 20 563 74  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 12 58 0 24 35 512 5 20 563 74  
User Adj: 1.00 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 13 63 0 26 38 557 5 22 612 80  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 13 63 0 26 38 557 5 22 612 80  
-----  
Critical Gap Module:  
Critical Gap: 6.9 7.5 6.5 6.9 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx  
FollowUpTim: 3.3 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx  
-----  
Capacity Module:  
Conflict Vol: 281 1010 1293 306 692 xxxxx xxxxx 562 xxxxx xxxxx  
Potent Cap.: 722 197 164 696 912 xxxxx xxxxx 1019 xxxxx xxxxx  
Move Cap.: 722 184 154 696 912 xxxxx xxxxx 1019 xxxxx xxxxx  
Volume/Cap: 0.02 0.34 0.00 0.04 0.04 xxxxx xxxxx 0.02 xxxxx xxxxx  
-----  
Level Of Service Module:  
2Way95thQ: xxxxx xxxxx 0.1 xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx  
Control Del: xxxxx xxxxx 10.1 xxxxx xxxxx xxxxx 9.1 xxxxx xxxxx  
LOS by Move: \* \* B \* \* A \* \* A \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx xxxxx 235 xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue: xxxxx xxxxx xxxxx 1.7 xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: xxxxx xxxxx xxxxx 29.4 xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* \* D \* \* \* \*  
ApproachDel: 10.1 29.4 xxxxxx xxxxxx  
ApproachLOS: B D \*  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

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Existing Traffic Conditions  
PM Peak Hour

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

\*\*\*\*\*  
Intersection #11 Tramonto Drive-Seahill Drive/Palos Verdes Drive South  
\*\*\*\*\*  
Average Delay (sec/veh): 2.1 Worst Case Level Of Service: C [ 23.6]  
\*\*\*\*\*  
Street Name: Tramonto Drive-Seahill Drive Palos Verdes Drive South  
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 1 0 0 1 1 0 0 0 1 0 1 1 0 1 0 2 0 1  
-----  
Volume Module:  
Base Vol: 48 0 27 2 0 0 30 535 61 40 422 5  
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: 48 0 27 2 0 0 30 535 61 40 422 5  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 48 0 27 2 0 0 30 535 61 40 422 5  
User Adj: 1.00 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: 52 0 29 2 0 0 33 582 66 43 459 5  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 52 0 29 2 0 0 33 582 66 43 459 5  
-----  
Critical Gap Module:  
Critical Gap: 7.5 6.5 6.9 7.5 xxxxx xxxxx 4.1 xxxxx xxxxx  
FollowUpTim: 3.5 4.0 3.3 3.5 xxxxx xxxxx 2.2 xxxxx xxxxx  
-----  
Capacity Module:  
Conflict Vol: 996 1231 324 902 xxxxx xxxxx 464 xxxxx xxxxx 648 xxxxx xxxxx  
Potent Cap.: 202 179 678 236 xxxxx xxxxx 1108 xxxxx xxxxx 948 xxxxx xxxxx  
Move Cap.: 190 166 678 213 xxxxx xxxxx 1108 xxxxx xxxxx 948 xxxxx xxxxx  
Volume/Cap: 0.27 0.00 0.04 0.01 xxxxx xxxxx 0.03 xxxxx xxxxx 0.05 xxxxx xxxxx  
-----  
Level Of Service Module:  
2Way95thQ: xxxxx xxxxx 0.1 0.0 xxxxx xxxxx 0.1 xxxxx xxxxx  
Control Del: xxxxx xxxxx 10.6 22.1 xxxxx xxxxx 8.3 xxxxx xxxxx 9.0 xxxxx xxxxx  
LOS by Move: \* \* B \* \* A \* \* A \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: 190 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue: 1.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: 30.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: D \* \* \* \* \* \* \*  
ApproachDel: 23.6 22.1 xxxxxx xxxxxx  
ApproachLOS: C C \*  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

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Existing Traffic Conditions  
PM Peak Hour

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

\*\*\*\*\*  
Intersection #12 Barkentine Road/Palos Verdes Drive South  
Average Delay (sec/veh): 0.6 Worst Case Level Of Service: Cf 18.7  
\*\*\*\*\*

Street Name: Barkentine Road Palos Verdes Drive South  
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 Uncontrolled Uncontrolled  
Rights: Include Include Include  
Lanes: 0 0 1 0 0 0 0 0 1 1 0 1 1 0 1 0 2 0 1

Volume Module:  
Base Vol: 14 0 6 0 0 3 19 561 12 7 437 2  
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: 14 0 6 0 0 3 19 561 12 7 437 2  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 14 0 6 0 0 3 19 561 12 7 437 2  
User Adj: 1.00 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: 15 0 7 0 0 3 21 610 13 8 475 2  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 15 0 7 0 0 3 21 610 13 8 475 2

Critical Gap Module:  
Critical Gap: 7.5 6.5 6.9 xxxxx xxxxx 6.9 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx  
FollowUpTim: 3.5 4.0 3.3 xxxxx xxxxx 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:  
Conflict Vol: 910 1150 311 xxxxx xxxxx 238 477 xxxxx xxxxx 623 xxxxx xxxxx  
Potent Cap.: 233 200 690 xxxxx xxxxx 770 1096 xxxxx xxxxx 968 xxxxx xxxxx  
Move Cap.: 227 195 690 xxxxx xxxxx 770 1096 xxxxx xxxxx 968 xxxxx xxxxx  
Volume/Cap: 0.07 0.00 0.01 xxxxx xxxxx 0.00 0.02 xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:  
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 0.1 xxxxx xxxxx 0.0 xxxxx xxxxx  
Control Del: xxxxx xxxxx xxxxx xxxxx 9.7 8.3 xxxxx xxxxx 8.7 xxxxx xxxxx  
LOS by Move: \* \* \* \* \* A \* A \* A \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx 284 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue: xxxxx 0.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: xxxxx 18.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* C \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 18.7 9.7 xxxxx xxxxx  
ApproachLOS: C A \*  
\*\*\*\*\*

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

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Existing Traffic Conditions  
PM Peak Hour

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

\*\*\*\*\*  
Intersection #15 Forrestal Drive/Palos Verdes Drive South  
Average Delay (sec/veh): 2.5 Worst Case Level Of Service: D[ 26.6]  
\*\*\*\*\*

Street Name: Forrestal Drive Palos Verdes Drive South  
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  
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1 0 1 0 1

Volume Module:  
Base Vol: 17 0 29 34 1 24 23 557 13 27 425 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: 17 0 29 34 1 24 23 557 13 27 425 46  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 17 0 29 34 1 24 23 557 13 27 425 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: 18 0 32 37 1 26 25 605 14 29 462 50  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 18 0 32 37 1 26 25 605 14 29 462 50

Critical Gap Module:  
Critical Gap: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx  
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:  
Conflict Vol: 1215 1226 605 1199 1190 462 512 xxxxx xxxxx 620 xxxxx xxxxx  
Potent Cap.: 160 180 501 164 189 604 1064 xxxxx xxxxx 971 xxxxx xxxxx  
Move Cap.: 146 171 501 147 179 604 1064 xxxxx xxxxx 971 xxxxx xxxxx  
Volume/Cap: 0.13 0.00 0.06 0.25 0.01 0.04 0.02 xxxxx xxxxx 0.03 xxxxx xxxxx

Level Of Service Module:  
2Way95thQ: 0.4 xxxxx xxxxx 0.9 xxxxx xxxxx 0.1 xxxxx xxxxx 0.1 xxxxx xxxxx  
Control Del: 33.2 xxxxx xxxxx 37.5 xxxxx xxxxx 8.5 xxxxx xxxxx 8.8 xxxxx xxxxx  
LOS by Move: D \* \* \* \* \* E \* A \* A \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx 501 xxxxx xxxxx 552 xxxxx xxxxx xxxxx xxxxx  
SharedQueue: xxxxx xxxxx 0.2 xxxxx xxxxx 0.2 xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: xxxxx xxxxx 12.7 xxxxx xxxxx 11.9 xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* B \* \* \* \* B \* \* \* \*  
ApproachDel: 20.3 26.6 xxxxx xxxxx  
ApproachLOS: C D \*  
\*\*\*\*\*

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

Existing PM Wed Mar 23, 2011 17:52:02 Page 7-1  
Existing Traffic Conditions  
PM Peak Hour  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #16 Palos Verdes Drive East/Palos Verdes Drive South  
Average Delay (sec/veh): 2.0 Worst Case Level Of Service: C [16.3]  
Street Name: Palos Verdes Drive East Palos Verdes Drive South  
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 36 0 66 61 466 0 0 432 31  
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 36 0 66 61 466 0 0 432 31  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 36 0 66 61 466 0 0 432 31  
User Adj: 1.00 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 39 0 72 66 507 0 0 470 34  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 0 39 0 72 66 507 0 0 470 34  
Critical Gap Module:  
Critical Gap: 6.4 6.4 6.2 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1  
FollowUpTm: 3.5 3.5 3.3 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2  
Capacity Module:  
Conflict Vol: 1109 1109 470 503 503 503 503 503 503 503 503 503  
Potent Cap.: 234 234 598 1072 1072 1072 1072 1072 1072 1072 1072 1072  
Move Cap.: 223 223 598 1072 1072 1072 1072 1072 1072 1072 1072 1072  
Volume/Cap: 0.18 0.18 0.12 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06  
Level Of Service Module:  
2Way95thQ: 0.6 0.6 0.4 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2  
Control Del: 24.5 24.5 11.8 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6  
LOS by Move: \* \* \* \* \* A \* \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: 234 234 598 1072 1072 1072 1072 1072 1072 1072 1072 1072  
SharedQueue: 223 223 598 1072 1072 1072 1072 1072 1072 1072 1072 1072  
Shrd ConDel: 223 223 598 1072 1072 1072 1072 1072 1072 1072 1072 1072  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 16.3 16.3 16.3 16.3 16.3 16.3 16.3 16.3 16.3 16.3 16.3 16.3  
ApproachLOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Existing PM Wed Mar 23, 2011 17:52:02 Page 8-1  
Existing Traffic Conditions  
PM Peak Hour  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #48 Narcissa Drive/Palos Verdes Drive South  
Average Delay (sec/veh): 0.6 Worst Case Level Of Service: C [16.1]  
Street Name: Narcissa Drive Palos Verdes Drive South  
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 1 1 0 0 0 1 0 0 1 1 0 0 1 0 1 0 1 0 1  
Volume Module:  
Base Vol: 0 0 0 15 0 15 21 547 0 0 410 6  
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 15 0 15 21 547 0 0 410 6  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 15 0 15 21 547 0 0 410 6  
User Adj: 1.00 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 16 0 16 23 595 0 0 446 7  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 0 16 0 16 23 595 0 0 446 7  
Critical Gap Module:  
Critical Gap: 7.1 6.5 6.2 6.4 6.5 6.2 4.1 4.1 4.1 4.1 4.1 4.1  
FollowUpTm: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 2.2 2.2 2.2 2.2 2.2  
Capacity Module:  
Conflict Vol: 1097 1092 595 1086 1086 446 452 452 452 452 452 452  
Potent Cap.: 192 216 508 242 218 617 1119 1119 1119 1119 1119 1119  
Move Cap.: 184 212 508 238 214 617 1119 1119 1119 1119 1119 1119  
Volume/Cap: 0.00 0.00 0.00 0.07 0.00 0.03 0.02 0.02 0.02 0.02 0.02 0.02  
Level Of Service Module:  
2Way95thQ: 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.1 0.1 0.1 0.1  
Control Del: 0.0 0.0 0.0 0.0 0.0 0.0 8.3 8.3 8.3 8.3 8.3 8.3  
LOS by Move: \* \* \* \* \* A \* \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: 0 0 0 0 0 0 238 238 238 238 238 238  
SharedQueue: 0 0 0 0 0 0 238 238 238 238 238 238  
Shrd ConDel: 0 0 0 0 0 0 21.2 21.2 21.2 21.2 21.2 21.2  
Shared LOS: \* \* \* \* \* C \* \* \* \* \*  
ApproachDel: 16.1 16.1 16.1 16.1 16.1 16.1 16.1 16.1 16.1 16.1 16.1 16.1  
ApproachLOS: \* \* \* \* \* C \* \* \* \* \*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*



## **APPENDIX B-2**

### **EXISTING WITH PROJECT CONDITIONS**



Existing + Project AM Wed Mar 23, 2011 17:52:25 Page 5-1

Existing With Project Traffic Conditions AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #12 Barkentine Road/Palos Verdes Drive South

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C [ 19.3]

\*\*\*\*\*

Street Name: Barkentine Road Palos Verdes Drive South

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 1 0 0 0 0 1 0 0 1 0 1 0 1 0 2 0 1

Volume Module:

Base Vol: 22 0 3 5 0 10 6 369 5 3 735 1

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 22 0 3 5 0 10 6 369 5 3 735 1

Added Vol: 0 0 0 0 0 0 0 6 0 0 0 17 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 22 0 3 5 0 10 6 375 5 3 752 1

User Adj: 1.00 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 0 3 5 0 11 7 408 5 3 817 1

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 24 0 3 5 0 11 7 408 5 3 817 1

Critical Gap Module:

Critical Gp: 7.5 6.5 6.9 7.5 6.5 6.9 4.1 xxxx xxxxx 4.1 xxxx xxxxx

FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Conflict Vol: 839 1248 207 1041 1250 409 818 xxxx xxxxx 413 xxxx xxxxx

Potent Cap.: 262 175 806 187 174 598 819 xxxx xxxxx 1157 xxxx xxxxx

Move Cap.: 255 173 806 185 172 598 819 xxxx xxxxx 1157 xxxx xxxxx

Volume/Cap: 0.09 0.00 0.00 0.03 0.00 0.02 0.01 xxxx xxxx 0.00 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx

Control Del:xxxxx xxxx xxxx xxxxx 9.4 xxxx xxxxx 8.1 xxxx xxxxx

LOS by Move: \* \* \* \* \* A \* \* A \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx 278 xxxx 342 xxxx 342 xxxx xxxx xxxx xxxx

SharedQueue:xxxxx 0.3 xxxx xxxx 0.1 xxxx xxxx 0.1 xxxx xxxx xxxx xxxx

Shrd ConDel:xxxxx 19.3 xxxx xxxx 16.0 xxxx xxxx 16.0 xxxx xxxx xxxx

Shared LOS: \* C \* \* \* C \* \* \* \* \* \* \* \*

ApproachDel: 19.3 16.0 xxxxxx xxxxxx

ApproachLOS: C C

\*\*\*\*\*

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

\*\*\*\*\*

Existing + Project AM Wed Mar 23, 2011 17:52:25 Page 6-1

Existing With Project Traffic Conditions AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #15 Forrestal Drive/Palos Verdes Drive South

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: D [ 32.0]

\*\*\*\*\*

Street Name: Forrestal Drive Palos Verdes Drive South

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: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1 0 1 0 1

Volume Module:

Base Vol: 3 1 1 41 0 25 15 438 2 12 676 20

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 3 1 1 41 0 25 15 438 2 12 676 20

Added Vol: 0 0 0 0 0 0 0 9 0 0 0 3 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 3 1 1 41 0 25 15 447 2 12 679 20

User Adj: 1.00 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: 3 1 1 45 0 27 16 486 2 13 738 22

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 3 1 1 45 0 27 16 486 2 13 738 22

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx

FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Conflict Vol: 1307 1304 486 1285 1285 738 760 xxxx xxxxx 488 xxxx xxxxx

Potent Cap.: 138 162 585 143 166 421 861 xxxx xxxxx 1086 xxxx xxxxx

Move Cap.: 126 157 585 139 161 421 861 xxxx xxxxx 1086 xxxx xxxxx

Volume/Cap: 0.03 0.01 0.00 0.32 0.00 0.06 0.02 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: 0.1 xxxx xxxxx 1.3 xxxx xxxxx 0.1 xxxx xxxxx 0.0 xxxx xxxxx

Control Del: 34.3 xxxx xxxxx 42.8 xxxx xxxxx 9.3 xxxx xxxxx 8.4 xxxx xxxxx

LOS by Move: D \* \* \* \* \* A \* \* A \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx 247 xxxx xxxx 421 xxxx xxxx xxxx xxxx

SharedQueue:xxxxx 0.0 xxxx xxxx 0.2 xxxx xxxx xxxx xxxx

Shrd ConDel:xxxxx 19.7 xxxx xxxx 14.1 xxxx xxxx xxxx xxxx

Shared LOS: \* \* \* C \* \* \* B \* \* \* \* \*

ApproachDel: 28.5 32.0 xxxxxx xxxxxx

ApproachLOS: D D

\*\*\*\*\*

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

\*\*\*\*\*

Existing + Project AM Wed Mar 23, 2011 17:52:25 Page 7-1

Existing With Project Traffic Conditions AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Palos Verdes Drive East/Palos Verdes Drive South

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: C [17.1]

Street Name: Palos Verdes Drive East Palos Verdes Drive South

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 1 0 0 0 1 1 0 1 0 0 0 0 1 0 1

Volume Module:

Base Vol: 0 0 0 16 0 119 126 336 0 0 591 40

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 16 0 119 126 336 0 0 591 40

Added Vol: 0 0 0 0 0 1 2 7 0 0 2 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 16 0 120 128 343 0 0 593 40

User Adj: 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

PHF Volume: 0 0 0 17 0 130 139 373 0 0 645 43

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 17 0 130 139 373 0 0 645 43

Critical Gap Module:

Critical Gp:xxxxx 6.4 xxxx 6.2 4.1 xxxx xxxxx xxxxx xxxxx

FollowUpTim:xxxxx 3.5 xxxx 3.3 2.2 xxxx xxxxx xxxxx xxxxx

Capacity Module:

Cnflct Vol: xxxx xxxx 1296 xxxx 645 688 xxxx xxxxx xxxxx xxxxx

Potent Cap.: xxxx xxxx xxxxx 181 xxxxx 476 916 xxxxx xxxxx xxxxx

Move Cap.: xxxx xxxx xxxxx 160 xxxxx 476 916 xxxxx xxxxx xxxxx

Volume/Cap: xxxx xxxx 0.11 xxxxx 0.27 0.15 xxxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxx xxxxx 0.4 xxxx 1.1 0.5 xxxxx xxxxx xxxxx

Control Del:xxxxx xxxx xxxxx 30.3 xxxx 15.4 9.6 xxxxx xxxxx xxxxx

LOS by Move: \* \* \* D \* C A \* \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \*

ApproachDel: xxxxxx 17.1 xxxxxx xxxxxx

ApproachLOS: \* C \* \* \* \* \*

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

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Existing + Project AM Wed Mar 23, 2011 17:52:26 Page 8-1

Existing With Project Traffic Conditions AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #48 Narcissa Drive/Palos Verdes Drive South

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: C [19.2]

Street Name: Narcissa Drive Palos Verdes Drive South

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 1 0 0 1 0 0 1 1 0 1 0 1 0 1

Volume Module:

Base Vol: 0 1 2 10 0 32 12 359 0 0 696 6

Growth Adj: 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 1 2 10 0 32 12 359 0 0 696 6

Added Vol: 0 0 0 6 0 9 3 3 0 0 9 2

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 1 2 16 0 41 15 362 0 0 705 8

User Adj: 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

PHF Volume: 0 1 2 17 0 45 16 393 0 0 766 9

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 1 2 17 0 45 16 393 0 0 766 9

Critical Gap Module:

Critical Gp:xxxxx 6.5 6.2 7.1 6.5 6.2 4.1 xxxxx xxxxx xxxxx

FollowUpTim:xxxxx 4.0 3.3 3.5 4.0 3.3 2.2 xxxxx xxxxx xxxxx

Capacity Module:

Cnflct Vol: xxxx 1201 393 1194 1192 766 775 xxxxx xxxxx xxxxx

Potent Cap.: xxxx 186 560 165 189 406 850 xxxxx xxxxx xxxxx

Move Cap.: xxxx 183 560 161 185 406 850 xxxxx xxxxx xxxxx

Volume/Cap: xxxx 0.01 0.00 0.11 0.00 0.11 0.02 xxxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxx xxxxx xxxxx xxxxx 0.4 0.1 xxxxx xxxxx xxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxxx 15.0 9.3 xxxxx xxxxx xxxxx

LOS by Move: \* \* \* \* \* A \* \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx 353 161 xxxxx xxxxx xxxxx xxxxx

SharedQueue:xxxxx xxxx 0.0 0.4 xxxxx xxxxx xxxxx xxxxx

Shrd ConDel:xxxxx xxxx 15.3 30.0 xxxxx xxxxx xxxxx xxxxx

Shared LOS: \* \* \* C D \* \* \* \* \* \*

ApproachDel: 15.3 19.2 xxxxxx xxxxxx

ApproachLOS: C C \* \* \* \* \*

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

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Existing + Project AM Wed Mar 23, 2011 17:52:26 Page 9-1

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Existing With Project Traffic Conditions

AM Peak Hour

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #74 Peppertree Drive/Palos Verdes Drive South

\*\*\*\*\*

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: C [19.2]

\*\*\*\*\*

Street Name: Peppertree Drive Palos Verdes Drive South

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 1 1 0 1 0 0 0 0 1 0 1

-----

Volume Module:

Base Vol: 0 0 0 13 0 8 6 370 0 0 712 5

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 13 0 8 6 370 0 0 712 5

Added Vol: 0 0 0 3 0 9 3 6 0 0 2 1

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 16 0 17 9 376 0 0 714 6

User Adj: 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

PHF Volume: 0 0 0 17 0 18 10 409 0 0 776 7

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 17 0 18 10 409 0 0 776 7

-----

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx xxxxx xxxxx xxxxx

FollowUpTm:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx xxxxx xxxxx xxxxx

-----

Capacity Module:

Conflict Vol: xxxx xxxx xxxxx 1204 1204 776 783 xxxx xxxxx xxxxx xxxxx xxxxx

Potent Cap.: xxxx xxxx xxxxx 205 186 401 844 xxxx xxxxx xxxxx xxxxx xxxxx

Move Cap.: xxxx xxxx xxxxx 203 183 401 844 xxxx xxxxx xxxxx xxxxx xxxxx

Volume/Cap: xxxx xxxx xxxxx 0.09 0.00 0.05 0.01 xxxx xxxxx xxxxx xxxxx xxxxx

-----

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxxx 0.1 0.0 xxxx xxxxx xxxxx xxxxx xxxxx

Control Del:xxxxx xxxx xxxxx 14.4 9.3 xxxx xxxxx xxxxx xxxxx xxxxx

LOS by Move: \* \* \* \* \* B A \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx 203 xxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue:xxxxx xxxx xxxxx 0.3 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel:xxxxx xxxx xxxxx 24.4 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: \* \* \* \* \* C \* \* \* \* \*

ApproachDel: xxxxxx 19.2 xxxxxx xxxxxx

ApproachLOS: \*

\*\*\*\*\*

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

\*\*\*\*\*

Existing + Project PM Wed Mar 23, 2011 17:52:44 Page 3-1

Existing With Project Traffic Conditions PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #6 Via Rivera/Hawthorne Boulevard

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: D[ 30.3]

\*\*\*\*\*

Street Name: Via Rivera Hawthorne Boulevard

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 Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include Include

Lanes: 0 0 0 1 0 0 1 0 0 1 0 1 0 1 0 1 0 2 0 1

Volume Module:

Base Vol: 0 0 12 58 0 24 35 512 5 20 563 74

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 12 58 0 24 35 512 5 20 563 74

Added Vol: 0 0 0 0 0 0 0 0 6 0 0 10 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 12 58 0 24 35 518 5 20 573 74

User Adj: 1.00 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 13 63 0 26 38 563 5 22 623 80

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 13 63 0 26 38 563 5 22 623 80

Critical Gap Module:

Critical Gp:xxxx xxx 6.9 7.5 6.5 6.9 4.1 xxx xxxxxx 4.1 xxx xxxxxx

FollowUpTm:xxxx xxx 3.3 3.5 4.0 3.3 2.2 xxx xxxxxx 2.2 xxx xxxxxx

Capacity Module:

Cnflct Vol: xxxx xxx 284 1024 1311 311 703 xxx xxxxxx 568 xxx xxxxxx

Potent Cap.: xxxx xxx 719 192 160 690 904 xxx xxxxxx 1014 xxx xxxxxx

Move Cap.: xxxx xxx 719 180 150 690 904 xxx xxxxxx 1014 xxx xxxxxx

Volume/Cap: xxxx xxx 0.02 0.35 0.00 0.04 0.04 xxx xxx 0.02 xxx xxx

Level Of Service Module:

2Way95thQ: xxxx xxx 0.1 xxxx xxx xxxxxx 0.1 xxxx xxxxxx

Control Del:xxxx xxx 10.1 xxx xxx xxxxxx 9.2 xxx xxxxxx 8.6 xxx xxxxxx

LOS by Move: \* \* B \* \* A \* \* A \* \* A \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxx xxxxxx 230 xxxxxx xxxxxx xxxxxx xxxxxx

SharedQueue:xxxx xxx xxxxxx xxxxxx 1.7 xxxxxx xxxxxx xxxxxx xxxxxx

Shrd ConDel:xxxx xxx xxxxxx xxxxxx 30.3 xxxxxx xxxxxx xxxxxx xxxxxx

Shared LOS: \* \* \* \* D \* \* \* \* \* \* \* \* \* \* \* \* \* \*

ApproachDel: 10.1 30.3 xxxxxx xxxxxx

ApproachLOS: B D \* \*

\*\*\*\*\*

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

\*\*\*\*\*

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Existing With Project Traffic Conditions PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #11 Tramonto Drive-Seahill Drive/Palos Verdes Drive South

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: C[ 24.7]

\*\*\*\*\*

Street Name: Tramonto Drive-Seahill Drive Palos Verdes Drive South

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 Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include Include

Lanes: 0 1 0 0 1 1 0 0 0 0 1 0 1 0 1 0 2 0 1

Volume Module:

Base Vol: 48 0 27 2 0 0 30 535 61 40 422 5

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: 48 0 27 2 0 0 30 535 61 40 422 5

Added Vol: 0 0 0 0 0 0 0 20 0 0 11 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 48 0 27 2 0 0 30 555 61 40 433 5

User Adj: 1.00 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: 52 0 29 2 0 0 33 603 66 43 471 5

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 52 0 29 2 0 0 33 603 66 43 471 5

Critical Gap Module:

Critical Gp: 7.5 6.5 6.9 7.5 xxx xxxxxx 4.1 xxx xxxxxx 4.1 xxx xxxxxx

FollowUpTm: 3.5 4.0 3.3 3.5 xxx xxxxxx 2.2 xxx xxxxxx 2.2 xxx xxxxxx

Capacity Module:

Cnflct Vol: 1024 1265 335 924 xxx xxxxxx 476 xxx xxxxxx 670 xxx xxxxxx

Potent Cap.: 192 171 667 227 xxx xxxxxx 1097 xxx xxxxxx 930 xxx xxxxxx

Move Cap.: 181 158 667 205 xxx xxxxxx 1097 xxx xxxxxx 930 xxx xxxxxx

Volume/Cap: 0.29 0.00 0.04 0.01 xxx xxx 0.03 xxx xxx 0.05 xxx xxx

Level Of Service Module:

2Way95thQ: xxxx xxx 0.1 0.0 xxxx xxxxxx 0.1 xxxx xxxxxx 0.1 xxxx xxxxxx

Control Del:xxxx xxx 10.6 22.8 xxx xxxxxx 8.4 xxx xxxxxx 9.1 xxxx xxxxxx

LOS by Move: \* \* B C \* \* A \* \* A \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: 181 xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx

SharedQueue: 1.1 xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx

Shrd ConDel: 32.7 xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx

Shared LOS: D \* \* \* \* \* \* \* \* \* \* \* \* \* \*

ApproachDel: 24.7 22.8 xxxxxx xxxxxx

ApproachLOS: C C \*

\*\*\*\*\*

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

\*\*\*\*\*

Existing + Project PM Wed Mar 23, 2011 17:52:44 Page 5-1

Existing With Project Traffic Conditions PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #12 Barkentine Road/Palos Verdes Drive South

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: C [ 19.4]

\*\*\*\*\*

Street Name: Barkentine Road Palos Verdes Drive South

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 1 0 0 0 0 0 0 1 1 0 1 0 1 0 2 0 1

Volume Module:

Base Vol: 14 0 6 0 0 3 19 561 12 7 437 2

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 14 0 6 0 0 3 19 561 12 7 437 2

Added Vol: 0 0 0 0 0 0 0 20 0 0 11 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 14 0 6 0 0 3 19 581 12 7 448 2

User Adj: 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

PHF Volume: 15 0 7 0 0 3 21 632 13 8 487 2

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 15 0 7 0 0 3 21 632 13 8 487 2

Critical Gap Module:

Critical Gap: 7.5 6.5 6.9 xxxxx xxxxx 6.9 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx

FollowUpTim: 3.5 4.0 3.3 xxxxx xxxxx 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflct Vol: 938 1184 322 xxxxx xxxxx 243 489 xxxxx xxxxx 645 xxxxx xxxxx

Potent Cap.: 222 191 679 xxxxx xxxxx 763 1085 xxxxx xxxxx 950 xxxxx xxxxx

Move Cap.: 217 186 679 xxxxx xxxxx 763 1085 xxxxx xxxxx 950 xxxxx xxxxx

Volume/Cap: 0.07 0.00 0.01 xxxxx xxxxx 0.00 0.02 xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 0.1 xxxxx xxxxx 0.0 xxxxx xxxxx

Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx 9.7 8.4 xxxxx xxxxx 8.8 xxxxx xxxxx

LOS by Move: \* \* \* \* \* A \* \* \* \* \* A

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxxx 272 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue: xxxxx 0.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel: xxxxx 19.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: \* C \* \* \* \* \* \* \* \* \* \* \*

ApproachDel: 19.4 \* 9.7 \* xxxxxx \* xxxxxx

ApproachLOS: C A \* \* \* \* \*

\*\*\*\*\*

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

\*\*\*\*\*

Existing + Project PM Wed Mar 23, 2011 17:52:44 Page 6-1

Existing With Project Traffic Conditions PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #15 Forrestal Drive/Palos Verdes Drive South

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: D [ 27.4]

\*\*\*\*\*

Street Name: Forrestal Drive Palos Verdes Drive South

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: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1 0 1

Volume Module:

Base Vol: 17 0 29 34 1 24 23 557 13 27 425 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

Initial Bse: 17 0 29 34 1 24 23 557 13 27 425 46

Added Vol: 0 0 0 0 0 0 0 6 0 0 10 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 17 0 29 34 1 24 23 563 13 27 435 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

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 18 0 32 37 1 26 25 612 14 29 473 50

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 18 0 32 37 1 26 25 612 14 29 473 50

Critical Gap Module:

Critical Gap: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx

FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflct Vol: 1232 1243 612 1216 1208 473 523 xxxxx xxxxx 626 xxxxx xxxxx

Potent Cap.: 155 176 497 159 185 595 1054 xxxxx xxxxx 965 xxxxx xxxxx

Move Cap.: 142 166 497 143 175 595 1054 xxxxx xxxxx 965 xxxxx xxxxx

Volume/Cap: 0.13 0.00 0.06 0.26 0.01 0.04 0.02 xxxxx xxxxx 0.03 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.4 xxxxx xxxxx 1.0 xxxxx xxxxx 0.1 xxxxx xxxxx 0.1 xxxxx xxxxx

Control Del: 34.1 xxxxx xxxxx 38.7 xxxxx xxxxx 8.5 xxxxx xxxxx 8.8 xxxxx xxxxx

LOS by Move: D \* \* \* \* \* E \* \* \* \* \* A

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxxx xxxxx 497 xxxxx xxxxx 543 xxxxx xxxxx xxxxx xxxxx

SharedQueue: xxxxx xxxxx 0.2 xxxxx xxxxx 0.2 xxxxx xxxxx xxxxx xxxxx

Shrd ConDel: xxxxx xxxxx 12.7 xxxxx xxxxx 12.0 xxxxx xxxxx xxxxx xxxxx

Shared LOS: \* \* \* \* \* B \* \* \* \* \* \*

ApproachDel: 20.6 \* 27.4 \* xxxxxx \* xxxxxx

ApproachLOS: C D \* \* \* \* \*

\*\*\*\*\*

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

\*\*\*\*\*



Existing With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #74 Peppertree Drive/Palos Verdes Drive South  
Average Delay (sec/veh): 0.6 Worst Case Level Of Service: C [17.8]  
Street Name: Peppertree Drive Palos Verdes Drive South  
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 1 1 0 0 0 0 1 0 1  
Volume Module:  
Base Vol: 0 0 0 0 15 0 6 9 562 0 0 427 13  
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 0 15 0 6 9 562 0 0 427 13  
Added Vol: 0 0 0 0 2 0 6 10 4 0 0 7 3  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 0 17 0 12 19 566 0 0 434 16  
User Adj: 1.00 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 0 18 0 13 21 615 0 0 472 17  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 0 0 18 0 13 21 615 0 0 472 17  
Critical Gap Module:  
Critical Gap:xxxxx 6.4 6.5 6.2 4.1 xxxxx xxxxx xxxxx xxxxx  
FollowUpTime:xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx xxxxx xxxxx  
Capacity Module:  
Conflict Vol: xxxxx xxxxx 1128 1128 472 489 xxxxx xxxxx xxxxx xxxxx  
Potent Cap.: xxxxx xxxxx 228 206 596 1085 xxxxx xxxxx xxxxx xxxxx  
Move Cap.: xxxxx xxxxx 225 202 596 1085 xxxxx xxxxx xxxxx xxxxx  
Volume/Cap: xxxxx xxxxx 0.08 0.00 0.02 0.02 xxxxx xxxxx xxxxx xxxxx  
Level Of Service Module:  
2Way95thQ: xxxxx xxxxx xxxxx 0.1 0.1 xxxxx xxxxx xxxxx xxxxx  
Control Del:xxxxx xxxxx xxxxx 11.2 8.4 xxxxx xxxxx xxxxx xxxxx  
LOS by Move: \* \* \* \* B A \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx 225 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxx xxxxx 0.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel:xxxxx xxxxx 22.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* C \* \* \* \* \* \*  
ApproachDel: xxxxxx 17.8 C xxxxxx \*  
ApproachLOS: \*  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

## **APPENDIX B-3**

### **YEAR 2020 FUTURE PRE-PROJECT CONDITIONS**

Future Related AM Wed Mar 23, 2011 17:53:04 Page 3-1  
Year 2020 With Related Projects Traffic Conditions  
AM Peak Hour  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #6 Via Rivera/Hawthorne Boulevard  
Average Delay (sec/veh): 14.2 Worst Case Level Of Service: F[137.3]  
Street Name: Via Rivera Hawthorne Boulevard  
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 Include Uncontrolled  
Rights: Include Include  
Lanes: 0 0 0 1 0 0 1 0 0 1 0 1 0 1 0 1 0 2 0 1  
Volume Module:  
Base Vol: 0 0 122 2 51 46 641 1 32 429 171  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 0 0 129 2 54 49 679 1 34 455 181  
Added Vol: 0 0 0 0 0 0 100 0 0 165 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 129 2 54 49 779 1 34 620 181  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 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 0 141 2 59 53 847 1 37 674 197  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 141 2 59 53 847 1 37 674 197  
Critical Gap Module:  
Critical Gp:xxxx xxx 6.9 6.8 6.5 6.9 4.1 xxx xxxxxx 4.1 xxx xxxxxx  
FollowUpTm:xxxx xxx 3.3 3.5 4.0 3.3 2.2 xxx xxxxxx 2.2 xxx xxxxxx  
Capacity Module:  
Cnflct Vol: xxxx xxx 424 1277 1702 337 871 xxx xxxxxx 848 xxx xxxxxx  
Potent Cap.: xxxx xxx 584 161 93 665 783 xxx xxxxxx 798 xxx xxxxxx  
Move Cap.: xxxx xxx 584 147 83 665 783 xxx xxxxxx 798 xxx xxxxxx  
Volume/Cap: xxxx xxx 0.00 0.95 0.03 0.09 0.07 xxx xxx 0.05 xxx xxx  
Level Of Service Module:  
2Way95thQ: xxxx xxx xxxxxx 0.2 xxx xxxxxx 0.1 xxx xxxxxx  
Control Del:xxxx xxx xxxxxx 9.9 xxx xxxxxx 9.7 xxx xxxxxx  
LOS by Move: \* \* \* \* \* A \* \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxx xxx xxxxxx 188 xxx xxx xxxxxx xxx xxx xxxxxx  
SharedQueue:xxxx xxx xxxxxx 9.6 xxx xxx xxxxxx xxx xxx xxxxxx  
Shrd ConDel:xxxx xxx xxxxxx 137 xxx xxx xxxxxx xxx xxx xxxxxx  
Shared LOS: \* \* \* \* \* F \* \* \* \* \*  
ApproachDel: xxxxxx 137.3 xxxxxx xxxxxx  
ApproachLOS: \* F \* \* \*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Future Related AM Wed Mar 23, 2011 17:53:04 Page 4-1  
Year 2020 With Related Projects Traffic Conditions  
AM Peak Hour  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #11 Tramonto Drive-Seahill Drive/Palos Verdes Drive South  
Average Delay (sec/veh): 4.1 Worst Case Level Of Service: E[ 44.6]  
Street Name: Tramonto Drive-Seahill Drive Palos Verdes Drive South  
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 Include Uncontrolled  
Rights: Include Include  
Lanes: 0 1 0 0 1 1 0 0 0 0 1 0 1 1 0 1 0 2 0 1  
Volume Module:  
Base Vol: 94 1 28 9 0 0 3 328 17 23 763 2  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 100 1 30 10 0 0 3 348 18 24 809 2  
Added Vol: 1 0 0 0 0 0 0 86 0 0 143 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 101 1 30 10 0 0 3 434 18 24 952 2  
User Adj: 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  
PHF Volume: 109 1 32 10 0 0 3 471 20 27 1035 2  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 109 1 32 10 0 0 3 471 20 27 1035 2  
Critical Gap Module:  
Critical Gp: 7.5 6.5 6.9 7.5 xxx xxxxxx 4.1 xxx xxxxxx 4.1 xxx xxxxxx  
FollowUpTm: 3.5 4.0 3.3 3.5 xxx xxxxxx 2.2 xxx xxxxxx 2.2 xxx xxxxxx  
Capacity Module:  
Cnflct Vol: 1058 1578 245 1331 xxx xxxxxx 1037 xxx xxxxxx 491 xxx xxxxxx  
Potent Cap.: 182 110 761 115 xxx xxxxxx 678 xxx xxxxxx 1083 xxx xxxxxx  
Move Cap.: 178 107 761 106 xxx xxxxxx 678 xxx xxxxxx 1083 xxx xxxxxx  
Volume/Cap: 0.62 0.01 0.04 0.10 xxx xxx 0.01 xxx xxx 0.02 xxx xxx  
Level Of Service Module:  
2Way95thQ: xxxx xxx 0.1 0.3 xxx xxxxxx 0.0 xxx xxxxxx 0.1 xxx xxxxxx  
Control Del:xxxx xxx 9.9 42.4 xxx xxxxxx 10.3 xxx xxxxxx 8.4 xxx xxxxxx  
LOS by Move: \* \* \* \* \* A E \* \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: 176 xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx  
SharedQueue: 3.5 xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx  
Shrd ConDel: 54.7 xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx  
Shared LOS: F \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 44.6 42.4 xxxxxx xxxxxx  
ApproachLOS: E \*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

|                                                                     |                                                                 |                                           |
|---------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------|
| Future Related AM                                                   | Wed Mar 23, 2011 17:53:04                                       | Page 5-1                                  |
| Year 2020 With Related Projects Traffic Conditions                  |                                                                 |                                           |
| AM Peak Hour                                                        |                                                                 |                                           |
| Level Of Service Computation Report                                 |                                                                 |                                           |
| 2000 HCM Unsignalized Method (Future Volume Alternative)            |                                                                 |                                           |
| Intersection #12 Barkentine Road/Palos Verdes Drive South           |                                                                 |                                           |
| Average Delay (sec/veh): 0.8 Worst Case Level Of Service: D [ 26.2] |                                                                 |                                           |
| Street Name: Barkentine Road Palos Verdes Drive South               |                                                                 |                                           |
| 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                                                       | Uncontrolled                              |
| Rights:                                                             | Include                                                         | Uncontrolled                              |
| Lanes:                                                              | 0 0 1 0 0 0 0 1 0 0 1 0 1 0 1 0 1 0 2 0 1                       | 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 2 0 1 |
| Volume Module:                                                      |                                                                 |                                           |
| Base Vol:                                                           | 22 0 3 5 0 10 6 369 5 3 735 1                                   |                                           |
| Growth Adj:                                                         | 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06     |                                           |
| Initial Bse:                                                        | 23 0 3 5 0 11 6 391 5 3 779 1                                   |                                           |
| Added Vol:                                                          | 0 0 0 0 0 0 0 86 0 0 143 0                                      |                                           |
| PasserByVol:                                                        | 0 0 0 0 0 0 0 0 0 0 0 0                                         |                                           |
| Initial Fut:                                                        | 23 0 3 5 0 11 6 477 5 3 922 1                                   |                                           |
| User Adj:                                                           | 1.00 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 0 3 6 0 12 7 519 6 3 1002 1                                  |                                           |
| Reduct Vol:                                                         | 0 0 0 0 0 0 0 0 0 0 0 0                                         |                                           |
| FinalVolume:                                                        | 25 0 3 6 0 12 7 519 6 3 1002 1                                  |                                           |
| Critical Gap Module:                                                |                                                                 |                                           |
| Critical Gp:                                                        | 7.5 6.5 6.9 7.5 6.5 6.9 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx         |                                           |
| FollowUpTm:                                                         | 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx         |                                           |
| Capacity Module:                                                    |                                                                 |                                           |
| Cnflct Vol:                                                         | 1043 1546 262 1282 1547 501 1003 xxxxx xxxxx 524 xxxxx xxxxx    |                                           |
| Potent Cap.:                                                        | 186 116 742 124 115 521 698 xxxxx xxxxx 1053 xxxxx xxxxx        |                                           |
| Move Cap.:                                                          | 180 114 742 123 114 521 698 xxxxx xxxxx 1053 xxxxx xxxxx        |                                           |
| Volume/Cap:                                                         | 0.14 0.00 0.00 0.05 0.00 0.02 0.01 xxxxx xxxxx 0.00 xxxxx xxxxx |                                           |
| Level Of Service Module:                                            |                                                                 |                                           |
| 2Way95thQ:                                                          | xxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx                |                                           |
| Control Del:                                                        | xxxxx xxxxx xxxxx xxxxx 10.2 xxxxx xxxxx 8.4 xxxxx xxxxx        |                                           |
| LOS by Move:                                                        | * * * * * B * * * A *                                           |                                           |
| Movement:                                                           | LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT         |                                           |
| Shared Cap.:                                                        | xxxx 198 xxxxx xxxxx 250 xxxxx xxxxx xxxxx xxxxx xxxxx          |                                           |
| SharedQueue:                                                        | xxxxx 0.5 xxxxx xxxxx 0.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx   |                                           |
| Shrd ConDel:                                                        | xxxxx 26.2 xxxxx xxxxx 20.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx |                                           |
| Shared LOS:                                                         | * * * * * C * * * * *                                           |                                           |
| ApproachDel:                                                        | 26.2 20.5 xxxxxx xxxxxx                                         |                                           |
| ApproachLOS:                                                        | D C                                                             |                                           |
| Note: Queue reported is the number of cars per lane.                |                                                                 |                                           |
| *****                                                               |                                                                 |                                           |

|                                                                     |                                                                     |                                           |
|---------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------|
| Future Related AM                                                   | Wed Mar 23, 2011 17:53:04                                           | Page 6-1                                  |
| Year 2020 With Related Projects Traffic Conditions                  |                                                                     |                                           |
| AM Peak Hour                                                        |                                                                     |                                           |
| Level Of Service Computation Report                                 |                                                                     |                                           |
| 2000 HCM Unsignalized Method (Future Volume Alternative)            |                                                                     |                                           |
| Intersection #15 Forrestal Drive/Palos Verdes Drive South           |                                                                     |                                           |
| Average Delay (sec/veh): 4.3 Worst Case Level Of Service: F [ 75.8] |                                                                     |                                           |
| Street Name: Forrestal Drive Palos Verdes Drive South               |                                                                     |                                           |
| 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                                                           | Uncontrolled                              |
| Rights:                                                             | Include                                                             | Uncontrolled                              |
| Lanes:                                                              | 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1                           | 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 |
| Volume Module:                                                      |                                                                     |                                           |
| Base Vol:                                                           | 3 1 1 41 0 25 15 438 2 12 676 20                                    |                                           |
| Growth Adj:                                                         | 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06         |                                           |
| Initial Bse:                                                        | 3 1 1 43 0 27 16 464 2 13 717 21                                    |                                           |
| Added Vol:                                                          | 7 0 26 0 0 0 0 83 2 9 134 0                                         |                                           |
| PasserByVol:                                                        | 0 0 0 0 0 0 0 0 0 0 0 0                                             |                                           |
| Initial Fut:                                                        | 10 1 27 43 0 27 16 547 4 22 851 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:                                                         | 11 1 29 47 0 29 17 595 4 24 925 23                                  |                                           |
| Reduct Vol:                                                         | 0 0 0 0 0 0 0 0 0 0 0 0                                             |                                           |
| FinalVolume:                                                        | 11 1 29 47 0 29 17 595 4 24 925 23                                  |                                           |
| Critical Gap Module:                                                |                                                                     |                                           |
| Critical Gp:                                                        | 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx             |                                           |
| FollowUpTm:                                                         | 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx             |                                           |
| Capacity Module:                                                    |                                                                     |                                           |
| Cnflct Vol:                                                         | 1627 1624 595 1619 1606 925 948 xxxxx xxxxx 599 xxxxx xxxxx         |                                           |
| Potent Cap.:                                                        | 83 104 508 84 106 329 733 xxxxx xxxxx 988 xxxxx xxxxx               |                                           |
| Move Cap.:                                                          | 73 99 508 76 101 329 733 xxxxx xxxxx 988 xxxxx xxxxx                |                                           |
| Volume/Cap:                                                         | 0.15 0.01 0.06 0.63 0.00 0.09 0.02 xxxxx xxxxx 0.02 xxxxx xxxxx     |                                           |
| Level Of Service Module:                                            |                                                                     |                                           |
| 2Way95thQ:                                                          | 0.5 xxxxx xxxxx 2.8 xxxxx xxxxx 0.1 xxxxx xxxxx 0.1 xxxxx xxxxx     |                                           |
| Control Del:                                                        | 63.1 xxxxx xxxxx 111.7 xxxxx xxxxx 10.0 xxxxx xxxxx 8.7 xxxxx xxxxx |                                           |
| LOS by Move:                                                        | F * * * * F * * B * * A *                                           |                                           |
| Movement:                                                           | LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT             |                                           |
| Shared Cap.:                                                        | xxxx xxxxx 439 xxxxx xxxxx 329 xxxxx xxxxx xxxxx xxxxx xxxxx        |                                           |
| SharedQueue:                                                        | xxxxx 0.2 xxxxx xxxxx 0.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx       |                                           |
| Shrd ConDel:                                                        | xxxxx 13.8 xxxxx xxxxx 17.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx     |                                           |
| Shared LOS:                                                         | * * * * * B * * * * * C * * * * *                                   |                                           |
| ApproachDel:                                                        | 26.9 75.8                                                           |                                           |
| ApproachLOS:                                                        | D F                                                                 |                                           |
| Note: Queue reported is the number of cars per lane.                |                                                                     |                                           |
| *****                                                               |                                                                     |                                           |



Year 2020 With Related Projects Traffic Conditions  
AM Peak Hour

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #74 Peppertree Drive/Palos Verdes Drive South

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: D [ 28.5]

\*\*\*\*\*

Street Name: North Bound South Bound East Bound West Bound

Approach: Palos Verdes Drive South

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 1 0 0 0 1 1 0 1 0 0 0 0 1 0 1

-----

Volume Module:

Base Vol: 0 0 0 13 0 8 6 370 0 0 712 5

Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06

Initial Bse: 0 0 0 14 0 8 6 392 0 0 755 5

Added Vol: 0 0 0 0 0 0 0 86 0 0 143 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 14 0 8 6 478 0 0 898 5

User Adj: 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

PHF Volume: 0 0 0 15 0 9 7 520 0 0 976 6

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 15 0 9 7 520 0 0 976 6

-----

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxx 6.4 xxxx 6.2 4.1 xxxx xxxxx xxxxx xxxxx

FollowUpTim:xxxxx xxxx xxxx 3.5 xxxx 3.3 2.2 xxxx xxxxx xxxxx xxxxx

-----

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx 1509 xxxx 976 982 xxxx xxxxx xxxxx xxxxx

Potent Cap.: xxxx xxxx xxxxx 134 xxxx 307 711 xxxx xxxxx xxxxx xxxxx

Move Cap.: xxxx xxxx xxxxx 133 xxxx 307 711 xxxx xxxxx xxxxx xxxxx

Volume/Cap: xxxx xxxx xxxxx 0.11 xxxx 0.03 0.01 xxxx xxxxx xxxxx xxxxx

-----

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx 0.4 xxxx 0.1 0.0 xxxx xxxxx xxxxx xxxxx

Control Del:xxxxx xxxx xxxxx 35.5 xxxx 17.1 10.1 xxxx xxxxx xxxxx xxxxx

LOS by Move: \* \* \* E \* C B \* \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd CntrlDel:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \*

ApproachDel: xxxxxx 28.5 xxxxxx xxxxxx

ApproachLOS: D \* \* \* \* \*

\*\*\*\*\*

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

\*\*\*\*\*

Future Related PM Wed Mar 23, 2011 17:54:43 Page 3-1

Year 2020 With Related Projects Traffic Conditions

PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #6 Via Rivera/Hawthorne Boulevard

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: F [ 97.0]

\*\*\*\*\*

Street Name: Via Rivera Hawthorne Boulevard

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 1 0 0 1 0 0 1 0 1 0 1 0 1 0 2 0 1

Volume Module:

Base Vol: 0 0 12 58 0 24 35 512 5 20 563 74

Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06

Initial Bse: 0 0 13 61 0 25 37 543 5 21 597 78

Added Vol: 0 0 0 0 0 0 0 210 0 0 205 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 13 61 0 25 37 753 5 21 802 78

User Adj: 1.00 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 14 67 0 28 40 818 6 23 872 85

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 14 67 0 28 40 818 6 23 872 85

Critical Gap Module:

Critical Gp:xxxxx xxx 6.9 7.5 6.5 6.9 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx

FollowUpTim:xxxxx xxx 3.3 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflct Vol: xxxxx xxx 412 1407 1822 436 957 xxxxx xxxxx 824 xxxxx xxxxx

Potent Cap.: xxxxx xxx 595 101 78 574 727 xxxxx xxxxx 815 xxxxx xxxxx

Move Cap.: xxxxx xxx 595 92 72 574 727 xxxxx xxxxx 815 xxxxx xxxxx

Volume/Cap: xxxxx xxx 0.02 0.73 0.00 0.05 0.06 xxxxx xxxxx 0.03 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxx 0.1 xxxxx xxxxx xxxxx 0.2 xxxxx xxxxx 0.1 xxxxx xxxxx

Control Del:xxxxx xxx 11.2 xxxxx xxxxx xxxxx 10.2 xxxxx xxxxx 9.5 xxxxx xxxxx

LOS by Move: \* \* B \* \* \* \* \* A \* \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxxx xxxxx xxxxx 122 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue:xxxxx xxxxx 4.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel:xxxxx xxxxx xxxxx 97.0 xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: \* \* \* \* \* F \* \* \* \* \*

ApproachDel: 11.2 97.0 xxxxxx xxxxxx

ApproachLOS: B F \* \* \*

\*\*\*\*\*

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

\*\*\*\*\*

Future Related PM Wed Mar 23, 2011 17:54:43 Page 4-1

Year 2020 With Related Projects Traffic Conditions

PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #11 Tramonto Drive-Seahill Drive/Palos Verdes Drive South

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: E [ 49.5]

\*\*\*\*\*

Street Name: Tramonto Drive-Seahill Drive Palos Verdes Drive South

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 1 0 0 1 1 0 0 0 1 0 1 1 0 1 0 2 0 1

Volume Module:

Base Vol: 48 0 27 2 0 0 30 535 61 40 422 5

Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06

Initial Bse: 51 0 29 2 0 0 32 567 65 42 447 5

Added Vol: 1 0 0 0 0 0 0 167 1 0 158 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 52 0 29 2 0 0 32 734 66 42 605 5

User Adj: 1.00 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: 56 0 31 2 0 0 35 798 71 46 658 6

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 56 0 31 2 0 0 35 798 71 46 658 6

Critical Gap Module:

Critical Gp: 7.5 6.5 6.9 7.5 xxxxx xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx

FollowUpTim: 3.5 4.0 3.3 3.5 xxxxx xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflct Vol: 1324 1659 435 1218 xxxxx xxxxx 664 xxxxx xxxxx 869 xxxxx xxxxx

Potent Cap.: 116 99 575 139 xxxxx xxxxx 935 xxxxx xxxxx 784 xxxxx xxxxx

Move Cap.: 108 89 575 122 xxxxx xxxxx 935 xxxxx xxxxx 784 xxxxx xxxxx

Volume/Cap: 0.52 0.00 0.05 0.02 xxxxx xxxxx 0.04 xxxxx xxxxx 0.06 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxx 0.2 0.1 xxxxx xxxxx 0.1 xxxxx xxxxx 0.2 xxxxx xxxxx

Control Del:xxxxx xxx 11.6 35.1 xxxxx xxxxx 9.0 xxxxx xxxxx 9.9 xxxxx xxxxx

LOS by Move: \* \* B \* \* \* \* \* A \* \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: 108 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue: 2.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel: 70.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: F \* \* \* \* \* \* \* \* \*

ApproachDel: 49.5 35.1 xxxxxx xxxxxx

ApproachLOS: E \* \* \* \*

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

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| Level Of Service Computation Report                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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| 2000 HCM Unsignalized Method (Future Volume Alternative)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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| Intersection #12 Barkentine Road/Palos Verdes Drive South                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| Average Delay (sec/veh):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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| Street Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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     | Palos Verdes Drive South |           |              |   |   |   |   |   |
| Approach:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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     | West Bound               |           |              |   |   |   |   |   |
| Movement:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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T - R | L - T - R                | L - T - R | L - T - R    |   |   |   |   |   |
| Control:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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     | Uncontrolled             |           | Uncontrolled |   |   |   |   |   |
| Rights:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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     | Include                  |           | Include      |   |   |   |   |   |
| Lanes:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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|                          |              |           |                          |           |              |   |   |   |   |   |

| Level Of Service Computation Report                                 |       |      |       |       |      |       |        |      |       |        |      |       |
|---------------------------------------------------------------------|-------|------|-------|-------|------|-------|--------|------|-------|--------|------|-------|
| 2000 HCM Unsignalized Method (Future Volume Alternative)            |       |      |       |       |      |       |        |      |       |        |      |       |
| Intersection #15 Forrestal Drive/Palos Verdes Drive South           |       |      |       |       |      |       |        |      |       |        |      |       |
| Average Delay (sec/veh): 5.5 Worst Case Level Of Service: F [ 87.4] |       |      |       |       |      |       |        |      |       |        |      |       |
| Street Name: Forrestal Drive Palos Verdes Drive South               |       |      |       |       |      |       |        |      |       |        |      |       |
| 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: 1 0 0 1 0 1 0 0 1 0 1 0 1                                    |       |      |       |       |      |       |        |      |       |        |      |       |
| Volume Module:                                                      |       |      |       |       |      |       |        |      |       |        |      |       |
| Base Vol:                                                           | 17    | 0    | 29    | 34    | 1    | 24    | 23     | 557  | 13    | 27     | 425  | 46    |
| Growth Adj:                                                         | 1.06  | 1.06 | 1.06  | 1.06  | 1.06 | 1.06  | 1.06   | 1.06 | 1.06  | 1.06   | 1.06 | 1.06  |
| Initial Bse:                                                        | 18    | 0    | 31    | 36    | 1    | 25    | 24     | 590  | 14    | 29     | 451  | 49    |
| Added Vol:                                                          | 4     | 0    | 17    | 0     | 0    | 0     | 0      | 156  | 8     | 30     | 151  | 0     |
| PasserByVol:                                                        | 0     | 0    | 0     | 0     | 0    | 0     | 0      | 0    | 0     | 0      | 0    | 0     |
| Initial Fut:                                                        | 22    | 0    | 48    | 36    | 1    | 25    | 24     | 746  | 22    | 59     | 602  | 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:                                                         | 24    | 0    | 52    | 39    | 1    | 28    | 27     | 811  | 24    | 64     | 654  | 53    |
| Reduct Vol:                                                         | 0     | 0    | 0     | 0     | 0    | 0     | 0      | 0    | 0     | 0      | 0    | 0     |
| FinalVolume:                                                        | 24    | 0    | 52    | 39    | 1    | 28    | 27     | 811  | 24    | 64     | 654  | 53    |
| Critical Gap Module:                                                |       |      |       |       |      |       |        |      |       |        |      |       |
| Critical Gap:                                                       | 7.1   | 6.5  | 6.2   | 7.1   | 6.5  | 6.2   | 4.1    | xxxx | xxxxx | 4.1    | xxxx | xxxxx |
| FollowUpTm:                                                         | 3.5   | 4.0  | 3.3   | 3.5   | 4.0  | 3.3   | 2.2    | xxxx | xxxxx | 2.2    | xxxx | xxxxx |
| Capacity Module:                                                    |       |      |       |       |      |       |        |      |       |        |      |       |
| Conflict Vol:                                                       | 1686  | 1699 | 811   | 1683  | 1669 | 654   | 707    | xxxx | xxxxx | 835    | xxxx | xxxxx |
| Potent Cap.:                                                        | 75    | 93   | 382   | 76    | 97   | 470   | 901    | xxxx | xxxxx | 807    | xxxx | xxxxx |
| Move Cap.:                                                          | 64    | 83   | 382   | 60    | 87   | 470   | 901    | xxxx | xxxxx | 807    | xxxx | xxxxx |
| Volume/Cap:                                                         | 0.37  | 0.00 | 0.14  | 0.65  | 0.01 | 0.06  | 0.03   | xxxx | xxxx  | 0.08   | xxxx | xxxx  |
| Level Of Service Module:                                            |       |      |       |       |      |       |        |      |       |        |      |       |
| 2Way95thQ:                                                          | 1.4   | xxxx | xxxxx | 2.7   | xxxx | xxxxx | 0.1    | xxxx | xxxxx | 0.3    | xxxx | xxxxx |
| Control Del:                                                        | 90.8  | xxxx | xxxxx | 140.9 | xxxx | xxxxx | 9.1    | xxxx | xxxxx | 9.8    | xxxx | xxxxx |
| LOS by Move:                                                        | F     | *    | *     | F     | *    | *     | A      | *    | *     | A      | *    | *     |
| Movement:                                                           |       |      |       |       |      |       |        |      |       |        |      |       |
| Shared Cap.:                                                        | xxxx  | xxxx | 382   | xxxx  | xxxx | 400   | xxxx   | xxxx | xxxxx | xxxx   | xxxx | xxxxx |
| SharedQueue:                                                        | xxxxx | xxxx | 0.5   | xxxxx | xxxx | 0.2   | xxxxx  | xxxx | xxxxx | xxxxx  | xxxx | xxxxx |
| Shrd ConDel:                                                        | xxxxx | xxxx | 15.9  | xxxxx | xxxx | 14.7  | xxxxx  | xxxx | xxxxx | xxxxx  | xxxx | xxxxx |
| Shared LOS:                                                         | *     | *    | C     | *     | *    | B     | *      | *    | *     | *      | *    | *     |
| ApproachDel:                                                        | 39.5  |      |       | 87.4  |      |       | xxxxxx |      |       | xxxxxx |      |       |
| ApproachLOS:                                                        | E     |      |       | F     |      |       | *      |      |       | *      |      |       |
| Note: Queue reported is the number of cars per lane.                |       |      |       |       |      |       |        |      |       |        |      |       |
| *****                                                               |       |      |       |       |      |       |        |      |       |        |      |       |

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
\*\*\*\*\*  
Intersection #16 Palos Verdes Drive East/Palos Verdes Drive South  
\*\*\*\*\*  
Average Delay (sec/veh): 3.8 Worst Case Level Of Service: E [ 37.2]  
\*\*\*\*\*  
Street Name: Palos Verdes Drive East Palos Verdes Drive South  
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 1 0 0 0 1 1 0 1 0 0 0 1 0 1  
Volume Module:  
Base Vol: 0 0 0 36 0 66 61 466 0 0 432 31  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 0 0 38 0 70 65 494 0 0 458 33  
Added Vol: 0 0 20 0 12 13 160 0 0 169 19  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 58 0 82 78 654 0 0 627 52  
User Adj: 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  
PHF Volume: 0 0 63 0 89 84 711 0 0 681 56  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 63 0 89 84 711 0 0 681 56  
Critical Gap Module:  
Critical Gap:xxxxx 6.4 xxxx 6.2 4.1 xxxx xxxxx xxxxx xxxxx  
FollowUpTim:xxxxx 3.5 xxxx 3.3 2.2 xxxx xxxxx xxxxx xxxxx  
Capacity Module:  
Conflict Vol: xxxx xxxxx 1561 xxxx 681 738 xxxx xxxxx xxxxx xxxxx  
Potent Cap.: xxxx xxxxx 125 xxxx 454 877 xxxx xxxxx xxxxx xxxxx  
Move Cap.: xxxx xxxxx 115 xxxx 454 877 xxxx xxxxx xxxxx xxxxx  
Volume/Cap: xxxx xxxxx 0.55 xxxx 0.20 0.10 xxxx xxxxx xxxxx xxxxx  
Level Of Service Module:  
2Way95thQ: xxxx xxxxx 2.6 xxxx 0.7 0.3 xxxx xxxxx xxxxx xxxxx  
Control Del:xxxxx 68.7 xxxx 14.9 9.5 xxxx xxxxx xxxxx xxxxx  
LOS by Move: \* \* \* F \* \* B A \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd Condel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: xxxxxx 37.2 \* \* \* \* \*  
ApproachLOS: \* \* \* E \* \*  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
\*\*\*\*\*  
Intersection #48 Narcissa Drive/Palos Verdes Drive South  
\*\*\*\*\*  
Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C [ 24.5]  
\*\*\*\*\*  
Street Name: Narcissa Drive Palos Verdes Drive South  
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 1 0 0 0 1 0 0 1 1 0 1 0 1 0 1  
Volume Module:  
Base Vol: 0 0 0 15 0 15 21 547 0 0 410 6  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 0 0 16 0 16 22 580 0 0 435 6  
Added Vol: 0 0 0 0 0 0 0 167 0 0 158 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 16 0 16 22 747 0 0 593 6  
User Adj: 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  
PHF Volume: 0 0 17 0 17 24 812 0 0 644 7  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 17 0 17 24 812 0 0 644 7  
Critical Gap Module:  
Critical Gap: 7.1 6.5 6.2 6.4 6.5 6.2 4.1 xxxxx xxxxx xxxxx xxxxx  
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxxx xxxxx xxxxx xxxxx  
Capacity Module:  
Conflict Vol: 1516 1511 812 1504 1504 644 651 xxxxx xxxxx xxxxx xxxxx  
Potent Cap.: 99 121 382 135 123 476 945 xxxxx xxxxx xxxxx xxxxx  
Move Cap.: 93 118 382 132 119 476 945 xxxxx xxxxx xxxxx xxxxx  
Volume/Cap: 0.00 0.00 0.00 0.13 0.00 0.04 0.03 xxxxx xxxxx xxxxx xxxxx  
Level Of Service Module:  
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 0.1 xxxxx xxxxx xxxxx xxxxx  
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx 12.8 8.9 xxxxx xxxxx xxxxx xxxxx  
LOS by Move: \* \* \* \* \* A \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx 0 xxxxx 132 xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxx xxxxx xxxxx 0.4 xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd Condel:xxxxx xxxxx xxxxx 36.2 xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* \* \* E \* \* \*  
ApproachDel: xxxxxx 24.5 \* \* \* \* \*  
ApproachLOS: \* \* \* C \* \*  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*



## **APPENDIX B-4**

### **YEAR 2020 FUTURE WITH PROJECT CONDITIONS**

Future Cumulative AM Wed Mar 23, 2011 17:55:16 Page 3-1  
Year 2020 With Project Traffic Conditions  
AM Peak Hour  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #6 Via Rivera/Hawthorne Boulevard  
Average Delay (sec/veh): 14.6 Worst Case Level Of Service: F[141.7]  
Street Name: Via Rivera Hawthorne Boulevard  
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 1 0 0 1 0 0 1 0 1 0 1 0 1 0 2 0 1  
Volume Module:  
Base Vol: 0 0 122 2 51 46 641 1 32 429 171  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 0 0 129 2 54 49 679 1 34 455 181  
Added Vol: 0 0 0 0 0 0 108 0 0 168 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 129 2 54 49 787 1 34 623 181  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 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 0 141 2 59 53 856 1 37 677 197  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 141 2 59 53 856 1 37 677 197  
Critical Gap Module:  
Critical Gp:xxxxx xxxx 6.9 6.8 6.5 6.9 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx  
FollowUpTim:xxxxx xxxx 3.3 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx  
Capacity Module:  
Cnflct Vol:xxxxx xxxx 1285 1714 338 874 xxxxx xxxxx 857 xxxxx xxxxx  
Potent Cap.:xxxxx xxxx 580 159 91 663 781 xxxxx xxxxx 792 xxxxx xxxxx  
Move Cap.:xxxxx xxxx 580 146 81 663 781 xxxxx xxxxx 792 xxxxx xxxxx  
Volume/Cap:xxxxx xxxx 0.00 0.97 0.03 0.09 0.07 xxxxx xxxxx 0.05 xxxxx xxxxx  
Level Of Service Module:  
2Way95thQ:xxxxx xxxx xxxxx xxxxx 0.2 xxxxx xxxxx 0.1 xxxxx xxxxx  
Control Del:xxxxx xxxx xxxxx xxxxx xxxxx 9.9 xxxxx xxxxx 9.8 xxxxx xxxxx  
LOS by Move:LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Movement:LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.:xxxxx xxxxx xxxxx 186 xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel:xxxxx xxxxx xxxxx 142 xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS:LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
ApproachDel:xxxxx 141.7 xxxxx xxxxx  
ApproachLOS:F F F F F  
Note: Queue reported is the number of cars per lane.  
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2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #11 Tramonto Drive-Seahill Drive/Palos Verdes Drive South  
Average Delay (sec/veh): 4.3 Worst Case Level Of Service: E[ 47.0]  
Street Name: Tramonto Drive-Seahill Drive Palos Verdes Drive South  
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 1 0 0 1 1 0 0 0 0 1 0 1 0 1 0 2 0 1  
Volume Module:  
Base Vol: 94 1 28 9 0 0 3 328 17 23 763 2  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 100 1 30 10 0 0 3 348 18 24 809 2  
Added Vol: 1 0 0 0 0 0 0 92 0 0 161 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 101 1 30 10 0 0 3 440 18 24 970 2  
User Adj: 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  
PHF Volume: 109 1 32 10 0 0 3 478 20 27 1054 2  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 109 1 32 10 0 0 3 478 20 27 1054 2  
Critical Gap Module:  
Critical Gp: 7.5 6.5 6.9 7.5 xxxxx xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx  
FollowUpTim: 3.5 4.0 3.3 3.5 xxxxx xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx  
Capacity Module:  
Cnflct Vol: 1075 1604 249 1354 xxxxx xxxxx 1056 xxxxx xxxxx 498 xxxxx xxxxx  
Potent Cap.: 177 107 757 110 xxxxx xxxxx 667 xxxxx xxxxx 1077 xxxxx xxxxx  
Move Cap.: 173 103 757 102 xxxxx xxxxx 667 xxxxx xxxxx 1077 xxxxx xxxxx  
Volume/Cap: 0.63 0.01 0.04 0.10 xxxxx xxxxx 0.01 xxxxx xxxxx 0.02 xxxxx xxxxx  
Level Of Service Module:  
2Way95thQ:xxxxx xxxx 0.1 0.3 xxxxx xxxxx 0.0 xxxxx xxxxx 0.1 xxxxx xxxxx  
Control Del:xxxxx xxxx 10.0 44.1 xxxxx xxxxx 10.4 xxxxx xxxxx 8.4 xxxxx xxxxx  
LOS by Move:LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Movement:LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: 171 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue: 3.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: 57.8 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: F \* \* \* \* \*  
ApproachDel: 47.0 44.1 xxxxx xxxxx  
ApproachLOS: E E \*  
Note: Queue reported is the number of cars per lane.  
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2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #12 Barkentine Road/Palos Verdes Drive South  
Average Delay (sec/veh): 0.8 Worst Case Level Of Service: D [ 26.9 ]

Street Name: Barkentine Road Palos Verdes Drive South  
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 1 0 0 0 0 1 0 0 1 0 1 0 2 0 1

Volume Module:  
Base Vol: 22 0 3 5 0 10 6 369 5 3 735 1  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 23 0 3 5 0 11 6 391 5 3 779 1  
Added Vol: 0 0 0 0 0 0 92 0 0 161 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 23 0 3 5 0 11 6 483 5 3 940 1  
User Adj: 1.00 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 0 3 6 0 12 7 525 6 3 1022 1  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 25 0 3 6 0 12 7 525 6 3 1022 1

Critical Gap Module:  
Critical Gp: 7.5 6.5 6.9 7.5 6.5 6.9 4.1 xxxxx 4.1 xxxxx  
FollowUpTm: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxxx 2.2 xxxxx

Capacity Module:  
Conflict Vol: 1060 1572 265 1305 1574 511 1023 xxxxx 531 xxxxx  
Potential Cap.: 181 111 739 120 111 513 686 xxxxx 1047 xxxxx  
Move Cap.: 175 110 739 118 110 513 686 xxxxx 1047 xxxxx  
Volume/Cap: 0.14 0.00 0.00 0.05 0.00 0.02 0.01 xxxxx 0.00 xxxxx

Level Of Service Module:  
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx  
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx 10.3 xxxxx 8.5 xxxxx  
LOS by Move: \* \* \* \* \* B \* A \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx 193 xxxxx xxxxx 242 xxxxx xxxxx xxxxx xxxxx  
SharedQueue: xxxxx 0.5 xxxxx xxxxx 0.2 xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: xxxxx 26.9 xxxxx xxxxx 21.0 xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* D \* \* \* C \* \* \* \*  
ApproachDel: 26.9 21.0 xxxxxx xxxxxx  
ApproachLOS: D C \*  
Note: Queue reported is the number of cars per lane.

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2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #15 Forrestal Drive/Palos Verdes Drive South  
Average Delay (sec/veh): 4.4 Worst Case Level Of Service: F [ 78.6 ]

Street Name: Forrestal Drive Palos Verdes Drive South  
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: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1 0 1

Volume Module:  
Base Vol: 3 1 1 41 0 25 15 438 2 12 676 20  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 3 1 1 43 0 27 16 464 2 13 717 21  
Added Vol: 7 0 26 0 0 0 0 92 2 9 137 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 10 1 27 43 0 27 16 556 4 22 854 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: 11 1 29 47 0 29 17 605 4 24 928 23  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 11 1 29 47 0 29 17 605 4 24 928 23

Critical Gap Module:  
Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxxx 4.1 xxxxx  
FollowUpTm: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxxx 2.2 xxxxx

Capacity Module:  
Conflict Vol: 1640 1637 605 1632 1619 928 951 xxxxx 609 xxxxx  
Potential Cap.: 81 102 502 82 104 328 731 xxxxx 979 xxxxx  
Move Cap.: 71 97 502 74 99 328 731 xxxxx 979 xxxxx  
Volume/Cap: 0.16 0.01 0.06 0.64 0.00 0.09 0.02 xxxxx 0.02 xxxxx

Level Of Service Module:  
2Way95thQ: 0.5 xxxxx xxxxx 2.9 xxxxx xxxxx 0.1 xxxxx xxxxx  
Control Del: 64.6 xxxxx xxxxx 116.2 xxxxx xxxxx 10.0 xxxxx 8.8 xxxxx  
LOS by Move: F \* \* F \* B \* A \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx 433 xxxxx xxxxx 328 xxxxx xxxxx xxxxx  
SharedQueue: xxxxx xxxxx 0.2 xxxxx xxxxx 0.3 xxxxx xxxxx xxxxx  
Shrd ConDel: xxxxx xxxxx 13.9 xxxxx xxxxx 17.0 xxxxx xxxxx xxxxx  
Shared LOS: \* \* B \* \* C \* \* \* \*  
ApproachDel: 27.4 78.6 xxxxxx xxxxxx  
ApproachLOS: D F \*  
Note: Queue reported is the number of cars per lane.

| Level Of Service Computation Report                                 |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
|---------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|--|
| 2000 HCM Unsignalized Method (Future Volume Alternative)            |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Intersection #16 Palos Verdes Drive East/Palos Verdes Drive South   |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Average Delay (sec/veh): 3.9 Worst Case Level Of Service: D [ 27.8] |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Street Name: Palos Verdes Drive East Palos Verdes Drive South       |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| 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 1 0 0 0 1 1 0 1 0 0 1                                |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Volume Module:                                                      |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Base Vol:                                                           | 0             | 0             | 0             | 16            | 0             | 119           | 126           | 336           | 0             | 0             | 591           | 40            |  |  |
| Growth Adj:                                                         | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          |  |  |
| Initial Bse:                                                        | 0             | 0             | 17            | 0             | 126           | 134           | 356           | 0             | 0             | 626           | 42            |               |  |  |
| Added Vol:                                                          | 0             | 0             | 0             | 11            | 0             | 11            | 13            | 105           | 0             | 0             | 135           | 31            |  |  |
| PasserByVol:                                                        | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |  |  |
| Initial Fut:                                                        | 0             | 0             | 28            | 0             | 137           | 147           | 461           | 0             | 0             | 761           | 73            |               |  |  |
| User Adj:                                                           | 1.00          | 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             | 30            | 0             | 149           | 159           | 501           | 0             | 0             | 828           | 80            |               |  |  |
| Reduct Vol:                                                         | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |  |  |
| FinalVolume:                                                        | 0             | 0             | 30            | 0             | 149           | 159           | 501           | 0             | 0             | 828           | 80            |               |  |  |
| Critical Gap Module:                                                |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Critical Gap:xxxxx                                                  | 6.4           | xxxx          | 6.2           | 4.1           | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| FollowUpTm:xxxxx                                                    | 3.5           | xxxx          | 3.3           | 2.2           | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Capacity Module:                                                    |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Conflict Vol:                                                       | xxxx          | xxxx          | 828           | 907           | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Potent Cap.:                                                        | xxxx          | xxxx          | 374           | 758           | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Move Cap.:                                                          | xxxx          | xxxx          | 92            | 374           | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Volume/Cap:                                                         | xxxx          | xxxx          | 0.33          | xxxx          | 0.40          | 0.21          | xxxx          | xxxx          | xxxx          | xxxx          | xxxx          | xxxx          |  |  |
| Level Of Service Module:                                            |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| 2Way95thQ:                                                          | xxxx          | xxxx          | xxxxx         | 1.3           | xxxx          | 1.9           | 0.8           | xxxx          | xxxxx         | xxxx          | xxxx          | xxxxx         |  |  |
| Control Del:xxxxx                                                   | xxxx          | xxxx          | xxxxx         | 61.9          | xxxx          | 20.8          | 11.0          | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| LOS by Move:                                                        | *             | *             | *             | F             | *             | C             | B             | *             | *             | *             | *             | *             |  |  |
| Movement:                                                           | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | 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          | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Shrd ConDel:xxxxx                                                   | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Shared LOS:                                                         | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             |  |  |
| ApproachDel:                                                        | xxxxx         |               |               | 27.8          | xxxxx         |               | xxxxx         |               |               | xxxxx         |               | xxxxx         |  |  |
| ApproachLOS:                                                        | *             |               |               | D             | *             |               | *             |               |               | *             |               | *             |  |  |
| Note: Queue reported is the number of cars per lane.                |               |               |               |               |               |               |               |               |               |               |               |               |  |  |

| Level Of Service Computation Report                                 |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
|---------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|--|
| 2000 HCM Unsignalized Method (Future Volume Alternative)            |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Intersection #48 Narcissa Drive/Palos Verdes Drive South            |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Average Delay (sec/veh): 1.3 Worst Case Level Of Service: D [ 27.6] |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Street Name: Narcissa Drive Palos Verdes Drive South                |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| 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 1 0 0 1 0 0 1 1 0 1 0 1                                |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Volume Module:                                                      |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Base Vol:                                                           | 0             | 1             | 2             | 10            | 0             | 32            | 12            | 359           | 0             | 0             | 696           | 6             |  |  |
| Growth Adj:                                                         | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          |  |  |
| Initial Bse:                                                        | 0             | 1             | 2             | 11            | 0             | 34            | 13            | 381           | 0             | 0             | 738           | 6             |  |  |
| Added Vol:                                                          | 0             | 0             | 0             | 6             | 0             | 9             | 3             | 89            | 0             | 0             | 152           | 2             |  |  |
| PasserByVol:                                                        | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |  |  |
| Initial Fut:                                                        | 0             | 1             | 2             | 17            | 0             | 43            | 16            | 470           | 0             | 0             | 890           | 8             |  |  |
| User Adj:                                                           | 1.00          | 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             | 1             | 2             | 18            | 0             | 47            | 17            | 510           | 0             | 0             | 967           | 9             |  |  |
| Reduct Vol:                                                         | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |  |  |
| FinalVolume:                                                        | 0             | 1             | 2             | 18            | 0             | 47            | 17            | 510           | 0             | 0             | 967           | 9             |  |  |
| Critical Gap Module:                                                |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Critical Gap:xxxxx                                                  | 6.5           | 6.2           | 7.1           | 6.5           | 6.2           | 4.1           | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| FollowUpTm:xxxxx                                                    | 4.0           | 3.3           | 3.5           | 4.0           | 3.3           | 2.2           | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Capacity Module:                                                    |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| Conflict Vol:                                                       | xxxx          | 1521          | 510           | 1513          | 1512          | 967           | 976           | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Potent Cap.:                                                        | xxxx          | 120           | 567           | 99            | 121           | 311           | 715           | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Move Cap.:                                                          | xxxx          | 117           | 567           | 96            | 118           | 311           | 715           | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Volume/Cap:                                                         | xxxx          | 0.01          | 0.00          | 0.19          | 0.00          | 0.15          | 0.02          | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Level Of Service Module:                                            |               |               |               |               |               |               |               |               |               |               |               |               |  |  |
| 2Way95thQ:                                                          | xxxx          | xxxx          | xxxxx         | xxxx          | xxxx          | 0.5           | 0.1           | xxxx          | xxxxx         | xxxx          | xxxx          | xxxxx         |  |  |
| Control Del:xxxxx                                                   | xxxx          | xxxx          | xxxxx         | xxxxx         | xxxx          | 18.6          | 10.2          | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| LOS by Move:                                                        | *             | *             | *             | *             | *             | C             | B             | *             | *             | *             | *             | *             |  |  |
| Movement:                                                           | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |  |  |
| Shared Cap.:                                                        | xxxx          | xxxx          | 248           | 96            | xxxx          | xxxxx         | xxxx          | xxxx          | xxxxx         | xxxx          | xxxx          | xxxxx         |  |  |
| SharedQueue:xxxxx                                                   | xxxx          | xxxx          | 0.0           | 0.6           | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Shrd ConDel:xxxxx                                                   | xxxx          | xxxx          | 19.7          | 50.8          | xxxx          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |  |  |
| Shared LOS:                                                         | *             | *             | C             | F             | *             | *             | *             | *             | *             | *             | *             | *             |  |  |
| ApproachDel:                                                        | 19.7          |               |               | 27.6          |               |               | xxxxx         |               |               | xxxxx         |               | xxxxx         |  |  |
| ApproachLOS:                                                        | C             |               |               | D             |               |               | *             |               |               | *             |               | *             |  |  |
| Note: Queue reported is the number of cars per lane.                |               |               |               |               |               |               |               |               |               |               |               |               |  |  |

Future Cumulative AM Wed Mar 23, 2011 17:55:16 Page 9-1  
-----  
Year 2020 With Project Traffic Conditions  
AM Peak Hour  
-----  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
\*\*\*\*\*  
Intersection #74 Peppertree Drive/Palos Verdes Drive South  
\*\*\*\*\*  
Average Delay (sec/veh): 0.7 Worst Case Level Of Service: D [ 27.2]  
\*\*\*\*\*  
Street Name: Peppertree Drive Palos Verdes Drive South  
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 1 0 0 0 1 1 0 1 0 0 0 0 1 0 1  
-----  
Volume Module:  
Base Vol: 0 0 0 13 0 8 6 370 0 0 712 5  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 0 0 0 14 0 8 6 392 0 0 755 5  
Added Vol: 0 0 0 3 0 9 3 92 0 0 145 1  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 17 0 17 9 484 0 0 900 6  
User Adj: 1.00 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 18 0 19 10 526 0 0 978 7  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 0 18 0 19 10 526 0 0 978 7  
-----  
Critical Gap Module:  
Critical Gp:xxxxx 6.4 xxxx 6.2 4.1 xxxx xxxxx xxxxx xxxxx  
FollowUpTim:xxxxx 3.5 xxxx 3.3 2.2 xxxx xxxxx xxxxx xxxxx  
-----  
Capacity Module:  
Conflict Vol: xxxxx xxxxx 1525 xxxxx 978 985 xxxxx xxxxx xxxxx xxxxx  
Potent Cap.: xxxxx xxxxx 131 xxxxx 307 709 xxxxx xxxxx xxxxx xxxxx  
Move Cap.: xxxxx xxxxx 130 xxxxx 307 709 xxxxx xxxxx xxxxx xxxxx  
Volume/Cap: xxxxx xxxxx 0.14 xxxxx 0.06 0.01 xxxxx xxxxx xxxxx xxxxx  
-----  
Level Of Service Module:  
2Way95thQ: xxxxx xxxxx 0.5 xxxxx 0.2 0.0 xxxxx xxxxx xxxxx xxxxx  
Control Del:xxxxx xxxxx 37.2 xxxxx 17.5 10.1 xxxxx xxxxx xxxxx xxxxx  
LOS by Move: \* \* \* E \* C B \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: xxxxxx 27.2 xxxxxx xxxxxx  
ApproachLOS: \* D \*  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Future Cumulative PM Wed Mar 23, 2011 17:55:36 Page 3-1  
Year 2020 With Project Traffic Conditions  
PM Peak Hour  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #6 Via Rivera/Hawthorne Boulevard  
Average Delay (sec/veh): 5.3 Worst Case Level Of Service: F[102.3]  
Street Name: Via Rivera Hawthorne Boulevard  
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 1 0 0 1 0 0 1 0 1 0 1 0 2 0 1  
Volume Module:  
Base Vol: 0 0 12 58 0 24 35 512 5 20 563 74  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 0 0 13 61 0 25 37 543 5 21 597 78  
Added Vol: 0 0 0 0 0 0 0 216 0 0 215 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 13 61 0 25 37 759 5 21 812 78  
User Adj: 1.00 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 14 67 0 28 40 825 6 23 882 85  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 14 67 0 28 40 825 6 23 882 85  
Critical Gap Module:  
Critical Gp:xxxxx xxx 6.9 7.5 6.5 6.9 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx  
FollowUpPrim:xxxxx xxx 3.3 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx  
Capacity Module:  
Conflict Vol: xxxx xxx 415 1421 1840 441 968 xxxxx xxxxx 830 xxxxx xxxxx  
Potent Cap.: xxxx xxx 592 98 76 569 720 xxxxx xxxxx 810 xxxxx xxxxx  
Move Cap.: xxxx xxx 592 90 70 569 720 xxxxx xxxxx 810 xxxxx xxxxx  
Volume/Cap: xxxx xxx 0.02 0.74 0.00 0.05 0.06 xxxxx xxxxx 0.03 xxxxx xxxxx  
Level Of Service Module:  
2Way95thQ: xxxx xxx 0.1 xxxxx xxxxx 0.2 xxxxx xxxxx 0.1 xxxxx xxxxx  
Control Del:xxxxx xxx 11.2 xxxxx xxxxx xxxxx 10.3 xxxxx xxxxx 9.6 xxxxx xxxxx  
LOS by Move: \* \* B \* \* \* \* A \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxx xxx xxxxx xxx 119 xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxx xxx xxxxx xxxxx 4.6 xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel:xxxxx xxx xxxxx xxxxx 102 xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* \* F \* \* \* \* \*  
ApproachDel: 11.2 102.3 xxxxxx  
ApproachLOS: B F  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

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Future Cumulative PM Wed Mar 23, 2011 17:55:36 Page 4-1  
Year 2020 With Project Traffic Conditions  
PM Peak Hour  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #11 Tramoto Drive-Seahill Drive/Palos Verdes Drive South  
Average Delay (sec/veh): 3.2 Worst Case Level Of Service: F[53.3]  
Street Name: Tramoto Drive-Seahill Drive Palos Verdes Drive South  
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 1 0 0 1 1 0 0 0 1 0 1 1 0 1 0 2 0 1  
Volume Module:  
Base Vol: 48 0 27 2 0 0 30 535 61 40 422 5  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 51 0 29 2 0 0 32 567 65 42 447 5  
Added Vol: 1 0 0 0 0 0 0 186 1 0 170 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 52 0 29 2 0 0 32 753 66 42 617 5  
User Adj: 1.00 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: 56 0 31 2 0 0 35 819 71 46 671 6  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 56 0 31 2 0 0 35 819 71 46 671 6  
Critical Gap Module:  
Critical Gp: 7.5 6.5 6.9 7.5 xxxxx xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx  
FollowUpPrim: 3.5 4.0 3.3 3.5 xxxxx xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx  
Capacity Module:  
Conflict Vol: 1351 1692 445 1242 xxxxx xxxxx 677 xxxxx xxxxx 890 xxxxx xxxxx  
Potent Cap.: 111 94 566 133 xxxxx xxxxx 924 xxxxx xxxxx 770 xxxxx xxxxx  
Move Cap.: 103 85 566 117 xxxxx xxxxx 924 xxxxx xxxxx 770 xxxxx xxxxx  
Volume/Cap: 0.55 0.00 0.05 0.02 xxxxx xxxxx 0.04 xxxxx xxxxx 0.06 xxxxx xxxxx  
Level Of Service Module:  
2Way95thQ: xxxx xxx 0.2 0.1 xxxxx xxxxx 0.1 xxxxx xxxxx 0.2 xxxxx xxxxx  
Control Del:xxxxx xxx 11.7 36.4 xxxxx xxxxx 9.0 xxxxx xxxxx 10.0 xxxxx xxxxx  
LOS by Move: \* \* B E \* \* A \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: 103 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue: 2.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: 76.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: F \* \* \* \* \*  
ApproachDel: 53.3 36.4 xxxxxx  
ApproachLOS: F E  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

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Future Cumulative PM Wed Mar 23, 2011 17:55:36 Page 5-1  
Year 2020 With Project Traffic Conditions  
PM Peak Hour  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #12 Barkentine Road/Palos Verdes Drive South  
Average Delay (sec/veh): 0.6 Worst Case Level Of Service: D [ 30.5]  
Street Name: Barkentine Road Palos Verdes Drive South  
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 1 0 0 0 0 0 0 1 1 0 1 1 0 1 0 2 0 1  
Volume Module:  
Base Vol: 14 0 6 0 0 3 19 561 12 7 437 2  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 15 0 6 0 0 3 20 595 13 7 463 2  
Added Vol: 0 0 0 0 0 0 0 186 0 0 170 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 15 0 6 0 0 3 20 781 13 7 633 2  
User Adj: 1.00 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 0 7 0 0 3 22 849 14 8 688 2  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 16 0 7 0 0 3 22 849 14 8 688 2  
Critical Gap Module:  
Critical Gp: 7.5 6.5 6.9 xxxxx xxxx 6.9 4.1 xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 4.0 3.3 xxxxx xxxx 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx  
Capacity Module:  
Conflict Vol: 1260 1606 431 xxxx xxxx 344 691 xxxx xxxxx 862 xxxx xxxxx  
Potent Cap.: 129 106 578 xxxx xxxx 658 914 xxxx xxxxx 788 xxxx xxxxx  
Move Cap.: 125 103 578 xxxx xxxx 658 914 xxxx xxxxx 788 xxxx xxxxx  
Volume/Cap: 0.13 0.00 0.01 xxxx xxxx 0.01 0.02 xxxx xxxx 0.01 xxxx xxxx  
Level Of Service Module:  
2Way95thQ: xxxx xxxx xxxxx xxxx xxxx 0.0 0.1 xxxx xxxxx 0.0 xxxx xxxxx  
Control Del: xxxxx xxxx xxxxx xxxxx xxxx 10.5 9.0 xxxx xxxxx 9.6 xxxx xxxxx  
LOS by Move: \* \* \* \* \* B A \* \* A \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxx 164 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx  
SharedQueue: xxxxx 0.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: xxxxx 30.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* D \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 30.5 10.5 xxxxxx xxxxxx  
ApproachLOS: D B \*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Future Cumulative PM Wed Mar 23, 2011 17:55:36 Page 6-1  
Year 2020 With Project Traffic Conditions  
PM Peak Hour  
Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #15 Forrestal Drive/Palos Verdes Drive South  
Average Delay (sec/veh): 5.7 Worst Case Level Of Service: F [ 91.9]  
Street Name: Forrestal Drive Palos Verdes Drive South  
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: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1 0 1 0 1  
Volume Module:  
Base Vol: 17 0 29 34 1 24 23 557 13 27 425 46  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 18 0 31 36 1 25 24 590 14 29 451 49  
Added Vol: 4 0 17 0 0 0 0 162 8 30 161 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 22 0 48 36 1 25 24 752 22 59 612 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: 24 0 52 39 1 28 27 818 24 64 665 53  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 24 0 52 39 1 28 27 818 24 64 665 53  
Critical Gap Module:  
Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx  
Capacity Module:  
Conflict Vol: 1704 1716 818 1701 1687 665 718 xxxx xxxxx 842 xxxx xxxxx  
Potent Cap.: 73 91 379 73 95 464 893 xxxx xxxxx 803 xxxx xxxxx  
Move Cap.: 62 81 379 58 85 464 893 xxxx xxxxx 803 xxxx xxxxx  
Volume/Cap: 0.38 0.00 0.14 0.67 0.01 0.06 0.03 xxxx xxxx 0.08 xxxx xxxx  
Level Of Service Module:  
2Way95thQ: 1.4 xxxx xxxxx 2.8 xxxx xxxxx 0.1 xxxx xxxxx 0.3 xxxx xxxxx  
Control Del: 94.7 xxxx xxxxx 148.5 xxxx xxxxx 9.2 xxxx xxxxx 9.9 xxxx xxxxx  
LOS by Move: F \* \* F \* \* A \* \* A \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxx xxxx 379 xxxx xxxx 393 xxxx xxxx xxxxx xxxx xxxx xxxxx  
SharedQueue: xxxxx xxxxx 0.5 xxxxx xxxxx 0.2 xxxxx xxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: xxxxx xxxxx 16.0 xxxxx xxxxx 14.9 xxxxx xxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* C \* \* B \* \* \* \* \*  
ApproachDel: 40.8 91.9 xxxxxx xxxxxx  
ApproachLOS: E F \*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

| Level Of Service Computation Report                                 |               |               |               |               |               |               |               |               |               |               |               |               |               |
|---------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2000 HCM Unsignalized Method (Future Volume Alternative)            |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Intersection #16 Palos Verdes Drive East/Palos Verdes Drive South   |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Average Delay (sec/veh): 4.0 Worst Case Level Of Service: E [ 38.2] |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Street Name: Palos Verdes Drive East Palos Verdes Drive South       |               |               |               |               |               |               |               |               |               |               |               |               |               |
| 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     | Stop Sign     | Stop Sign     | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  |
| Rights:                                                             | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       |
| Lanes:                                                              | 0 0 0 0 0     | 1 0 0 0 1     | 1 0 0 0 1     | 1 0 0 0 1     | 0 0 1 0 1     | 0 0 1 0 1     | 0 0 1 0 1     | 0 0 1 0 1     | 0 0 1 0 1     | 0 0 1 0 1     | 0 0 1 0 1     | 0 0 1 0 1     | 0 0 1 0 1     |
| Volume Module:                                                      |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Base Vol:                                                           | 0             | 0             | 0             | 36            | 0             | 66            | 61            | 466           | 0             | 0             | 432           | 31            |               |
| Growth Adj:                                                         | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          |               |
| Initial Bse:                                                        | 0             | 0             | 0             | 38            | 0             | 70            | 65            | 494           | 0             | 0             | 458           | 33            |               |
| Added Vol:                                                          | 0             | 0             | 0             | 20            | 0             | 15            | 15            | 164           | 0             | 0             | 177           | 19            |               |
| PasserByVol:                                                        | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |               |
| Initial Fut:                                                        | 0             | 0             | 0             | 58            | 0             | 85            | 80            | 658           | 0             | 0             | 635           | 52            |               |
| User Adj:                                                           | 1.00          | 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             | 63            | 0             | 92            | 87            | 715           | 0             | 0             | 690           | 56            |               |
| Reduct Vol:                                                         | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |               |
| FinalVolume:                                                        | 0             | 0             | 0             | 63            | 0             | 92            | 87            | 715           | 0             | 0             | 690           | 56            |               |
| Critical Gap Module:                                                |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Critical Gp:xxxxx                                                   | xxxxx         | xxxxx         | xxxxx         | 6.4           | xxxxx         | 6.2           | 4.1           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| FollowUpTim:xxxxx                                                   | xxxxx         | xxxxx         | xxxxx         | 3.5           | xxxxx         | 3.3           | 2.2           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Capacity Module:                                                    |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Cnflct Vol:                                                         | xxxxx         | xxxxx         | xxxxx         | 1578          | xxxxx         | 690           | 747           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Potent Cap.:                                                        | xxxxx         | xxxxx         | xxxxx         | 122           | xxxxx         | 448           | 871           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Move Cap.:                                                          | xxxxx         | xxxxx         | xxxxx         | 112           | xxxxx         | 448           | 871           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Volume/Cap:                                                         | xxxxx         | xxxxx         | xxxxx         | 0.56          | xxxxx         | 0.21          | 0.10          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Level Of Service Module:                                            |               |               |               |               |               |               |               |               |               |               |               |               |               |
| 2Way95thQ:                                                          | xxxxx         | xxxxx         | xxxxx         | 2.7           | xxxxx         | 0.8           | 0.3           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Control Del:xxxxx                                                   | xxxxx         | xxxxx         | xxxxx         | 72.0          | xxxxx         | 15.1          | 9.6           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| LOS by Move:                                                        | * * *         | * * *         | * * *         | F             | * * *         | C             | A             | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         |
| Movement:                                                           | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |
| Shared Cap.:                                                        | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| SharedQueue:xxxxx                                                   | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Shrd ConDel:xxxxx                                                   | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Shared LOS:                                                         | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         |
| ApproachDel:                                                        | xxxxxx        | xxxxxx        | xxxxxx        | 38.2          | xxxxxx        | E             | xxxxxx        | xxxxxx        | xxxxxx        | xxxxxx        | xxxxxx        | xxxxxx        | xxxxxx        |
| ApproachLOS:                                                        | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             |
| Note: Queue reported is the number of cars per lane.                |               |               |               |               |               |               |               |               |               |               |               |               |               |
| *****                                                               |               |               |               |               |               |               |               |               |               |               |               |               |               |

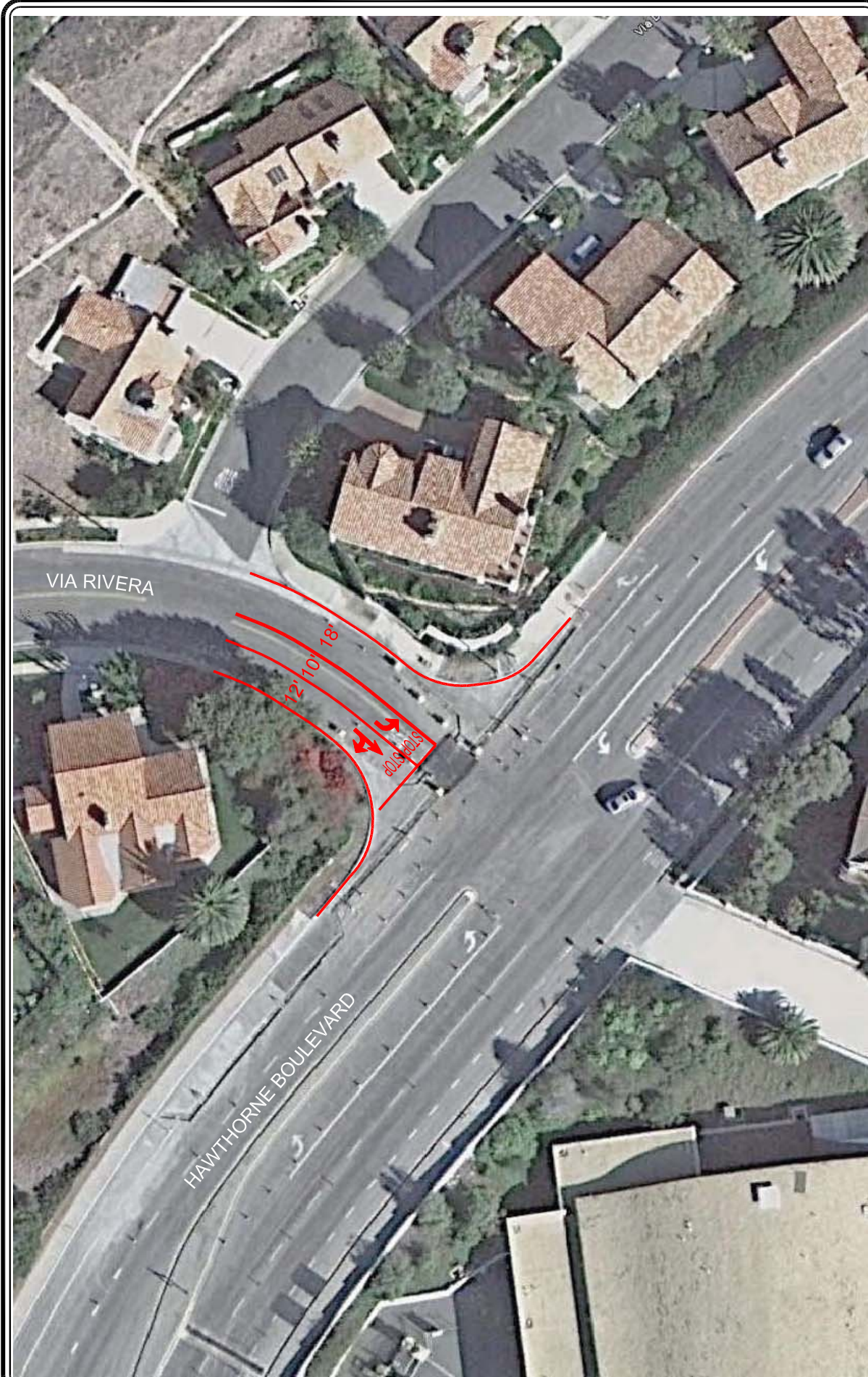
| Level Of Service Computation Report                                 |               |               |               |               |               |               |               |               |               |               |               |               |               |
|---------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2000 HCM Unsignalized Method (Future Volume Alternative)            |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Intersection #48 Narcissa Drive/Palos Verdes Drive South            |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Average Delay (sec/veh): 1.0 Worst Case Level Of Service: D [ 25.9] |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Street Name: Narcissa Drive Palos Verdes Drive South                |               |               |               |               |               |               |               |               |               |               |               |               |               |
| 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     | Stop Sign     | Stop Sign     | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  | Uncontrolled  |
| Rights:                                                             | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       | Include       |
| Lanes:                                                              | 0 0 1 0 0     | 0 1 0 0 1     | 0 1 0 0 1     | 0 1 0 0 1     | 1 0 0 1 0     | 1 0 0 1 0     | 1 0 0 1 0     | 1 0 0 1 0     | 1 0 0 1 0     | 1 0 0 1 0     | 1 0 0 1 0     | 1 0 0 1 0     | 1 0 0 1 0     |
| Volume Module:                                                      |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Base Vol:                                                           | 0             | 0             | 0             | 15            | 0             | 15            | 21            | 547           | 0             | 0             | 410           | 6             |               |
| Growth Adj:                                                         | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          | 1.06          |               |
| Initial Bse:                                                        | 0             | 0             | 0             | 16            | 0             | 16            | 22            | 580           | 0             | 0             | 435           | 6             |               |
| Added Vol:                                                          | 0             | 0             | 0             | 4             | 0             | 6             | 10            | 177           | 0             | 0             | 164           | 7             |               |
| PasserByVol:                                                        | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |               |
| Initial Fut:                                                        | 0             | 0             | 0             | 20            | 0             | 22            | 32            | 757           | 0             | 0             | 599           | 13            |               |
| User Adj:                                                           | 1.00          | 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             | 22            | 0             | 24            | 35            | 823           | 0             | 0             | 651           | 15            |               |
| Reduct Vol:                                                         | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |               |
| FinalVolume:                                                        | 0             | 0             | 0             | 22            | 0             | 24            | 35            | 823           | 0             | 0             | 651           | 15            |               |
| Critical Gap Module:                                                |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Critical Gp:                                                        | 7.1           | 6.5           | 6.2           | 6.4           | 6.5           | 6.2           | 4.1           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| FollowUpTim:                                                        | 3.5           | 4.0           | 3.3           | 3.5           | 4.0           | 3.3           | 2.2           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Capacity Module:                                                    |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Cnflct Vol:                                                         | 1563          | 1558          | 823           | 1543          | 1543          | 651           | 665           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Potent Cap.:                                                        | 92            | 114           | 377           | 128           | 116           | 472           | 934           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Move Cap.:                                                          | 85            | 109           | 377           | 124           | 112           | 472           | 934           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Volume/Cap:                                                         | 0.00          | 0.00          | 0.00          | 0.17          | 0.00          | 0.05          | 0.04          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Level Of Service Module:                                            |               |               |               |               |               |               |               |               |               |               |               |               |               |
| 2Way95thQ:                                                          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | 0.2           | 0.1           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Control Del:xxxxx                                                   | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | 13.0          | 9.0           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| LOS by Move:                                                        | * * *         | * * *         | * * *         | * * *         | * * *         | B             | A             | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         |
| Movement:                                                           | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |
| Shared Cap.:                                                        | xxxxx         | 0             | xxxxx         | 124           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| SharedQueue:xxxxx                                                   | xxxxx         | xxxxx         | xxxxx         | 0.6           | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Shrd ConDel:xxxxx                                                   | xxxxx         | xxxxx         | xxxxx         | 40.0          | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         | xxxxx         |
| Shared LOS:                                                         | * * *         | * * *         | * * *         | E             | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         | * * *         |
| ApproachDel:                                                        | xxxxxx        | xxxxxx        | xxxxxx        | 25.9          | xxxxxx        | D             | xxxxxx        | xxxxxx        | xxxxxx        | xxxxxx        | xxxxxx        | xxxxxx        | xxxxxx        |
| ApproachLOS:                                                        | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             | *             |
| Note: Queue reported is the number of cars per lane.                |               |               |               |               |               |               |               |               |               |               |               |               |               |
| *****                                                               |               |               |               |               |               |               |               |               |               |               |               |               |               |

Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)  
Intersection #74 Peppertree Drive/Palos Verdes Drive South  
Average Delay (sec/veh): 0.7 Worst Case Level Of Service: D [ 28.5]  
Street Name: Peppertree Drive Palos Verdes Drive South  
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 1 0 0 0 1 1 0 0 0 0 0 1 0 1  
Volume Module:  
Base Vol: 0 0 0 0 15 0 6 9 562 0 0 427 13  
Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06  
Initial Bse: 0 0 0 0 16 0 6 10 596 0 0 453 14  
Added Vol: 0 0 0 0 2 0 6 10 171 0 0 165 3  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 0 18 0 12 20 767 0 0 618 17  
User Adj: 1.00 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 0 19 0 13 21 833 0 0 671 18  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 0 0 19 0 13 21 833 0 0 671 18  
Critical Gap Module:  
Critical Gap:xxxxx 6.4 xxxx 6.2 4.1 xxxx xxxxx xxxxx xxxxx  
FollowUpTrim:xxxxx 3.5 xxxx 3.3 2.2 xxxx xxxxx xxxxx xxxxx  
Capacity Module:  
Conflict Vol: xxxxx xxxxx 1547 xxxxx 671 690 xxxxx xxxxx xxxxx xxxxx  
Potent Cap.: xxxxx xxxxx xxxxx 127 xxxxx 460 914 xxxxx xxxxx xxxxx xxxxx  
Move Cap.: xxxxx xxxxx xxxxx 125 xxxxx 460 914 xxxxx xxxxx xxxxx xxxxx  
Volume/Cap: xxxxx xxxxx xxxxx 0.16 xxxxx 0.03 0.02 xxxxx xxxxx xxxxx xxxxx  
Level Of Service Module:  
2Way95th0: xxxxx xxxxx xxxxx 0.5 xxxxx 0.1 0.1 xxxxx xxxxx xxxxx xxxxx  
Control Del:xxxxx xxxxx xxxxx 39.1 xxxxx 13.1 9.0 xxxxx xxxxx xxxxx xxxxx  
LOS by Move: \* \* \* E \* \* B A \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: xxxxxx 28.5 D xxxxxx \*  
ApproachLOS: \*  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

## **APPENDIX B-5**

### **YEAR 2020 FUTURE WITH PROJECT WITH MITIGATION CONDITIONS**



MAP SOURCE: GOOGLE EARTH



NOT TO SCALE

## APPENDIX FIGURE B-1 CONCEPTUAL MITIGATION MEASURE

HAWTHORNE BOULEVARD/VIA RIVERA

ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

Year 2020 With Project Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #6 Via Rivera/Hawthorne Boulevard

\*\*\*\*\*  
Average Delay (sec/veh): 9.6 Worst Case Level Of Service: F[ 91.7]  
\*\*\*\*\*

| Street Name: | Via Rivera  |   |             |   |              | Hawthorne Boulevard |              |   |   |  |
|--------------|-------------|---|-------------|---|--------------|---------------------|--------------|---|---|--|
| Approach:    | North Bound |   | South Bound |   | East Bound   |                     | West Bound   |   |   |  |
| Movement:    | 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 | 1            | 1                   | 0            | 0 | 1 |  |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 0    | 0    | 0    | 122  | 2    | 51   | 46   | 641  | 1    | 32   | 429  | 171  |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 0    | 0    | 0    | 129  | 2    | 54   | 49   | 679  | 1    | 34   | 455  | 181  |
| Added Vol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 108  | 0    | 0    | 168  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 0    | 0    | 0    | 129  | 2    | 54   | 49   | 787  | 1    | 34   | 623  | 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    | 0    | 0    | 141  | 2    | 59   | 53   | 856  | 1    | 37   | 677  | 197  |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 0    | 0    | 0    | 141  | 2    | 59   | 53   | 856  | 1    | 37   | 677  | 197  |

Critical Gap Module:

|                   |       |     |     |     |     |     |       |       |     |       |       |
|-------------------|-------|-----|-----|-----|-----|-----|-------|-------|-----|-------|-------|
| Critical Gp:xxxxx | xxxxx | 6.9 | 6.8 | 6.5 | 6.9 | 4.1 | xxxxx | xxxxx | 4.1 | xxxxx | xxxxx |
| FollowUpTim:xxxxx | xxxxx | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxxx | xxxxx | 2.2 | xxxxx | xxxxx |

Capacity Module:

|              |       |       |      |      |      |      |      |       |       |      |       |       |
|--------------|-------|-------|------|------|------|------|------|-------|-------|------|-------|-------|
| Cnflct Vol:  | xxxxx | xxxxx | 429  | 1285 | 1714 | 338  | 874  | xxxxx | xxxxx | 857  | xxxxx | xxxxx |
| Potent Cap.: | xxxxx | xxxxx | 580  | 159  | 91   | 663  | 781  | xxxxx | xxxxx | 792  | xxxxx | xxxxx |
| Move Cap.:   | xxxxx | xxxxx | 580  | 146  | 81   | 663  | 781  | xxxxx | xxxxx | 792  | xxxxx | xxxxx |
| Volume/Cap:  | xxxxx | xxxxx | 0.00 | 0.97 | 0.03 | 0.09 | 0.07 | xxxxx | xxxxx | 0.05 | xxxxx | xxxxx |

Level Of Service Module:

|                   |        |       |       |       |       |       |        |       |       |        |       |       |
|-------------------|--------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|
| 2Way95thQ:        | xxxxx  | xxxxx | xxxxx | 7.0   | xxxxx | xxxxx | 0.2    | xxxxx | xxxxx | 0.1    | xxxxx | xxxxx |
| Control Del:xxxxx | xxxxx  | xxxxx | xxxxx | 125.9 | xxxxx | xxxxx | 9.9    | xxxxx | xxxxx | 9.8    | xxxxx | xxxxx |
| LOS by Move:      | *      | *     | *     | F     | *     | *     | A      | *     | *     | A      | *     | *     |
| Movement:         | LT     | LTR   | RT    | LT    | LTR   | RT    | LT     | LTR   | RT    | LT     | LTR   | RT    |
| Shared Cap.:      | xxxxx  | xxxxx | xxxxx | xxxxx | xxxxx | 522   | xxxxx  | xxxxx | xxxxx | xxxxx  | xxxxx | xxxxx |
| SharedQueue:xxxxx | xxxxx  | xxxxx | xxxxx | xxxxx | xxxxx | 0.4   | xxxxx  | xxxxx | xxxxx | xxxxx  | xxxxx | xxxxx |
| Shrd ConDel:xxxxx | xxxxx  | xxxxx | xxxxx | xxxxx | xxxxx | 12.8  | xxxxx  | xxxxx | xxxxx | xxxxx  | xxxxx | xxxxx |
| Shared LOS:       | *      | *     | *     | *     | *     | B     | *      | *     | *     | *      | *     | *     |
| ApproachDel:      | xxxxxx |       |       | 91.7  |       |       | xxxxxx |       |       | xxxxxx |       |       |
| ApproachLOS:      | *      |       |       | F     |       |       | *      |       |       | *      |       |       |

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

Year 2020 With Project Traffic Conditions  
AM Peak Hour

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

\*\*\*\*\*  
Intersection #6 Via Rivera/Hawthorne Boulevard  
\*\*\*\*\*

| Approach:                                                                 | North Bound               |       |       | South Bound |       |       | East Bound  |       |       | West Bound  |       |       |
|---------------------------------------------------------------------------|---------------------------|-------|-------|-------------|-------|-------|-------------|-------|-------|-------------|-------|-------|
| Movement:                                                                 | L                         | T     | R     | L           | T     | R     | L           | T     | R     | L           | T     | R     |
| HevVeh:                                                                   | 0%                        |       |       | 0%          |       |       | 0%          |       |       | 0%          |       |       |
| Grade:                                                                    | 0%                        |       |       | 0%          |       |       | 0%          |       |       | 0%          |       |       |
| Peds/Hour:                                                                | 0                         |       |       | 0           |       |       | 0           |       |       | 0           |       |       |
| Pedestrian Walk Speed:                                                    | 4.00 feet/sec             |       |       |             |       |       |             |       |       |             |       |       |
| LaneWidth:                                                                | 12 feet                   |       |       | 12 feet     |       |       | 12 feet     |       |       | 12 feet     |       |       |
| Time Period:                                                              | 0.25 hour                 |       |       |             |       |       |             |       |       |             |       |       |
| Upstream Signals:                                                         |                           |       |       |             |       |       |             |       |       |             |       |       |
| Link Index:                                                               |                           |       |       |             |       |       | #19         |       |       | #22         |       |       |
| Dist(miles):                                                              |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| Speed (mph):                                                              |                           |       |       |             |       |       | 0.00        |       |       | 0.00        |       |       |
| SignalIndex:                                                              |                           |       |       |             |       |       | #3          |       |       | #9          |       |       |
| Cycle Time:                                                               |                           |       |       |             |       |       | 0 secs      |       |       | 0 secs      |       |       |
| InitVolume:                                                               |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| Saturation:                                                               |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| ArrivalType:                                                              |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| G/C:                                                                      |                           |       |       |             |       |       | 0.00 0.00   |       |       | 0.00 0.00   |       |       |
| *** Computation 1: Time for Queue to Clear at Each Upstream Intersection  |                           |       |       |             |       |       |             |       |       |             |       |       |
| P:                                                                        |                           |       |       |             |       |       | 0.000 0.000 |       |       | 0.000 0.000 |       |       |
| gq1:                                                                      |                           |       |       |             |       |       | 0.00 0.00   |       |       | 0.00 0.00   |       |       |
| gq2:                                                                      |                           |       |       |             |       |       | 0.00 0.00   |       |       | 0.00 0.00   |       |       |
| gq:                                                                       |                           |       |       |             |       |       | 0.00 0.00   |       |       | 0.00 0.00   |       |       |
| *** Computation 2: Time Intersection Blocked Because of Upstream Platoons |                           |       |       |             |       |       |             |       |       |             |       |       |
| alpha:                                                                    |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| beta:                                                                     |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| ta (secs):                                                                |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| F:                                                                        |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| f:                                                                        |                           |       |       |             |       |       | 0.000 0.000 |       |       | 0.000 0.000 |       |       |
| vcmax:                                                                    |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| vcg:                                                                      |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| vcmin:                                                                    |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| tp:                                                                       |                           |       |       |             |       |       | 0.0 0.0     |       |       | 0.0 0.0     |       |       |
| p:                                                                        |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| *** Computation 3: Platoon Event Periods                                  |                           |       |       |             |       |       |             |       |       |             |       |       |
| pdom/psubo:                                                               | 0.000/0.000/Unconstrained |       |       |             |       |       |             |       |       |             |       |       |
| *** Computation 4: Conflicting Flows During Each Unblocked Period         |                           |       |       |             |       |       |             |       |       |             |       |       |
| InitCnflVol:                                                              | 1376                      | 1910  | 429   | 1285        | 1714  | 338   | 874         | xxxxx | xxxxx | 857         | xxxxx | xxxxx |
| AdjCnflVol:                                                               | 1376                      | 1910  | 429   | 1285        | 1714  | 338   | 874         | xxxxx | xxxxx | 857         | xxxxx | xxxxx |
| UpstreamAdj:                                                              | 1.00                      | 1.000 | 1.000 | 1.00        | 1.000 | 1.000 | 1.00        | x.xxx | x.xxx | 1.00        | x.xxx | x.xxx |
| ConflictVol:                                                              | 1376                      | 1910  | 429   | 1285        | 1714  | 338   | 874         | xxxxx | xxxxx | 857         | xxxxx | xxxxx |
| *** Computation 5: Capacity for Subject Movement During Unblocked Period  |                           |       |       |             |       |       |             |       |       |             |       |       |
| InitPotCap:                                                               | 106                       | 69    | 580   | 159         | 91    | 663   | 781         | xxxxx | xxxxx | 792         | xxxxx | xxxxx |
| UpstreamAdj:                                                              | 1.00                      | 1.000 | 1.000 | 1.00        | 1.000 | 1.000 | 1.00        | x.xxx | x.xxx | 1.00        | x.xxx | x.xxx |
| Potent Cap.:                                                              | 106                       | 69    | 580   | 159         | 91    | 663   | 781         | xxxxx | xxxxx | 792         | xxxxx | xxxxx |

Year 2020 With Project Traffic Conditions  
AM Peak Hour

Peak Hour Delay Signal Warrant Report

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Intersection #6 Via Rivera/Hawthorne Boulevard

\*\*\*\*\*

Future Volume Alternative: Peak Hour Warrant NOT Met

| 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 |     |     |   |
| Lanes:       | 0           | 0 | 0 | 0 | 1           | 0 | 0  | 1 | 1            | 0   | 1 | 1 | 1            | 0   | 2   | 0 |
| Initial Vol: | 0           | 0 | 0 | 0 | 129         | 2 | 54 |   | 49           | 787 | 1 |   | 34           | 623 | 181 |   |
| ApproachDel: | xxxxxx      |   |   |   | 91.7        |   |    |   | xxxxxx       |     |   |   | xxxxxx       |     |     |   |

Approach[southbound] [lanes=2] [control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=4.7]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=186]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3] [total volume=1861]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Year 2020 With Project Traffic Conditions  
AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

\*\*\*\*\*  
Intersection #6 Via Rivera/Hawthorne Boulevard  
\*\*\*\*\*

Future Volume Alternative: Peak Hour Warrant Met

| 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 |     |   |     |   |
| Lanes:                           | 0           | 0 | 0 | 0 | 1 | 1           | 0 | 0 | 1 | 0  | 1            | 0   | 1 | 1 | 0 | 1            | 0   | 2 | 0   | 1 |
| Initial Vol:                     | 0           |   | 0 |   | 0 | 129         |   | 2 |   | 54 | 49           | 787 |   | 1 |   | 34           | 623 |   | 181 |   |
| Major Street Volume:             |             |   |   |   |   | 1675        |   |   |   |    |              |     |   |   |   |              |     |   |     |   |
| Minor Approach Volume:           |             |   |   |   |   | 186         |   |   |   |    |              |     |   |   |   |              |     |   |     |   |
| Minor Approach Volume Threshold: |             |   |   |   |   | 152         |   |   |   |    |              |     |   |   |   |              |     |   |     |   |

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #6 Via Rivera/Hawthorne Boulevard

Average Delay (sec/veh): 4.5 Worst Case Level Of Service: F[ 86.0]

Street Name: Via Rivera Hawthorne Boulevard

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 1 1 0 0 1 0 1 0 1 0 2 0 1

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 0    | 0    | 12   | 58   | 0    | 24   | 35   | 512  | 5    | 20   | 563  | 74   |
| Growth Adj:  | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Initial Bse: | 0    | 0    | 13   | 61   | 0    | 25   | 37   | 543  | 5    | 21   | 597  | 78   |
| Added Vol:   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 216  | 0    | 0    | 215  | 0    |
| PasserByVol: | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Fut: | 0    | 0    | 13   | 61   | 0    | 25   | 37   | 759  | 5    | 21   | 812  | 78   |
| User Adj:    | 1.00 | 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    | 14   | 67   | 0    | 28   | 40   | 825  | 6    | 23   | 882  | 85   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| FinalVolume: | 0    | 0    | 14   | 67   | 0    | 28   | 40   | 825  | 6    | 23   | 882  | 85   |

Critical Gap Module:

|              |       |      |     |     |     |     |     |      |       |     |      |       |
|--------------|-------|------|-----|-----|-----|-----|-----|------|-------|-----|------|-------|
| Critical Gp: | xxxxx | xxxx | 6.9 | 7.5 | 6.5 | 6.9 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |

Capacity Module:

|              |      |      |      |      |      |      |      |      |       |      |      |       |
|--------------|------|------|------|------|------|------|------|------|-------|------|------|-------|
| Cnflct Vol:  | xxxx | xxxx | 415  | 1421 | 1840 | 441  | 968  | xxxx | xxxxx | 830  | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | 592  | 98   | 76   | 569  | 720  | xxxx | xxxxx | 810  | xxxx | xxxxx |
| Move Cap.:   | xxxx | xxxx | 592  | 90   | 70   | 569  | 720  | xxxx | xxxxx | 810  | xxxx | xxxxx |
| Volume/Cap:  | xxxx | xxxx | 0.02 | 0.74 | 0.00 | 0.05 | 0.06 | xxxx | xxxx  | 0.03 | xxxx | xxxx  |

Level Of Service Module:

|              |               |               |               |               |               |               |               |               |               |               |               |               |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 2Way95thQ:   | xxxx          | xxxx          | 0.1           | 3.8           | xxxx          | xxxxx         | 0.2           | xxxx          | xxxxx         | 0.1           | xxxx          | xxxxx         |
| Control Del: | xxxxx         | xxxx          | 11.2          | 116.8         | xxxx          | xxxxx         | 10.3          | xxxx          | xxxxx         | 9.6           | xxxx          | xxxxx         |
| LOS by Move: | *             | *             | B             | F             | *             | *             | B             | *             | *             | A             | *             | *             |
| Movement:    | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT | LT - LTR - RT |
| Shared Cap.: | xxxx          | xxxx          | xxxxx         | xxxx          | xxxx          | 569           | xxxx          | xxxx          | xxxxx         | xxxx          | xxxx          | xxxxx         |
| SharedQueue: | xxxxx         | xxxx          | xxxxx         | xxxxx         | xxxx          | 0.2           | xxxxx         | xxxx          | xxxxx         | xxxxx         | xxxx          | xxxxx         |
| Shrd ConDel: | xxxxx         | xxxx          | xxxxx         | xxxxx         | xxxx          | 11.6          | xxxxx         | xxxx          | xxxxx         | xxxxx         | xxxx          | xxxxx         |
| Shared LOS:  | *             | *             | *             | *             | *             | B             | *             | *             | *             | *             | *             | *             |
| ApproachDel: | 11.2          |               |               | 86.0          |               |               | xxxxxx        |               |               | xxxxxx        |               |               |
| ApproachLOS: | B             |               |               | F             |               |               | *             |               |               | *             |               |               |

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

Year 2020 With Project Traffic Conditions  
PM Peak Hour

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

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Intersection #6 Via Rivera/Hawthorne Boulevard

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| Approach:                                                                 | North Bound               |       |       | South Bound |       |       | East Bound  |       |       | West Bound  |       |       |
|---------------------------------------------------------------------------|---------------------------|-------|-------|-------------|-------|-------|-------------|-------|-------|-------------|-------|-------|
| Movement:                                                                 | L                         | T     | R     | L           | T     | R     | L           | T     | R     | L           | T     | R     |
| HevVeh:                                                                   | 0%                        |       |       | 0%          |       |       | 0%          |       |       | 0%          |       |       |
| Grade:                                                                    | 0%                        |       |       | 0%          |       |       | 0%          |       |       | 0%          |       |       |
| Peds/Hour:                                                                | 0                         |       |       | 0           |       |       | 0           |       |       | 0           |       |       |
| Pedestrian Walk Speed:                                                    | 4.00 feet/sec             |       |       |             |       |       |             |       |       |             |       |       |
| LaneWidth:                                                                | 12 feet                   |       |       | 12 feet     |       |       | 12 feet     |       |       | 12 feet     |       |       |
| Time Period:                                                              | 0.25 hour                 |       |       |             |       |       |             |       |       |             |       |       |
| Upstream Signals:                                                         |                           |       |       |             |       |       |             |       |       |             |       |       |
| Link Index:                                                               |                           |       |       |             |       |       | #19         |       |       | #22         |       |       |
| Dist(miles):                                                              |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| Speed (mph):                                                              |                           |       |       |             |       |       | 0.00        |       |       | 0.00        |       |       |
| SignalIndex:                                                              |                           |       |       |             |       |       | #3          |       |       | #9          |       |       |
| Cycle Time:                                                               |                           |       |       |             |       |       | 0 secs      |       |       | 0 secs      |       |       |
| InitVolume:                                                               |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| Saturation:                                                               |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| ArrivalType:                                                              |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| G/C:                                                                      |                           |       |       |             |       |       | 0.00 0.00   |       |       | 0.00 0.00   |       |       |
| *** Computation 1: Time for Queue to Clear at Each Upstream Intersection  |                           |       |       |             |       |       |             |       |       |             |       |       |
| P:                                                                        |                           |       |       |             |       |       | 0.000 0.000 |       |       | 0.000 0.000 |       |       |
| gq1:                                                                      |                           |       |       |             |       |       | 0.00 0.00   |       |       | 0.00 0.00   |       |       |
| gq2:                                                                      |                           |       |       |             |       |       | 0.00 0.00   |       |       | 0.00 0.00   |       |       |
| gq:                                                                       |                           |       |       |             |       |       | 0.00 0.00   |       |       | 0.00 0.00   |       |       |
| *** Computation 2: Time Intersection Blocked Because of Upstream Platoons |                           |       |       |             |       |       |             |       |       |             |       |       |
| alpha:                                                                    |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| beta:                                                                     |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| ta (secs):                                                                |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| F:                                                                        |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| f:                                                                        |                           |       |       |             |       |       | 0.000 0.000 |       |       | 0.000 0.000 |       |       |
| vcmax:                                                                    |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| vcg:                                                                      |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| vcmin:                                                                    |                           |       |       |             |       |       | 0           |       |       | 0           |       |       |
| tp:                                                                       |                           |       |       |             |       |       | 0.0 0.0     |       |       | 0.0 0.0     |       |       |
| p:                                                                        |                           |       |       |             |       |       | 0.000       |       |       | 0.000       |       |       |
| *** Computation 3: Platoon Event Periods                                  |                           |       |       |             |       |       |             |       |       |             |       |       |
| pdom/psubo:                                                               | 0.000/0.000/Unconstrained |       |       |             |       |       |             |       |       |             |       |       |
| *** Computation 4: Conflicting Flows During Each Unblocked Period         |                           |       |       |             |       |       |             |       |       |             |       |       |
| InitCnflVol:                                                              | 1396                      | 1922  | 415   | 1421        | 1840  | 441   | 968         | xxxxx | xxxxx | 830         | xxxxx | xxxxx |
| AdjCnflVol:                                                               | 1396                      | 1922  | 415   | 1421        | 1840  | 441   | 968         | xxxxx | xxxxx | 830         | xxxxx | xxxxx |
| UpstreamAdj:                                                              | 1.00                      | 1.000 | 1.000 | 1.00        | 1.000 | 1.000 | 1.00        | x.xxx | x.xxx | 1.00        | x.xxx | x.xxx |
| ConflictVol:                                                              | 1396                      | 1922  | 415   | 1421        | 1840  | 441   | 968         | xxxxx | xxxxx | 830         | xxxxx | xxxxx |
| *** Computation 5: Capacity for Subject Movement During Unblocked Period  |                           |       |       |             |       |       |             |       |       |             |       |       |
| InitPotCap:                                                               | 103                       | 68    | 592   | 98          | 76    | 569   | 720         | xxxxx | xxxxx | 810         | xxxxx | xxxxx |
| UpstreamAdj:                                                              | 1.00                      | 1.000 | 1.000 | 1.00        | 1.000 | 1.000 | 1.00        | x.xxx | x.xxx | 1.00        | x.xxx | x.xxx |
| Potent Cap.:                                                              | 103                       | 68    | 592   | 98          | 76    | 569   | 720         | xxxxx | xxxxx | 810         | xxxxx | xxxxx |

Year 2020 With Project Traffic Conditions  
PM Peak Hour

Peak Hour Delay Signal Warrant Report

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Intersection #6 Via Rivera/Hawthorne Boulevard

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Future Volume Alternative: Peak Hour Warrant NOT Met

| Approach:    | North Bound |   |    |   | South Bound |   |    |   | East Bound   |     |   |    | West Bound   |    |   |  |
|--------------|-------------|---|----|---|-------------|---|----|---|--------------|-----|---|----|--------------|----|---|--|
| Movement:    | L           | - | T  | - | R           | L | -  | T | -            | R   | L | -  | T            | -  | R |  |
| Control:     | Stop Sign   |   |    |   | Stop Sign   |   |    |   | Uncontrolled |     |   |    | Uncontrolled |    |   |  |
| Lanes:       | 0           | 0 | 0  | 0 | 1           | 1 | 0  | 0 | 1            | 0   | 1 | 0  | 1            | 1  | 0 |  |
| Initial Vol: | 0           | 0 | 13 |   | 61          | 0 | 25 |   | 37           | 759 | 5 | 21 | 812          | 78 |   |  |
| ApproachDel: | 11.2        |   |    |   | 86.0        |   |    |   | xxxxxx       |     |   |    | xxxxxx       |    |   |  |

Approach[northbound] [lanes=1] [control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=13]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4] [total volume=1812]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound] [lanes=2] [control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=2.1]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=87]

FAIL - Approach volume less than 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=4] [total volume=1812]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

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Year 2020 With Project Traffic Conditions  
PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #6 Via Rivera/Hawthorne Boulevard

\*\*\*\*\*

Future Volume Alternative: Peak Hour Warrant NOT Met

| 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 |    |   |   |   |
| Lanes:                                                          | 0           | 0 | 0 | 1  | 1           | 0 | 0 | 1  | 0            | 1   | 0 | 1  | 1            | 0  | 1 | 0 | 1 |
| Initial Vol:                                                    | 0           | 0 | 0 | 13 | 61          | 0 | 0 | 25 | 37           | 759 | 5 | 21 | 812          | 78 |   |   |   |
| Major Street Volume:                                            |             |   |   |    | 1713        |   |   |    |              |     |   |    |              |    |   |   |   |
| Minor Approach Volume:                                          |             |   |   |    | 87          |   |   |    |              |     |   |    |              |    |   |   |   |
| Minor Approach Volume Threshold: 143 [less than minimum of 150] |             |   |   |    |             |   |   |    |              |     |   |    |              |    |   |   |   |

SIGNAL WARRANT DISCLAIMER

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Year 2020 With Project Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #6 Via Rivera/Hawthorne Boulevard  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.517  
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 34 Level Of Service: A  
\*\*\*\*\*

| Street Name: | Via Rivera  |     |     |             |     |     | Hawthorne Boulevard |     |     |            |     |     |
|--------------|-------------|-----|-----|-------------|-----|-----|---------------------|-----|-----|------------|-----|-----|
| 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   |
| Y+R:         | 4.0         | 4.0 | 4.0 | 4.0         | 4.0 | 4.0 | 4.0                 | 4.0 | 4.0 | 4.0        | 4.0 | 4.0 |
| Lanes:       | 0           | 0   | 0   | 0           | 0   | 0   | 1                   | 0   | 1   | 1          | 0   | 1   |

| Volume Module: | Via Rivera |      |      | Via Rivera |      |      | Hawthorne Boulevard |      |      | Hawthorne Boulevard |      |      |
|----------------|------------|------|------|------------|------|------|---------------------|------|------|---------------------|------|------|
| Base Vol:      | 0          | 0    | 0    | 122        | 2    | 51   | 46                  | 641  | 1    | 32                  | 429  | 171  |
| Growth Adj:    | 1.06       | 1.06 | 1.06 | 1.06       | 1.06 | 1.06 | 1.06                | 1.06 | 1.06 | 1.06                | 1.06 | 1.06 |
| Initial Bse:   | 0          | 0    | 0    | 129        | 2    | 54   | 49                  | 679  | 1    | 34                  | 455  | 181  |
| Added Vol:     | 0          | 0    | 0    | 0          | 0    | 0    | 0                   | 108  | 0    | 0                   | 168  | 0    |
| PasserByVol:   | 0          | 0    | 0    | 0          | 0    | 0    | 0                   | 0    | 0    | 0                   | 0    | 0    |
| Initial Fut:   | 0          | 0    | 0    | 129        | 2    | 54   | 49                  | 787  | 1    | 34                  | 623  | 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          | 0    | 0    | 141        | 2    | 59   | 53                  | 856  | 1    | 37                  | 677  | 197  |
| Reduct Vol:    | 0          | 0    | 0    | 0          | 0    | 0    | 0                   | 0    | 0    | 0                   | 0    | 0    |
| Reduced Vol:   | 0          | 0    | 0    | 141        | 2    | 59   | 53                  | 856  | 1    | 37                  | 677  | 197  |
| 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 |
| Final Volume:  | 0          | 0    | 0    | 141        | 2    | 59   | 53                  | 856  | 1    | 37                  | 677  | 197  |

| Saturation Flow Module: | Via Rivera |      |      | Via Rivera |      |      | Hawthorne Boulevard |      |      | Hawthorne Boulevard |      |      |
|-------------------------|------------|------|------|------------|------|------|---------------------|------|------|---------------------|------|------|
| 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       | 0.00 | 1.00 | 0.70       | 0.01 | 0.29 | 1.00                | 2.00 | 0.00 | 1.00                | 2.00 | 1.00 |
| Final Sat.:             | 0          | 0    | 1600 | 1115       | 18   | 466  | 1600                | 3196 | 4    | 1600                | 3200 | 1600 |

| Capacity Analysis Module: | Via Rivera |      |      | Via Rivera |      |      | Hawthorne Boulevard |      |      | Hawthorne Boulevard |      |      |
|---------------------------|------------|------|------|------------|------|------|---------------------|------|------|---------------------|------|------|
| Vol/Sat:                  | 0.00       | 0.00 | 0.00 | 0.09       | 0.13 | 0.13 | 0.03                | 0.27 | 0.27 | 0.02                | 0.21 | 0.12 |
| Crit Moves:               |            |      |      | ****       |      |      | ****                |      |      | ****                |      |      |

Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #6 Via Rivera/Hawthorne Boulevard  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.460  
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 31 Level Of Service: A  
\*\*\*\*\*

| Street Name: | Via Rivera  |     |     |             |     |     | Hawthorne Boulevard |     |     |            |     |     |
|--------------|-------------|-----|-----|-------------|-----|-----|---------------------|-----|-----|------------|-----|-----|
| 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   |
| Y+R:         | 4.0         | 4.0 | 4.0 | 4.0         | 4.0 | 4.0 | 4.0                 | 4.0 | 4.0 | 4.0        | 4.0 | 4.0 |
| Lanes:       | 0           | 0   | 0   | 0           | 0   | 1   | 0                   | 0   | 1   | 1          | 0   | 1   |

| Volume Module: | Via Rivera |      |      | Via Rivera |      |      | Hawthorne Boulevard |      |      | Hawthorne Boulevard |      |      |
|----------------|------------|------|------|------------|------|------|---------------------|------|------|---------------------|------|------|
| Base Vol:      | 0          | 0    | 12   | 58         | 0    | 24   | 35                  | 512  | 5    | 20                  | 563  | 74   |
| Growth Adj:    | 1.06       | 1.06 | 1.06 | 1.06       | 1.06 | 1.06 | 1.06                | 1.06 | 1.06 | 1.06                | 1.06 | 1.06 |
| Initial Bse:   | 0          | 0    | 13   | 61         | 0    | 25   | 37                  | 543  | 5    | 21                  | 597  | 78   |
| Added Vol:     | 0          | 0    | 0    | 0          | 0    | 0    | 0                   | 216  | 0    | 0                   | 215  | 0    |
| PasserByVol:   | 0          | 0    | 0    | 0          | 0    | 0    | 0                   | 0    | 0    | 0                   | 0    | 0    |
| Initial Fut:   | 0          | 0    | 13   | 61         | 0    | 25   | 37                  | 759  | 5    | 21                  | 812  | 78   |
| User Adj:      | 1.00       | 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    | 14   | 67         | 0    | 28   | 40                  | 825  | 6    | 23                  | 882  | 85   |
| Reduct Vol:    | 0          | 0    | 0    | 0          | 0    | 0    | 0                   | 0    | 0    | 0                   | 0    | 0    |
| Reduced Vol:   | 0          | 0    | 14   | 67         | 0    | 28   | 40                  | 825  | 6    | 23                  | 882  | 85   |
| 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 |
| Final Volume:  | 0          | 0    | 14   | 67         | 0    | 28   | 40                  | 825  | 6    | 23                  | 882  | 85   |

| Saturation Flow Module: | Via Rivera |      |      | Via Rivera |      |      | Hawthorne Boulevard |      |      | Hawthorne Boulevard |      |      |
|-------------------------|------------|------|------|------------|------|------|---------------------|------|------|---------------------|------|------|
| 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       | 0.00 | 1.00 | 0.71       | 0.00 | 0.29 | 1.00                | 1.99 | 0.01 | 1.00                | 2.00 | 1.00 |
| Final Sat.:             | 0          | 0    | 1600 | 1132       | 0    | 468  | 1600                | 3178 | 22   | 1600                | 3200 | 1600 |

| Capacity Analysis Module: | Via Rivera |      |      | Via Rivera |      |      | Hawthorne Boulevard |      |      | Hawthorne Boulevard |      |      |
|---------------------------|------------|------|------|------------|------|------|---------------------|------|------|---------------------|------|------|
| Vol/Sat:                  | 0.00       | 0.00 | 0.01 | 0.04       | 0.00 | 0.06 | 0.03                | 0.26 | 0.26 | 0.01                | 0.28 | 0.05 |
| Crit Moves:               | ****       |      |      |            | **** | **** |                     |      |      | ****                |      |      |



MAP SOURCE: GOOGLE EARTH



NOT TO SCALE

## APPENDIX FIGURE B-2 CONCEPTUAL MITIGATION MEASURE

SEAHILL DRIVE-TRAMONTO DRIVE/PALOS VERDES DRIVE SOUTH  
ZONE 2 LANDSLIDE MORATORIUM - PORTUGUESE BEND PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

## TWO-WAY STOP CONTROL SUMMARY

| General Information  |               |  | Site Information |                              |
|----------------------|---------------|--|------------------|------------------------------|
| Analyst              | FSB           |  | Intersection     | Int #2:PVDS/Tramonto-Seahill |
| Agency/Co.           | LLG Engineers |  | Jurisdiction     | City of Rancho Palos Verdes  |
| Date Performed       | 3/23/2011     |  | Analysis Year    | Future With Project          |
| Analysis Time Period | AM Peak Hour  |  |                  |                              |

Project Description Zone 2 - Portuguese Bend Project/1-10-3845-1

East/West Street: Palos Verdes Drive South

North/South Street: Tramonto Drive-Seahill Drive

Intersection Orientation: East-West

Study Period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street                  | Eastbound   |      |      | Westbound |      |      |
|-------------------------------|-------------|------|------|-----------|------|------|
| Movement                      | 1           | 2    | 3    | 4         | 5    | 6    |
|                               | L           | T    | R    | L         | T    | R    |
| Volume (veh/h)                | 3           | 440  | 18   | 24        | 970  | 2    |
| Peak-Hour Factor, PHF         | 0.92        | 0.92 | 0.92 | 0.92      | 0.92 | 0.92 |
| Hourly Flow Rate, HFR (veh/h) | 3           | 478  | 19   | 26        | 1054 | 2    |
| Percent Heavy Vehicles        | 0           | --   | --   | 0         | --   | --   |
| Median Type                   | Raised curb |      |      |           |      |      |
| RT Channelized                |             |      | 0    |           |      | 0    |
| Lanes                         | 1           | 2    | 0    | 1         | 2    | 1    |
| Configuration                 | L           | T    | TR   | L         | T    | R    |
| Upstream Signal               |             | 0    |      |           | 0    |      |

| Minor Street                  | Northbound |      |      | Southbound |      |      |
|-------------------------------|------------|------|------|------------|------|------|
| Movement                      | 7          | 8    | 9    | 10         | 11   | 12   |
|                               | L          | T    | R    | L          | T    | R    |
| Volume (veh/h)                | 101        | 1    | 30   | 10         | 0    | 0    |
| Peak-Hour Factor, PHF         | 0.92       | 0.92 | 0.92 | 0.92       | 0.92 | 0.92 |
| Hourly Flow Rate, HFR (veh/h) | 109        | 1    | 32   | 10         | 0    | 0    |
| Percent Heavy Vehicles        | 0          | 0    | 0    | 0          | 0    | 0    |
| Percent Grade (%)             | 0          |      |      | 0          |      |      |
| Flared Approach               |            | N    |      |            | N    |      |
| Storage                       |            | 0    |      |            | 0    |      |
| RT Channelized                |            |      | 0    |            |      | 0    |
| Lanes                         | 0          | 1    | 1    | 0          | 1    | 0    |
| Configuration                 | LT         |      | R    |            | LTR  |      |

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

| Approach               | Eastbound | Westbound | Northbound |   |      | Southbound |      |    |
|------------------------|-----------|-----------|------------|---|------|------------|------|----|
| Movement               | 1         | 4         | 7          | 8 | 9    | 10         | 11   | 12 |
| Lane Configuration     | L         | L         | LT         |   | R    |            | LTR  |    |
| v (veh/h)              | 3         | 26        | 110        |   | 32   |            | 10   |    |
| C (m) (veh/h)          | 667       | 1077      | 302        |   | 796  |            | 184  |    |
| v/c                    | 0.00      | 0.02      | 0.36       |   | 0.04 |            | 0.05 |    |
| 95% queue length       | 0.01      | 0.07      | 1.61       |   | 0.13 |            | 0.17 |    |
| Control Delay (s/veh)  | 10.4      | 8.4       | 23.6       |   | 9.7  |            | 25.7 |    |
| LOS                    | B         | A         | C          |   | A    |            | D    |    |
| Approach Delay (s/veh) | --        | --        | 20.5       |   |      | 25.7       |      |    |
| Approach LOS           | --        | --        | C          |   |      | D          |      |    |

## TWO-WAY STOP CONTROL SUMMARY

| General Information                                                     |                    |           |            | Site Information                                        |                              |            |      |    |
|-------------------------------------------------------------------------|--------------------|-----------|------------|---------------------------------------------------------|------------------------------|------------|------|----|
| Analyst                                                                 | FSB                |           |            | Intersection                                            | Int #2:PVDS/Tramonto-Seahill |            |      |    |
| Agency/Co.                                                              | LLG Engineers      |           |            | Jurisdiction                                            | City of Rancho Palos Verdes  |            |      |    |
| Date Performed                                                          | 3/23/2011          |           |            | Analysis Year                                           | Future With Project          |            |      |    |
| Analysis Time Period                                                    | PM Peak Hour       |           |            |                                                         |                              |            |      |    |
| Project Description <i>Zone 2 - Portuguese Bend Project/1-10-3845-1</i> |                    |           |            |                                                         |                              |            |      |    |
| East/West Street: <i>Palos Verdes Drive South</i>                       |                    |           |            | North/South Street: <i>Tramonto Drive-Seahill Drive</i> |                              |            |      |    |
| Intersection Orientation: <i>East-West</i>                              |                    |           |            | Study Period (hrs): <i>0.25</i>                         |                              |            |      |    |
| Vehicle Volumes and Adjustments                                         |                    |           |            |                                                         |                              |            |      |    |
| Major Street                                                            | Eastbound          |           |            | Westbound                                               |                              |            |      |    |
| Movement                                                                | 1                  | 2         | 3          | 4                                                       | 5                            | 6          |      |    |
|                                                                         | L                  | T         | R          | L                                                       | T                            | R          |      |    |
| Volume (veh/h)                                                          | 32                 | 753       | 66         | 42                                                      | 617                          | 5          |      |    |
| Peak-Hour Factor, PHF                                                   | 0.92               | 0.92      | 0.92       | 0.92                                                    | 0.92                         | 0.92       |      |    |
| Hourly Flow Rate, HFR (veh/h)                                           | 34                 | 818       | 71         | 45                                                      | 670                          | 5          |      |    |
| Percent Heavy Vehicles                                                  | 0                  | --        | --         | 0                                                       | --                           | --         |      |    |
| Median Type                                                             | <i>Raised curb</i> |           |            |                                                         |                              |            |      |    |
| RT Channelized                                                          |                    |           | 0          |                                                         |                              | 0          |      |    |
| Lanes                                                                   | 1                  | 2         | 0          | 1                                                       | 2                            | 1          |      |    |
| Configuration                                                           | L                  | T         | TR         | L                                                       | T                            | R          |      |    |
| Upstream Signal                                                         |                    | 0         |            |                                                         | 0                            |            |      |    |
| Minor Street                                                            | Northbound         |           |            | Southbound                                              |                              |            |      |    |
| Movement                                                                | 7                  | 8         | 9          | 10                                                      | 11                           | 12         |      |    |
|                                                                         | L                  | T         | R          | L                                                       | T                            | R          |      |    |
| Volume (veh/h)                                                          | 52                 | 0         | 29         | 2                                                       | 0                            | 0          |      |    |
| Peak-Hour Factor, PHF                                                   | 0.92               | 0.92      | 0.92       | 0.92                                                    | 0.92                         | 0.92       |      |    |
| Hourly Flow Rate, HFR (veh/h)                                           | 56                 | 0         | 31         | 2                                                       | 0                            | 0          |      |    |
| Percent Heavy Vehicles                                                  | 0                  | 0         | 0          | 0                                                       | 0                            | 0          |      |    |
| Percent Grade (%)                                                       | 0                  |           |            | 0                                                       |                              |            |      |    |
| Flared Approach                                                         |                    | N         |            |                                                         | N                            |            |      |    |
| Storage                                                                 |                    | 0         |            |                                                         | 0                            |            |      |    |
| RT Channelized                                                          |                    |           | 0          |                                                         |                              | 0          |      |    |
| Lanes                                                                   | 0                  | 1         | 1          | 0                                                       | 1                            | 0          |      |    |
| Configuration                                                           | LT                 |           | R          |                                                         | LTR                          |            |      |    |
| Delay, Queue Length, and Level of Service                               |                    |           |            |                                                         |                              |            |      |    |
| Approach                                                                | Eastbound          | Westbound | Northbound |                                                         |                              | Southbound |      |    |
| Movement                                                                | 1                  | 4         | 7          | 8                                                       | 9                            | 10         | 11   | 12 |
| Lane Configuration                                                      | L                  | L         | LT         |                                                         | R                            |            | LTR  |    |
| v (veh/h)                                                               | 34                 | 45        | 56         |                                                         | 31                           |            | 2    |    |
| C (m) (veh/h)                                                           | 926                | 771       | 209        |                                                         | 618                          |            | 232  |    |
| v/c                                                                     | 0.04               | 0.06      | 0.27       |                                                         | 0.05                         |            | 0.01 |    |
| 95% queue length                                                        | 0.11               | 0.19      | 1.04       |                                                         | 0.16                         |            | 0.03 |    |
| Control Delay (s/veh)                                                   | 9.0                | 10.0      | 28.4       |                                                         | 11.1                         |            | 20.7 |    |
| LOS                                                                     | A                  | A         | D          |                                                         | B                            |            | C    |    |
| Approach Delay (s/veh)                                                  | --                 | --        | 22.3       |                                                         |                              | 20.7       |      |    |
| Approach LOS                                                            | --                 | --        | C          |                                                         |                              | C          |      |    |

Year 2020 With Project Traffic Conditions  
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #15 Forrestal Drive/Palos Verdes Drive South

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.739

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 55 Level Of Service: C

\*\*\*\*\*

Street Name: Forrestal Drive Palos Verdes Drive South

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

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 0 1 0 1 0 0 1 0 1 1 0 1 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 3 1 1 41 0 25 15 438 2 12 676 20

Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06

Initial Bse: 3 1 1 43 0 27 16 464 2 13 717 21

Added Vol: 7 0 26 0 0 0 0 92 2 9 137 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 10 1 27 43 0 27 16 556 4 22 854 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: 11 1 29 47 0 29 17 605 4 24 928 23

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 11 1 29 47 0 29 17 605 4 24 928 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: 11 1 29 47 0 29 17 605 4 24 928 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 0.04 0.96 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Sat.: 1600 60 1540 1600 0 1600 1600 1600 1600 1600 1600 1600

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.01 0.02 0.02 0.03 0.00 0.02 0.01 0.38 0.00 0.01 0.58 0.01

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

\*\*\*\*\*

Year 2020 With Project Traffic Conditions  
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #15 Forrestal Drive/Palos Verdes Drive South

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.708

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 51 Level Of Service: C

\*\*\*\*\*

Street Name: Forrestal Drive Palos Verdes Drive South

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

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 0 1 0 1 0 0 1 0 1 1 0 1 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 17 0 29 34 1 24 23 557 13 27 425 46

Growth Adj: 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06

Initial Bse: 18 0 31 36 1 25 24 590 14 29 451 49

Added Vol: 4 0 17 0 0 0 0 162 8 30 161 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 22 0 48 36 1 25 24 752 22 59 612 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: 24 0 52 39 1 28 27 818 24 64 665 53

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 24 0 52 39 1 28 27 818 24 64 665 53

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 0 52 39 1 28 27 818 24 64 665 53

-----|-----|-----|-----|

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 0.00 1.00 1.00 0.04 0.96 1.00 1.00 1.00 1.00 1.00 1.00

Final Sat.: 1600 0 1600 1600 64 1536 1600 1600 1600 1600 1600 1600

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.01 0.00 0.03 0.02 0.02 0.02 0.02 0.51 0.01 0.04 0.42 0.03

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

\*\*\*\*\*

## 1.0 CONSTRUCTION IMPACT ANALYSIS

Project construction would generate traffic from construction worker travel, the arrival and departure of trucks delivering construction materials to the site, and the removal of debris generated by on-site demolition activities. Both the number of construction workers and trucks would vary throughout the construction process. It is important to note that the following construction summary and corresponding analyses assume that *all* 47 homes within the project site would be under construction simultaneously, which is a highly unlikely scenario and extremely conservative. This conservative assumption has been employed for illustrative purposes only so as to identify the maximum potential impact of construction activities in the vicinity.

### 1.1 Overview of Construction Phases

The construction of the project is anticipated to consist of several main construction work efforts: Demolition/Site Preparation/Grading/Building Construction/Paving/Architectural Coating. The total construction period is anticipated to last approximately 48 months within the above six general periods or phases of construction. The following provides a general overview of the various phases of construction, based on information provided by the environmental consultant: Phase 1 (two months) consists of demolition; Phase 2 (roughly one and one-half months) consists of site preparation, Phase 3 (almost four months) consists of grading, Phase 4 (36 months) consists of building construction activities, Phase 5 (two and one-half months) consists of paving, and Phase 6 (two and one-half months) consists of architectural coating.

#### 1.1.1 *Demolition/Site Preparation/Grading*

Construction would initially begin with the demolition and removal of any existing on-site secondary structure/s and landscaping. It is anticipated that equipment needs would include heavy machinery such as a concrete/industrial saw, rubber tired dozers and excavators, and other miscellaneous machinery. During the peak period of this phase, a work force of seven construction workers per lot or a total of 329 construction workers for the entire project would be necessary and workers would occur in two general shifts. This phase is anticipated to take two months to complete and assumes all 47 homes are under construction simultaneously (a highly unlikely scenario).

The site preparation phase includes heavy construction equipment which would be located on-site during site preparation activities and would not travel to and from the project site on a daily basis. It is anticipated that equipment needs associated with site preparation activities would include rubber tired dozers, tractors/loaders/backhoes, and other miscellaneous machinery. During the peak period of this phase, a work force of a nine construction workers per lot or a total of 423 construction workers for the entire project would be necessary. This work is estimated to take roughly one and one-half months to complete, after completion of the building demolition and assumes all 47 homes are under construction simultaneously (a highly unlikely scenario).

The grading phase includes heavy construction equipment which would be located on-site during site grading activities and would not travel to and from the project site on a daily basis. It is anticipated that equipment needs associated with grading activities would include an excavator, a grader, rubber tired dozer, scraper, a tractor/loader/backhoe and other miscellaneous machinery. In addition, ten wheel dump trucks (i.e., the smaller 10 cubic yard capacity dump trucks) would be utilized in this area for any import of fill material. It is assumed that no more than 50 cubic yards of fill per lot would need to be imported. During the peak period of this phase, a work force of six construction workers per lot or a total of 282 construction workers for the entire project would be necessary. This work is estimated to take roughly four months to complete, after completion of the site preparation phase and assumes all 47 homes are under construction simultaneously (a highly unlikely scenario).

#### *1.1.2 Building Construction*

Building construction of the project consists of all aspects of building construction with the exception of paving and architectural coatings. It is anticipated that equipment needs associated with these building construction activities would include a crane, fork-lifts, generator sets, concrete pump, cement and mortar mixers and air compressors, skill saws and power drills, tractor/loader/backhoes, welders, as well as miscellaneous machinery. During the peak period of this building construction phase, a work force of eight construction workers per lot or a total of 376 construction workers for the entire project would be necessary. Based on a similar residential project, it is estimated that two trucks per day per home is anticipated to be generated to/from the project site during building construction activities. Thus, a total of 94 material delivery trucks per day are anticipated during this phase of construction. Building construction is anticipated to take approximately 34 months to complete and assumes all 47 homes are under construction simultaneously (a highly unlikely scenario).

#### *1.1.3 Paving/Architectural Coating*

The paving phase includes heavy construction equipment which would be located on-site during site preparation activities and would not travel to and from the project site on a daily basis. It is anticipated that equipment needs associated with paving activities would include pavers, paving equipment, and rollers. During the peak period of this phase, a work force of seven construction workers per lot or a total of 329 construction workers for the entire project would be necessary. This work is estimated to take roughly two and one-half months to complete, after completion of the building construction and assumes all 47 homes are under construction simultaneously (a highly unlikely scenario).

The architectural coating phase includes some heavy construction equipment which would be located on-site during site grading activities and would not travel to and from the project site on a daily basis. It is anticipated that equipment needs associated with architectural coating activities would include air compressors and miscellaneous machinery. During the peak period of this phase, a work force of two construction workers per lot or a total of 94 construction workers for the entire project would be necessary. This work is estimated to take roughly two

and one-half months to complete, after completion of the paving phase and assumes all 47 homes are under construction simultaneously (a highly unlikely scenario).

## 1.2 Construction Assumptions

It is assumed that the homesites would be cleared and that after completion of the first three phases of short-term construction activities (i.e., demolition, site preparation and grading) building construction would commence. The equipment staging area during the construction period would occur on-site. Building construction activities are anticipated to occur between the hours of 7:00 AM and 7:00 PM, with two shifts of construction workers.

## 1.3 Construction Traffic Trip Generation

Activities related to the building construction (Phase 4) have been determined to generate the greatest number of vehicle trips compared to the other phases of construction. Thus, the greatest potential for impact on the adjacent street system would occur during the building construction phase when the peak construction workforce is present and truck trip generation is also at its highest level. As stated previously, it is important to note that the following construction summary and corresponding analyses assume that *all* 47 homes within the project site would be under construction simultaneously, which is a highly unlikely scenario and extremely conservative. This conservative assumption has been employed for illustrative purposes only so as to identify the maximum potential impact of construction activities in the vicinity.

### 1.3.1 *Peak Construction Worker Demand*

During the peak period of construction activities, a work force of 376 construction workers would be required assuming eight workers per lot and the highly unlikely scenario of *all* 47 homes under construction at the same time. Based on information provided by the environmental consultant, the construction workers would work in two shifts, with the first shift beginning at 7:00 AM and ending at 3:00 PM, and the second shift beginning at 11:00 AM and ending at 7:00 PM. Therefore, these particular construction workers would arrive and depart the project site during off-peak hours (the peak hour of traffic at the study intersections in the vicinity of the site primarily occurs between approximately 7:45 AM and 8:45 AM during the morning commuter period and between approximately 5:00 and 6:00 PM during the afternoon commuter period). It is anticipated that construction workers would remain on-site throughout their shift.

The number of construction worker vehicles is estimated using an average vehicle ridership (AVR) of 1.135 persons per vehicle (as provided in the South Coast Air Quality Management District in its CEQA Air Quality Handbook). Therefore, it is estimated that up to 332 vehicles (332 inbound trips and 332 outbound trips) on a daily basis would be generated by the construction workers during the peak construction phase (i.e., building construction) of the project area. For the first shift, the inbound construction worker trips (i.e., 166 inbound trips) would occur outside/before the AM commuter peak hour and the outbound worker trips (i.e., 166 outbound trips) would occur outside/before the PM commuter peak hour. For the second shift, the inbound construction worker trips (i.e., 166 inbound trips) would occur outside/before the

PM commuter peak hour and the outbound worker trips (i.e., 166 outbound trips) would occur outside/after the PM commuter peak. Thus, these construction work trips would occur outside of the morning and afternoon peak commuter hours of the local street system.

### *1.3.2 Peak Construction Truck Demand*

In addition to construction worker vehicles, additional trips may be generated by miscellaneous trucks traveling to and from the project area. These trucks may consist of larger vehicles delivering equipment and/or construction materials to the project area, or smaller pick-up trucks or four-wheel drive vehicles used by construction supervisors and/or City inspectors. Heavy construction equipment would be located on-site during the building construction activities and would not travel to and from the project site on a daily basis.

Based on a similar residential project, it is estimated that two trucks per day per home is anticipated to be generated to/from the project site during peak building construction activities. Thus, based on 47 proposed dwelling units, a maximum of 94 material delivery trucks per day are anticipated to be generated to/from the project site during construction activities. Therefore, peak truck trip generation would total up to 188 truck round-trips per day (94 inbound trucks and 94 outbound trucks) are anticipated. Assuming a material delivery period of 12 hours per day (beginning at 7:00 AM, with the last delivery at 7:00 PM), this corresponds to a total of eight trucks per hour. Since construction truck trips would occur along major roadways with the number of trips during the AM and PM peak hours being relatively limited, construction impacts from this particular type of construction activity source would be less than significant based on the forecast traffic operations as reported in the traffic study.

It is anticipated that delivery trucks/construction equipment would be brought onto the project site and be stored within the perimeter fence of each construction site, thus, no staging is expected to occur on the perimeter public streets. Therefore, detours around the construction sites would not be required. Flagmen, however, would be used to control traffic movement during the ingress or egress of trucks and heavy equipment from each construction site. As noted below in Section 1.5, a Construction Traffic Control Plan may be required by the City to be developed to minimize potential conflicts between construction activity and through traffic.

Construction worker parking is anticipated to occur primarily within each lot. As noted in the emergency access and evacuation section, current roadway widths (as measured in the field from edge of pavement to edge of pavement) within the Portuguese Bend area typically vary between 20 and 24 feet in width. Several of the internal private roadways also have areas off road that might provide sufficient width for several construction worker vehicles, although not recommended. Refer to the emergency access and evacuation section for further discussion of the traffic analysis during times of an emergency and subsequent evacuation.

### *1.3.3 Peak Construction Traffic Generation Summary*

During peak building construction activities (assuming conservatively that *all* 47 lots are under construction concurrently which is highly unlikely), construction worker vehicles and trucks are

forecast to generate 852 vehicle trips per day (426 inbound trips and 426 outbound trips). The inbound and outbound construction worker trips are anticipated to occur outside of the AM and PM commuter peak hours. As mentioned in the Section 1.3.2, a total of eight material delivery trucks per hour are anticipated to be generated to/from the project site during peak construction activities. With two gateways on Palos Verdes Drive South (i.e., at Narcissa Drive and Peppertree Drive), this would result in no more than four vehicles at each of the gateway study intersections during either the AM or PM peak hour. As noted in the traffic study, these intersections are projected to operate at Level of Service D with the proposed project and this increase is not anticipated to result in any significant impacts based on the City's significance criteria. This level of trip generation also does not exceed 50 or more vehicle trips during either the AM or PM peak hours, which is the threshold contained in the Congestion Management Program for analysis of a location is required. Therefore, the traffic impacts associated with construction activities are determined to be less than significant.

#### 1.4 Haul Routes

Approvals by the City of Rancho Palos Verdes may be required for the implementation of a Truck Haul Route program for the project and would be subject to review by the City of Rancho Palos Verdes Department of Public Works. Based on current plans, haul trucks and delivery trucks would access the site via Palos Verdes Drive South, Peppertree Drive and Narcissa Drive. Haul routes to and from the project area would therefore require approval from the City of Rancho Palos Verdes Department of Public Works.

#### 1.5 Construction Effects on Existing Roads

Several comments received during the Notice of Preparation (NOP) process expressed concern about the potential effects of project-related construction vehicles on the existing pavement integrity for roads within the Portuguese Bend Community. Based on review of the Portuguese Bend Community Association publications, it is noted that all roads behind the Portuguese Bend gates on Narcissa Drive and Peppertree Drive (i.e., located north of Palos Verdes Drive South) are private, including land (whether vacant or developed). As such, the design and maintenance of private streets is not the responsibility of the City of Rancho Palos Verdes, and therefore these streets may or may not meet accepted design standards, and in some cases are not in keeping with customary maintenance standards.

Further research was conducted of the Covenants, Conditions and Restrictions (CC&Rs) for the Portuguese Bend Community Association as it relates to the purposes, memberships and maintenance charges. The Association has the right and power to purchase, construct, improve, repair, maintain, among others, and hold easements for or the fee to improve, light and maintain streets, roads, alleys, trails, bridle paths, walks, gateways, among others. The owners of lots within the Portuguese Bend Community Association must therefore pay and fund the appropriate general charges, assessments and liens in this regard. Damage caused to any private roadways within the community as a result of construction activities within the community is therefore the responsibility of the Association to repair.

## 1.6 Construction Traffic Impacts

With the required haul route approval, the off-peak arrival and departure of construction workers and the other construction management practices described above, impacts from construction activity are concluded to be less than significant. Impacts would be further reduced with the implementation of the following design features:

- Maintain existing access for land uses in proximity of the project site;
- Limit any potential lane closures to off-peak travel periods;
- Schedule receipt of construction materials during non-peak travel periods, to the extent possible;
- Coordinate deliveries to reduce the potential of trucks waiting to unload for extended periods of time; and
- Prohibit parking by construction workers on adjacent streets and direct construction workers to available parking as determined in conjunction with City staff.

In order to minimize potential conflicts between construction activity and through traffic, a Construction Traffic Control Plan may be required by the City to be developed for use during project construction. The Construction Traffic Control Plan would identify all traffic control measures, signs, and delineators to be implemented by the construction contractor through the duration of demolition and construction activity. In addition, the City of Rancho Palos Verdes would review and be responsible for approval of any proposed Truck Haul Route program. Because of these requirements, and, moreover, construction-related trips would be nominal and well dispersed during the AM and PM peak hours, construction-related transportation impacts due to the construction of the project area is expected to be less than significant.

## 1.0 EMERGENCY ACCESS AND EVACUATION EVALUATION

Summaries of the emergency access and evacuation have been prepared for the proposed project in response to comments received during the Notice of Preparation process. In addition, an evaluation has been prepared to determine the estimated amount of time (i.e., clearing time) needed for area residents of the Portuguese Bend community to evacuate the area in the event of a major incident (e.g., wildland fire). This analysis has been performed assuming existing and full development of the proposed project (i.e., all additional 47 single family homes).

### 1.1 Summary of Emergency Access and Evacuation

The City utilizes Los Angeles County for both fire and public safety services and emergency “first responder” responsibilities are implemented by the County without the requirement or need of City staff involvement. In the case of the August 27, 2009 brush fire in the Portuguese Bend area of the City, while the County was the primary responding agency, the City did play an important and supporting role during the incident to disseminate information to the residents, City Council and City staff. A summary report following the incident was prepared and presented to the City Council (report dated October 20, 2009). That report provided an overview of lessons learned as well as details regarding the Los Angeles County Emergency Mass Notification System, emergency communications procedures, the management and coordination of recovery operations, among others.

Research has been conducted with respect to existing emergency evacuation procedures. Residents are directed to several preparedness documents and procedures, such as those contained in the *Ready! Set! Go! Your Personal Wildfire Action Plan*, published by the County of Los Angeles Fire Department. Several fire protection plans for various communities have also been researched as part of this section. In addition, an evacuation study entitled *Modeling Small Area Evacuation: Can Existing Transportation Infrastructure Impede Public Safety?*, April 2002 prepared by Vehicle Intelligence and Transportation Analysis Laboratory, University of California, Santa Barbara and a paper entitled *Public Safety in the Urban-Wildland Interface: Should Fire-Prone Communities Have a Maximum Occupancy?*, contained in the National Hazards Review, August 2005, were reviewed in detail as part of this analysis.

#### 1.1.1 Emergency Access Summary

The Portuguese Bend area of Rancho Palos Verdes is a private community that is served by two primary access points; one access point via Narcissa Drive (on the west end) and one access point via Peppertree Drive (on the east end). Both of these access points are gated north of Palos Verdes Drive South and are used by residents to access other local roads and their respective homes. A total of approximately 165 homes are planned within the Portuguese Bend community/association, including 111 homes in the project area (i.e., which includes the 47 additional single family homes analyzed as part of the proposed project as well as 64 developed lots within the project area).

Field observations have been conducted in order to verify existing signage, traffic control and pavement widths associated with the private roadways within the Portuguese Bend area. Narcissa Drive has a pavement width of roughly 23 feet north of the existing gate (north of Palos Verdes Drive South) and the pavement width generally varies between 22 feet and 24 feet in width along its length. Peppertree Drive has a pavement width of roughly 22 feet north of the existing gate (north of Palos Verdes Drive South) and the pavement width generally varies between 22 feet and 24 feet in width along its length. Based on field observations conducted along the private roadways it is recommended that these access roads be posted with “No Parking – Fire Lane” signs. The roadways are of sufficient width to allow large vehicles (i.e., fire engine type trucks) to access the Portuguese Bend area. It should also be noted that the majority of the roadways are not fully improved (e.g., with formal curb and gutter) thus, the above widths and measurements reflect the edge of pavement widths. Additional (i.e., unimproved) width is available along many portions of the roadways, however.

Two fire stations are located within the project study area: Fire Station #53 (located at 6124 Palos Verdes Drive South, Rancho Palos Verdes, CA 90275) and Fire Station #83 (located at 83 Miraleste Plaza, Rancho Palos Verdes, CA 90275). In addition, it is important to note that the County’s Division I Battalion 14 Headquarters is located at Fire Station #106 in Rolling Hills Estates. These first response teams will utilize Palos Verdes Drive South to access either Narcissa Drive or Peppertree Drive in order to respond to a fire incident as well as other fire access roads. Further, it is expected that the gates located at both public gateways will be set/controlled to remain open during an evacuation period.

As part of controlling access to and from an evacuation area for a wildland fire within the Portuguese Bend area, nearby roadways will be closed by law enforcement agencies to inbound traffic with the exception for public safety vehicles. Therefore, a minimum of one travel lane will remain open at all times. Any closed roads or traffic closure points would be identified by County emergency personnel and fire staging areas would be set up for public safety officials and equipment. These staging areas would be located where resources can be placed while waiting for tactical assignment to combat wildland fires.

Further, as required by the California Vehicle Code (Section 21806, authorized Emergency Vehicles), motorists are required to pull to the right side of the highway and stop to allow an emergency vehicle to pass. If required, drivers of emergency vehicles are trained to utilize center turn lanes, or travel in opposing through lanes to pass through and traverse crowded or tight areas. Thus, the respect entitled to emergency vehicles and driver training allow emergency vehicles to negotiate typical as well as atypical street conditions in urban and rural areas.

#### *1.1.2 Evacuation Summary*

Evacuation from a wildfire should be the number one priority that the public can take to protect themselves. The law enforcement agencies’ primary responsibility during a wildland fire is to assist in evacuation of an area. Residents are expected to follow the evacuation routes as

communicated and directed by Los Angeles County fire personnel via local roads and onto either Narcissa Drive or Peppertree Drive to exit the area via Palos Verdes Drive South.

## 1.2 Evacuation Evaluation

An evaluation was prepared to determine the estimated amount of time (i.e., clearing time) needed for area residents to evacuate the Portuguese Bend area in the event of a nearby wildland fire.

### 1.2.1 *Number of Residential Units in the Portuguese Bend Area to be Evacuated*

A study documenting the number of existing residential units and potential future residential units for the Portuguese Bend area that would utilize either Narcissa Drive or Peppertree Drive to evacuate has been prepared. The existing and future residential units were separated by street segment first and then combined and the results are presented in **Table 1**. As stated above, the number of existing and potential units for the entire Portuguese Bend community is forecast to total approximately 165 units. Based on field observations and use of aerial photography, a total of roughly 54 homes exist outside of the project area, with roughly 26 expected to predominantly utilize Narcissa Drive and 28 expected to predominantly utilize Peppertree Drive during an evacuation. The project area consists of approximately 64 developed lots as well as the potential development of up to 47 additional lots. Given an overall gateway distribution of 56 percent via Narcissa Drive and 44 percent via Peppertree Drive associated with the future potential homes (i.e., 26 via Narcissa Drive and 21 via Peppertree Drive) the total number of existing and future homes expected to evacuate via Narcissa Drive totals 86 homes (i.e., 60 existing and up to 26 future homes) and via Peppertree Drive totals 79 homes (i.e., 58 existing and up to 21 future homes).

### 1.2.2 *Forecast Trip Generation and Evacuation Clearing Times – Future Conditions*

Based on the above referenced technical documents, it is conservatively estimated that during an evacuation, two vehicles per residential unit will be evacuated. It should be noted that this can be considered a conservative assumption, as not every residential unit would be occupied during an evacuation nor would every home have two drivers present in order to evacuate two vehicles. The total forecast trip generation for the existing and future homes within the Portuguese Bend area by gateway is presented in **Table 2**. As shown in **Table 2**, approximately 172 vehicles are forecast to exit via Narcissa Drive and 158 vehicles are forecast to exit via Peppertree Drive.

An evacuation study, *Modeling Small Area Evacuation: Can Existing Transportation Infrastructure Impede Public Safety?*, April 2002 was prepared by Vehicle Intelligence and Transportation Analysis Laboratory, University of California, Santa Barbara to document the modeled clearing times for a neighborhood similar in nature to the Portuguese Bend community in Rancho Palos Verdes. That neighborhood contained a total of two access points and the internal roadways comprised of one lane in each direction. As part of the study, three five-minute intervals were used to separate the forecast trip generation in which 30 percent of the total number of vehicles evacuate within the first five minutes, 50 percent evacuated in the next five minutes, and 20 percent evacuate in the next five minutes.

The *Modeling Small Area Evacuation: Can Existing Transportation Infrastructure Impede Public Safety?* study modeled the evacuation clearing times for several scenarios. For the purposes of this evaluation, it was assumed that some traffic closures and traffic control officers would be posted at the critical intersections to quickly process vehicles evacuating the area. The referenced study modeled an evacuation clearing time for residential units, with two vehicles evacuating per unit, traffic closures, and traffic control at 74.9 vehicles per minute. The average 74.9 vehicles per minute evacuation clearing time was therefore used to determine the evacuation clearing time for the Portuguese Bend area.

As shown in column [3] of *Table 2*, which is the condition with highest amount of vehicles evacuating (i.e., 50 percent evacuated in the second five minutes), it is estimated that the clearing time to evacuate the vehicles traveling south on Narcissa Drive is approximately 1.1 minutes and the time to evacuate the vehicles traveling south on Peppertree Drive is approximately 1.1 minutes. These findings are found to be within an acceptable range for evacuation purposes.

### 1.2.3 Proposed Minimum Exits – For Evacuations

Table 4 (Proposed Minimum Exits Table for Interface Communities) contained in the *Public Safety in the Urban-Wildland Interface: Should Fire-Prone Communities Have a Maximum Occupancy?*, National Hazards Review, August 2005 article, was also reviewed in detail in order to verify the validity of the number of exiting roadways to adequately serve the Portuguese Bend community during times of an emergency evacuation.

As indicated in the above referenced table, for a total number of households of between 51 and 300 homes, the minimum number of exiting roads is two (2) and the maximum number of households per exit totals 150 homes. As the community has been constructed with two exiting roads and a total of 86 and 79 total households are forecast to exit the Narcissa Drive and Peppertree Drive gateways, respectively, the design of the roadway system with respect to number of exiting roadways and number of households per exit is concluded to be adequate for emergency evacuation purposes.

## 1.3 Equestrian Evacuation

The Los Angeles County Equine Response Team has previously addressed the City of Rancho Palos Verdes Equestrian Committee regarding the Fire Department's coordination and request regarding preplans for equine evacuation in case of a wildland fire. The Equine Response Team has sites that can be used for emergency equine evacuation pick-up, thus allowing the Equine Response Team to pick-up the horse/s and transport them to emergency shelters. Given that one inbound travel lane will be maintained during an evacuation period to allow for entry of emergency vehicles, equestrian evacuation will be possible.

## 1.4 Construction Traffic Implications During an Evacuation

Several comments received during the formal Notice of Preparation process noted some concern regarding possible implications of construction traffic during an emergency evacuation. As

summarized in *Table 2*, and concluded above, it is estimated that the clearing time to evacuate resident vehicles traveling south on Narcissa Drive is approximately 1.1 minutes and the time to evacuate the resident vehicles traveling south on Peppertree Drive is also approximately 1.1 minutes. These estimates assume that all 47 homes proposed as part of the project have been completed and the findings are found to be within an acceptable range for evacuation purposes.

Based on the construction analysis contained herein, it was conservatively determined that the maximum construction activity in terms of construction trip generation would occur during the building construction phase given the highly unlikely scenario of all 47 homes being under construction at the same time. Accounting for the addition of the construction worker and construction truck trip generation/vehicles (while subtracting the future resident vehicles from the evacuation analysis), the above evacuation clearance times would increase slightly to 1.4 minutes for Narcissa Drive and 1.3 minutes for Peppertree Drive, respectively. It should also be noted that the provisions for resident evacuation would also apply to construction-related vehicles and personnel. Therefore, it can be concluded that these clearance times would increase by 0.3 minutes (18 seconds) and 0.2 minutes (12 seconds) for the Narcissa Drive and Peppertree Drive access points, respectively.

Table 1  
POTENTIAL BUILDOUT OF SINGLE-FAMILY DWELLING UNITS  
IN THE PORTUGUESE BEND AREA - EVACUATION ROUTE SCENARIO [1]

| <b>Location</b>                                       | <b>Existing<br/>Units<br/>Outside of<br/>Project Area</b> | <b>Developed<br/>Lots<br/>Within<br/>Project Area</b> | <b>Potential<br/>Units<br/>(Proposed<br/>Project)</b> | <b>Total<br/>Units</b> |
|-------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|------------------------|
| Narcissa Drive<br>north of Palos Verdes Drive South   | 26                                                        | 34                                                    | 26                                                    | 86                     |
| Peppertree Drive<br>north of Palos Verdes Drive South | 28                                                        | 30                                                    | 21                                                    | 79                     |
| Total                                                 | 54                                                        | 64                                                    | 47                                                    | 165                    |

[1] Source: Based on field observations, existing aerial photography, and the project description.

Table 2  
FORECAST OF TRIP GENERATION AND CLEARING TIMES  
PORTUGUESE BEND AREA - BUILDOUT  
EVACUATION ROUTE SCENARIO

| Location                                              | [1]<br>Total<br>Evacuation<br>Forecast<br>Trips [a] | [2]<br>First Five Minutes<br>of Evacuation [b] |                                   | [3]<br>Second Five Minutes<br>of Evacuation [b] |                                   | [4]<br>Third Five Minutes<br>of Evacuation [b] |                                   |
|-------------------------------------------------------|-----------------------------------------------------|------------------------------------------------|-----------------------------------|-------------------------------------------------|-----------------------------------|------------------------------------------------|-----------------------------------|
|                                                       |                                                     | Forecast<br>Trips [a]                          | Clearing<br>Time [c]<br>(Minutes) | Forecast<br>Trips [a]                           | Clearing<br>Time [c]<br>(Minutes) | Forecast<br>Trips [a]                          | Clearing<br>Time [c]<br>(Minutes) |
| Narcissa Drive<br>north of Palos Verdes Drive South   | 172                                                 | 52                                             | 0.7                               | 86                                              | 1.1                               | 34                                             | 0.5                               |
| Peppertree Drive<br>north of Palos Verdes Drive South | 158                                                 | 47                                             | 0.6                               | 79                                              | 1.1                               | 32                                             | 0.4                               |

[a] It is estimated that two vehicles per residential unit would be used during evacuation. Note that this is a conservative assumption as not every residential unit would be occupied during evacuation. A total of 86 and 79 homes are expected to evacuate via the Narcissa Drive and Peppertree Drive gateways, respectively.

[b] The forecast trips were separated into three five-minute intervals in which 30% of the total number of vehicles evacuate in the first five minutes, 50% evacuate in the next five minutes, and 20% evacuate in the next five minutes. The five-minute intervals were based on information documented in the "Modeling Small Area Evacuation: Can Existing Transportation Infrastructure Impede Public Safety", by Vehicle Intelligence & Transportation Analysis Laboratory, University of California, Santa Barbara, April 2002.

[c] An average of 74.9 cars per minute was used to determine the clearing time during evacuation. This average was based on the clearing times documented in the "Modeling Small Area Evacuation: Can Existing Transportation Infrastructure Impede Public Safety", by Vehicle Intelligence & Transportation Analysis Laboratory, University of California, Santa Barbara, April 2002. It should be noted that the 74.9 cars per minute rate assumes traffic control and inbound traffic closures in the area.