

---

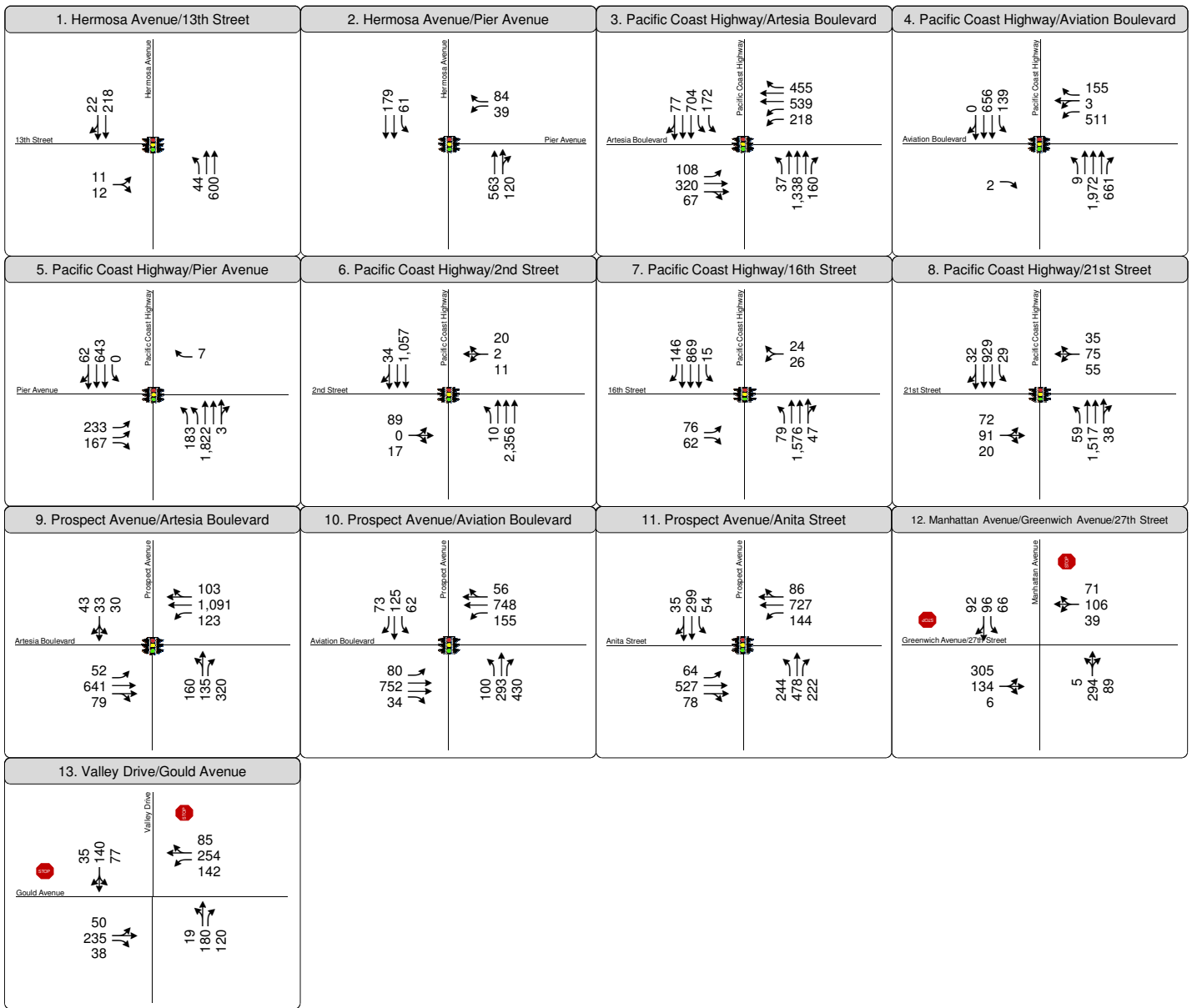
# **APPENDIX G - TRANSPORTATION ASSESSMENT**

---



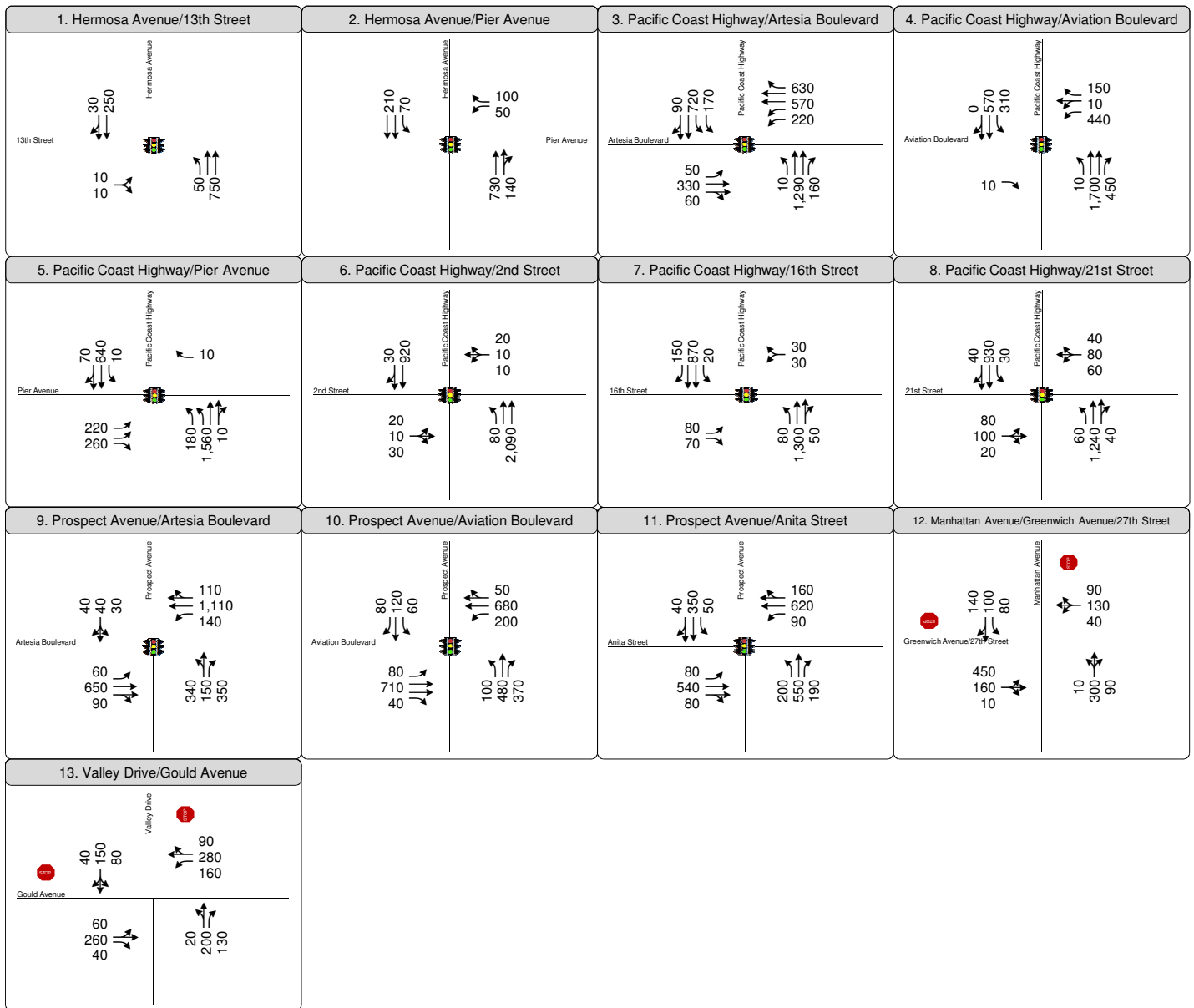
## **G-1: LANE CONFIGURATIONS**





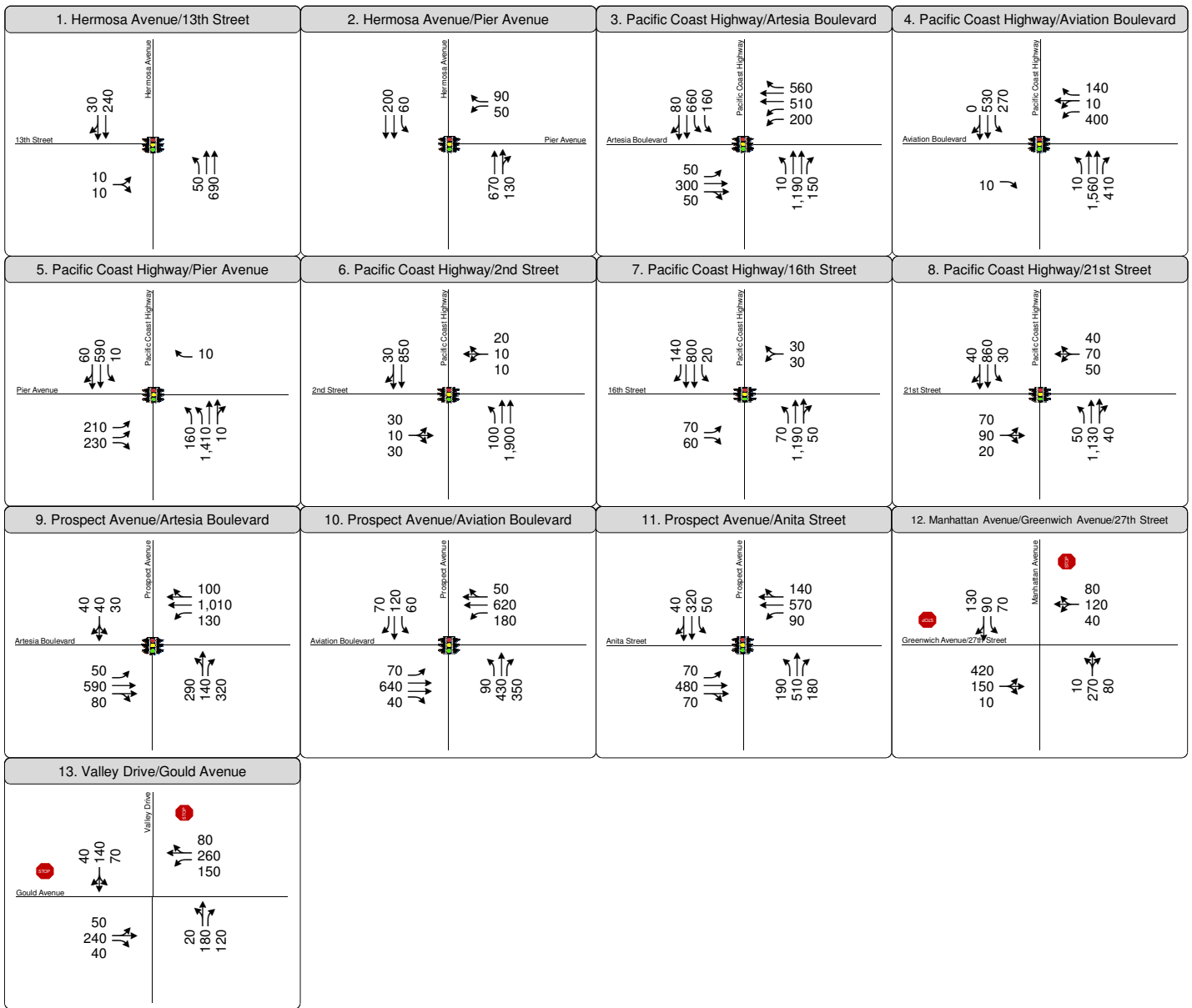
Peak Hour Traffic Volumes and Lane Configurations - Existing (2015)





Peak Hour Traffic Volumes and Lane Configurations - Future Without Project (2040)





Peak Hour Traffic Volumes and Lane Configurations - PLAN Hermosa (2040)







## **G-2: TRAFFIC COUNTS**



## **INTERSECTIONS**

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-001

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

| NS/EW Streets: | Hermosa Ave | Hermosa Ave | 13th St | 13th St |
|----------------|-------------|-------------|---------|---------|
|----------------|-------------|-------------|---------|---------|

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
|         | 1          | 2   | 0  | 0          | 2  | 0  | 0         | 1  | 0  | 0         | 0  | 0  |       |
| 7:00 AM | 9          | 60  | 0  | 1          | 28 | 3  | 1         | 0  | 3  | 0         | 0  | 0  | 105   |
| 7:15 AM | 3          | 76  | 0  | 0          | 26 | 3  | 2         | 0  | 2  | 0         | 0  | 0  | 112   |
| 7:30 AM | 7          | 102 | 0  | 0          | 35 | 3  | 2         | 0  | 6  | 0         | 0  | 0  | 155   |
| 7:45 AM | 9          | 133 | 0  | 0          | 48 | 4  | 0         | 0  | 4  | 0         | 0  | 0  | 198   |
| 8:00 AM | 11         | 168 | 0  | 0          | 49 | 7  | 3         | 0  | 1  | 0         | 0  | 0  | 239   |
| 8:15 AM | 13         | 171 | 0  | 0          | 64 | 4  | 3         | 0  | 6  | 0         | 0  | 0  | 261   |
| 8:30 AM | 11         | 128 | 0  | 0          | 57 | 7  | 5         | 0  | 1  | 0         | 0  | 0  | 209   |
| 8:45 AM | 15         | 116 | 0  | 0          | 49 | 5  | 1         | 0  | 3  | 0         | 0  | 0  | 189   |

UTURNS

| NB | SB | EB | WB |
|----|----|----|----|
| 6  | 1  | 0  | 0  |
| 1  | 0  | 0  | 0  |
| 4  | 0  | 0  | 0  |
| 3  | 0  | 0  | 0  |
| 2  | 0  | 0  | 0  |
| 3  | 0  | 0  | 0  |
| 3  | 0  | 0  | 0  |
| 4  | 0  | 0  | 0  |

|                        |       |        |       |       |        |       |        |       |        |         |         |         |       |
|------------------------|-------|--------|-------|-------|--------|-------|--------|-------|--------|---------|---------|---------|-------|
| <b>TOTAL VOLUMES :</b> | NL    | NT     | NR    | SL    | ST     | SR    | EL     | ET    | ER     | WL      | WT      | WR      | TOTAL |
| <b>APPROACH %'s :</b>  | 78    | 954    | 0     | 1     | 356    | 36    | 17     | 0     | 26     | 0       | 0       | 0       | 1468  |
|                        | 7.56% | 92.44% | 0.00% | 0.25% | 90.59% | 9.16% | 39.53% | 0.00% | 60.47% | #DIV/0! | #DIV/0! | #DIV/0! |       |

|    |    |    |    |
|----|----|----|----|
| NB | SB | EB | WB |
| 26 | 1  | 0  | 0  |

|                             |        |     |   |       |     |    |       |   |    |       |   |   |              |
|-----------------------------|--------|-----|---|-------|-----|----|-------|---|----|-------|---|---|--------------|
| <b>PEAK HR START TIME :</b> | 745 AM |     |   |       |     |    |       |   |    |       |   |   | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 44     | 600 | 0 | 0     | 218 | 22 | 11    | 0 | 12 | 0     | 0 | 0 | 907          |
| <b>PEAK HR FACTOR :</b>     | 0.875  |     |   | 0.882 |     |    | 0.639 |   |    | 0.000 |   |   | 0.869        |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-001

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

| NS/EW Streets:              | PM          |           |         |             |           |          |           |         |           |           |         |         | TOTAL         |
|-----------------------------|-------------|-----------|---------|-------------|-----------|----------|-----------|---------|-----------|-----------|---------|---------|---------------|
|                             | Hermosa Ave |           |         | Hermosa Ave |           |          | 13th St   |         |           | 13th St   |         |         |               |
|                             | NORTHBOUND  |           |         | SOUTHBOUND  |           |          | EASTBOUND |         |           | WESTBOUND |         |         |               |
| LANES:                      | NL          | NT        | NR      | SL          | ST        | SR       | EL        | ET      | ER        | WL        | WT      | WR      | TOTAL         |
|                             | 1           | 2         | 0       | 0           | 2         | 0        | 0         | 1       | 0         | 0         | 0       | 0       |               |
| 4:00 PM                     | 10          | 52        | 0       | 0           | 68        | 2        | 4         | 0       | 16        | 0         | 0       | 0       | 152           |
| 4:15 PM                     | 19          | 50        | 0       | 0           | 95        | 7        | 5         | 0       | 6         | 0         | 0       | 0       | 182           |
| 4:30 PM                     | 10          | 69        | 0       | 1           | 93        | 3        | 1         | 0       | 13        | 0         | 0       | 0       | 190           |
| 4:45 PM                     | 15          | 63        | 0       | 0           | 96        | 1        | 5         | 0       | 6         | 0         | 0       | 0       | 186           |
| 5:00 PM                     | 15          | 64        | 0       | 0           | 104       | 0        | 2         | 0       | 17        | 0         | 0       | 0       | 202           |
| 5:15 PM                     | 22          | 85        | 0       | 0           | 101       | 7        | 5         | 0       | 10        | 0         | 0       | 0       | 230           |
| 5:30 PM                     | 23          | 63        | 0       | 0           | 99        | 4        | 10        | 0       | 22        | 0         | 0       | 0       | 221           |
| 5:45 PM                     | 24          | 57        | 0       | 0           | 84        | 2        | 7         | 0       | 18        | 0         | 0       | 0       | 192           |
| <b>TOTAL VOLUMES :</b>      | NL<br>138   | NT<br>503 | NR<br>0 | SL<br>1     | ST<br>740 | SR<br>26 | EL<br>39  | ET<br>0 | ER<br>108 | WL<br>0   | WT<br>0 | WR<br>0 | TOTAL<br>1555 |
| <b>APPROACH %'s :</b>       | 21.53%      | 78.47%    | 0.00%   | 0.13%       | 96.48%    | 3.39%    | 26.53%    | 0.00%   | 73.47%    | #DIV/0!   | #DIV/0! | #DIV/0! |               |
| <b>PEAK HR START TIME :</b> | 500 PM      |           |         |             |           |          |           |         |           |           |         |         | TOTAL         |
| <b>PEAK HR VOL :</b>        | 84          | 269       | 0       | 0           | 388       | 13       | 24        | 0       | 67        | 0         | 0       | 0       | 845           |
| <b>PEAK HR FACTOR :</b>     | 0.825       |           | 0.928   |             |           | 0.711    |           |         | 0.000     |           |         | 0.918   |               |

| UTURNS   |         |         |         |
|----------|---------|---------|---------|
| NB       | SB      | EB      | WB      |
| 6        | 0       | 0       | 0       |
| 8        | 0       | 0       | 0       |
| 6        | 1       | 0       | 0       |
| 6        | 0       | 0       | 0       |
| 8        | 0       | 0       | 0       |
| 7        | 0       | 0       | 0       |
| 7        | 0       | 0       | 0       |
| 4        | 0       | 0       | 0       |
| NB<br>52 | SB<br>1 | EB<br>0 | WB<br>0 |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-002

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

| NS/EW Streets: | Hermosa Ave | Hermosa Ave | Pier Ave | Pier Ave |
|----------------|-------------|-------------|----------|----------|
|----------------|-------------|-------------|----------|----------|

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 7:00 AM | 0          | 58  | 3  | 17         | 19 | 0  | 0         | 0  | 0  | 2         | 0  | 14 | 113   |
| 7:15 AM | 0          | 72  | 17 | 9          | 21 | 0  | 0         | 0  | 0  | 8         | 0  | 12 | 139   |
| 7:30 AM | 0          | 93  | 23 | 17         | 29 | 0  | 0         | 0  | 0  | 6         | 0  | 13 | 181   |
| 7:45 AM | 0          | 138 | 30 | 16         | 38 | 0  | 0         | 0  | 0  | 5         | 0  | 15 | 242   |
| 8:00 AM | 0          | 156 | 32 | 15         | 38 | 0  | 0         | 0  | 0  | 13        | 0  | 20 | 274   |
| 8:15 AM | 0          | 147 | 34 | 12         | 58 | 0  | 0         | 0  | 0  | 9         | 0  | 29 | 289   |
| 8:30 AM | 0          | 122 | 24 | 18         | 45 | 0  | 0         | 0  | 0  | 12        | 0  | 20 | 241   |
| 8:45 AM | 0          | 108 | 23 | 13         | 36 | 0  | 0         | 0  | 0  | 12        | 0  | 26 | 218   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |

|                        |       |        |        |        |        |       |         |         |         |        |       |        |       |
|------------------------|-------|--------|--------|--------|--------|-------|---------|---------|---------|--------|-------|--------|-------|
| <b>TOTAL VOLUMES :</b> | NL    | NT     | NR     | SL     | ST     | SR    | EL      | ET      | ER      | WL     | WT    | WR     | TOTAL |
| <b>APPROACH %'s :</b>  | 0     | 894    | 186    | 117    | 284    | 0     | 0       | 0       | 0       | 67     | 0     | 149    | 1697  |
|                        | 0.00% | 82.78% | 17.22% | 29.18% | 70.82% | 0.00% | #DIV/0! | #DIV/0! | #DIV/0! | 31.02% | 0.00% | 68.98% |       |

|    |    |    |    |
|----|----|----|----|
| NB | SB | EB | WB |
| 0  | 0  | 0  | 0  |

|                             |        |     |     |       |     |   |       |   |   |       |   |    |       |
|-----------------------------|--------|-----|-----|-------|-----|---|-------|---|---|-------|---|----|-------|
| <b>PEAK HR START TIME :</b> | 745 AM |     |     |       |     |   |       |   |   |       |   |    | TOTAL |
| <b>PEAK HR VOL :</b>        | 0      | 563 | 120 | 61    | 179 | 0 | 0     | 0 | 0 | 39    | 0 | 84 | 1046  |
| <b>PEAK HR FACTOR :</b>     | 0.908  |     |     | 0.857 |     |   | 0.000 |   |   | 0.809 |   |    | 0.905 |

**CONTROL :** Signalized



# Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5524-003

Day: Wednesday

City: Hermosa Beach

Date: 9/10/2014

AM

| NS/EW Streets: | Pacific Coast Hwy |  |  | Pacific Coast Hwy |  |  | Artesia Blvd |  |  | Artesia Blvd |  |  | TOTAL |
|----------------|-------------------|--|--|-------------------|--|--|--------------|--|--|--------------|--|--|-------|
|                | NORTHBOUND        |  |  | SOUTHBOUND        |  |  | EASTBOUND    |  |  | WESTBOUND    |  |  |       |

| LANES:  | NL<br>1 | NT<br>3 | NR<br>0 | SL<br>2 | ST<br>3 | SR<br>0 | EL<br>1 | ET<br>2 | ER<br>0 | WL<br>2 | WT<br>2 | WR<br>1 | TOTAL |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|
| 7:00 AM | 10      | 468     | 39      | 17      | 115     | 28      | 19      | 50      | 11      | 32      | 72      | 96      | 957   |
| 7:15 AM | 12      | 462     | 55      | 18      | 148     | 25      | 20      | 53      | 15      | 26      | 60      | 104     | 998   |
| 7:30 AM | 8       | 358     | 35      | 64      | 129     | 35      | 33      | 101     | 10      | 37      | 108     | 114     | 1032  |
| 7:45 AM | 10      | 259     | 40      | 57      | 134     | 34      | 32      | 78      | 18      | 37      | 150     | 100     | 949   |
| 8:00 AM | 7       | 283     | 44      | 47      | 152     | 23      | 31      | 86      | 20      | 54      | 178     | 127     | 1052  |
| 8:15 AM | 8       | 321     | 33      | 36      | 178     | 18      | 20      | 87      | 17      | 43      | 107     | 104     | 972   |
| 8:30 AM | 6       | 295     | 32      | 36      | 173     | 24      | 30      | 87      | 14      | 69      | 127     | 118     | 1011  |
| 8:45 AM | 16      | 439     | 51      | 53      | 201     | 12      | 27      | 60      | 16      | 52      | 127     | 106     | 1160  |

UTURNS

| NB | SB | EB | WB |
|----|----|----|----|
| 0  | 0  | 1  | 0  |
| 1  | 0  | 0  | 0  |
| 0  | 0  | 1  | 0  |
| 0  | 0  | 0  | 0  |
| 0  | 0  | 0  | 0  |
| 0  | 0  | 1  | 0  |
| 0  | 0  | 1  | 0  |
| 0  | 0  | 0  | 0  |

|                 | NL    | NT     | NR     | SL     | ST     | SR     | EL     | ET     | ER     | WL     | WT     | WR     | TOTAL |
|-----------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| TOTAL VOLUMES : | 77    | 2885   | 329    | 328    | 1230   | 199    | 212    | 602    | 121    | 350    | 929    | 869    | 8131  |
| APPROACH %'s :  | 2.34% | 87.66% | 10.00% | 18.67% | 70.01% | 11.33% | 22.67% | 64.39% | 12.94% | 16.29% | 43.25% | 40.46% |       |

| NB | SB | EB | WB |
|----|----|----|----|
| 1  | 0  | 4  | 0  |

| PEAK HR START TIME : | 800 AM |      |     |       |     |    |       |     |    |       |     |     | TOTAL |
|----------------------|--------|------|-----|-------|-----|----|-------|-----|----|-------|-----|-----|-------|
| PEAK HR VOL :        | 37     | 1338 | 160 | 172   | 704 | 77 | 108   | 320 | 67 | 218   | 539 | 455 | 4195  |
| PEAK HR FACTOR :     | 0.758  |      |     | 0.896 |     |    | 0.903 |     |    | 0.844 |     |     | 0.904 |

CONTROL : Signalized



# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-003

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

| NS/EW Streets:              | Pacific Coast Hwy |         | Pacific Coast Hwy |            |         | Artesia Blvd |           |         | Artesia Blvd |           |         | TOTAL   |       |              |
|-----------------------------|-------------------|---------|-------------------|------------|---------|--------------|-----------|---------|--------------|-----------|---------|---------|-------|--------------|
|                             | NORTHBOUND        |         |                   | SOUTHBOUND |         |              | EASTBOUND |         |              | WESTBOUND |         |         |       |              |
| LANES:                      | NL<br>1           | NT<br>3 | NR<br>0           | SL<br>2    | ST<br>3 | SR<br>0      | EL<br>1   | ET<br>2 | ER<br>0      | WL<br>2   | WT<br>2 | WR<br>1 |       |              |
| 4:00 PM                     | 16                | 236     | 63                | 119        | 415     | 22           | 17        | 111     | 18           | 60        | 75      | 73      | 1225  |              |
| 4:15 PM                     | 12                | 224     | 42                | 102        | 450     | 25           | 18        | 88      | 15           | 78        | 69      | 71      | 1194  |              |
| 4:30 PM                     | 13                | 225     | 75                | 109        | 461     | 29           | 15        | 109     | 12           | 52        | 91      | 92      | 1283  |              |
| 4:45 PM                     | 5                 | 213     | 51                | 101        | 474     | 19           | 9         | 78      | 13           | 78        | 101     | 80      | 1222  |              |
| 5:00 PM                     | 10                | 241     | 57                | 126        | 476     | 23           | 9         | 121     | 27           | 43        | 80      | 63      | 1276  |              |
| 5:15 PM                     | 7                 | 200     | 44                | 121        | 464     | 24           | 15        | 107     | 13           | 73        | 94      | 76      | 1238  |              |
| 5:30 PM                     | 13                | 271     | 54                | 85         | 455     | 19           | 14        | 110     | 13           | 57        | 99      | 56      | 1246  |              |
| 5:45 PM                     | 13                | 207     | 66                | 93         | 493     | 26           | 17        | 87      | 16           | 79        | 80      | 71      | 1248  |              |
| <b>TOTAL VOLUMES :</b>      | 89                | 1817    | 452               | 856        | 3688    | 187          | 114       | 811     | 127          | 520       | 689     | 582     | 9932  |              |
| <b>APPROACH %'s :</b>       | 3.77%             | 77.06%  | 19.17%            | 18.09%     | 77.95%  | 3.95%        | 10.84%    | 77.09%  | 12.07%       | 29.03%    | 38.47%  | 32.50%  |       |              |
| <b>PEAK HR START TIME :</b> | 430 PM            |         |                   |            |         |              |           |         |              |           |         |         |       | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 35                | 879     | 227               | 457        | 1875    | 95           | 48        | 415     | 65           | 246       | 366     | 311     | 5019  |              |
| <b>PEAK HR FACTOR :</b>     | 0.911             |         |                   | 0.971      |         |              | 0.841     |         |              | 0.891     |         |         | 0.978 |              |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 1      | 0  | 0  | 0  |
| 1      | 0  | 0  | 0  |
| 2      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 1      | 0  | 0  | 0  |
| 1      | 0  | 0  | 0  |
| 1      | 0  | 0  | 0  |
| 1      | 0  | 0  | 0  |
| 7      | 0  | 0  | 0  |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-004

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

|                       |                   |                   |               |               |
|-----------------------|-------------------|-------------------|---------------|---------------|
| <b>NS/EW Streets:</b> | Pacific Coast Hwy | Pacific Coast Hwy | Aviation Blvd | Aviation Blvd |
|-----------------------|-------------------|-------------------|---------------|---------------|

| LANES:  | NORTHBOUND |     |     | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|-----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR  | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
|         | 1          | 2.5 | .5  | 1          | 3   | 0  | 0         | 0  | 1  | 0         | 2  | 1  |       |
| 7:00 AM | 3          | 598 | 167 | 33         | 143 | 0  | 0         | 0  | 0  | 89        | 0  | 29 | 1062  |
| 7:15 AM | 4          | 541 | 172 | 27         | 168 | 0  | 0         | 0  | 1  | 129       | 2  | 36 | 1080  |
| 7:30 AM | 1          | 488 | 173 | 32         | 164 | 0  | 0         | 0  | 1  | 141       | 1  | 39 | 1040  |
| 7:45 AM | 1          | 345 | 146 | 47         | 181 | 0  | 0         | 0  | 0  | 152       | 0  | 51 | 923   |
| 8:00 AM | 1          | 297 | 162 | 53         | 173 | 0  | 0         | 0  | 0  | 143       | 4  | 79 | 912   |
| 8:15 AM | 2          | 356 | 164 | 39         | 209 | 1  | 0         | 0  | 2  | 127       | 3  | 50 | 953   |
| 8:30 AM | 0          | 363 | 161 | 35         | 217 | 0  | 0         | 0  | 1  | 141       | 4  | 54 | 976   |
| 8:45 AM | 3          | 409 | 152 | 38         | 205 | 0  | 0         | 0  | 2  | 156       | 3  | 74 | 1042  |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 1  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 1      | 0  | 0  | 0  |

|                        |       |        |        |        |        |       |       |       |         |        |       |        |       |
|------------------------|-------|--------|--------|--------|--------|-------|-------|-------|---------|--------|-------|--------|-------|
| <b>TOTAL VOLUMES :</b> | NL    | NT     | NR     | SL     | ST     | SR    | EL    | ET    | ER      | WL     | WT    | WR     | TOTAL |
| <b>APPROACH %'s :</b>  | 15    | 3397   | 1297   | 304    | 1460   | 1     | 0     | 0     | 7       | 1078   | 17    | 412    | 7988  |
|                        | 0.32% | 72.14% | 27.54% | 17.22% | 82.72% | 0.06% | 0.00% | 0.00% | 100.00% | 71.53% | 1.13% | 27.34% |       |

|    |    |    |    |
|----|----|----|----|
| NB | SB | EB | WB |
| 1  | 1  | 0  | 0  |

|                             |        |      |     |       |     |   |       |   |   |       |   |     |              |
|-----------------------------|--------|------|-----|-------|-----|---|-------|---|---|-------|---|-----|--------------|
| <b>PEAK HR START TIME :</b> | 700 AM |      |     |       |     |   |       |   |   |       |   |     | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 9      | 1972 | 658 | 139   | 656 | 0 | 0     | 0 | 2 | 511   | 3 | 155 | 4105         |
| <b>PEAK HR FACTOR :</b>     | 0.859  |      |     | 0.872 |     |   | 0.500 |   |   | 0.824 |   |     | 0.950        |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-004

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

| NS/EW Streets:              | Pacific Coast Hwy |           |          | Pacific Coast Hwy |         |         | Aviation Blvd |         |         | Aviation Blvd |         |         | TOTAL |              |
|-----------------------------|-------------------|-----------|----------|-------------------|---------|---------|---------------|---------|---------|---------------|---------|---------|-------|--------------|
|                             | NORTHBOUND        |           |          | SOUTHBOUND        |         |         | EASTBOUND     |         |         | WESTBOUND     |         |         |       |              |
| LANES:                      | NL<br>1           | NT<br>2.5 | NR<br>.5 | SL<br>1           | ST<br>3 | SR<br>0 | EL<br>0       | ET<br>0 | ER<br>1 | WL<br>0       | WT<br>2 | WR<br>1 |       |              |
| 4:00 PM                     | 4                 | 266       | 141      | 57                | 382     | 0       | 0             | 0       | 0       | 144           | 0       | 62      | 1056  |              |
| 4:15 PM                     | 3                 | 235       | 112      | 54                | 434     | 0       | 0             | 0       | 2       | 157           | 3       | 63      | 1063  |              |
| 4:30 PM                     | 5                 | 263       | 132      | 52                | 433     | 0       | 0             | 0       | 2       | 170           | 3       | 53      | 1113  |              |
| 4:45 PM                     | 2                 | 290       | 122      | 63                | 488     | 0       | 0             | 0       | 0       | 177           | 3       | 67      | 1212  |              |
| 5:00 PM                     | 3                 | 240       | 141      | 66                | 412     | 0       | 0             | 0       | 0       | 182           | 4       | 48      | 1096  |              |
| 5:15 PM                     | 3                 | 315       | 125      | 46                | 466     | 0       | 0             | 0       | 2       | 187           | 2       | 53      | 1199  |              |
| 5:30 PM                     | 5                 | 278       | 123      | 47                | 446     | 0       | 0             | 0       | 0       | 182           | 1       | 50      | 1132  |              |
| 5:45 PM                     | 2                 | 287       | 108      | 60                | 476     | 1       | 0             | 0       | 0       | 195           | 2       | 72      | 1203  |              |
| <b>TOTAL VOLUMES :</b>      | 27                | 2174      | 1004     | 445               | 3537    | 1       | 0             | 0       | 6       | 1394          | 18      | 468     | 9074  |              |
| <b>APPROACH %'s :</b>       | 0.84%             | 67.83%    | 31.33%   | 11.17%            | 88.80%  | 0.03%   | 0.00%         | 0.00%   | 100.00% | 74.15%        | 0.96%   | 24.89%  |       |              |
| <b>PEAK HR START TIME :</b> | 445 PM            |           |          |                   |         |         |               |         |         |               |         |         |       | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 13                | 1123      | 511      | 222               | 1812    | 0       | 0             | 0       | 2       | 728           | 10      | 218     | 4639  |              |
| <b>PEAK HR FACTOR :</b>     | 0.929             |           |          | 0.923             |         |         | 0.250         |         |         | 0.968         |         |         | 0.957 |              |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-005

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

**NS/EW Streets:**

Pacific Coast Hwy

Pacific Coast Hwy

Pier Ave

Pier Ave

| LANES:                      | NORTHBOUND |        |       | SOUTHBOUND |        |        | EASTBOUND |       |        | WESTBOUND |       |        | TOTAL        |
|-----------------------------|------------|--------|-------|------------|--------|--------|-----------|-------|--------|-----------|-------|--------|--------------|
|                             | NL         | NT     | NR    | SL         | ST     | SR     | EL        | ET    | ER     | WL        | WT    | WR     |              |
| 7:00 AM                     | 39         | 550    | 0     | 0          | 141    | 13     | 50        | 0     | 39     | 0         | 0     | 0      | 832          |
| 7:15 AM                     | 44         | 546    | 0     | 0          | 164    | 14     | 52        | 0     | 33     | 0         | 0     | 0      | 853          |
| 7:30 AM                     | 49         | 431    | 0     | 0          | 164    | 14     | 69        | 0     | 51     | 0         | 0     | 1      | 779          |
| 7:45 AM                     | 51         | 295    | 3     | 0          | 174    | 21     | 61        | 1     | 44     | 0         | 1     | 5      | 656          |
| 8:00 AM                     | 73         | 313    | 1     | 1          | 185    | 30     | 85        | 0     | 49     | 0         | 0     | 1      | 738          |
| 8:15 AM                     | 57         | 359    | 3     | 2          | 191    | 27     | 83        | 0     | 52     | 0         | 0     | 0      | 774          |
| 8:30 AM                     | 57         | 326    | 1     | 0          | 209    | 31     | 70        | 3     | 53     | 0         | 0     | 2      | 752          |
| 8:45 AM                     | 91         | 405    | 2     | 0          | 224    | 31     | 41        | 0     | 40     | 0         | 0     | 2      | 836          |
| <b>TOTAL VOLUMES :</b>      | 461        | 3225   | 10    | 3          | 1452   | 181    | 511       | 4     | 361    | 0         | 1     | 11     | 6220         |
| <b>APPROACH %'s :</b>       | 12.47%     | 87.26% | 0.27% | 0.18%      | 88.75% | 11.06% | 58.33%    | 0.46% | 41.21% | 0.00%     | 8.33% | 91.67% |              |
| <b>PEAK HR START TIME :</b> | 700 AM     |        |       |            |        |        |           |       |        |           |       |        | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 183        | 1822   | 3     | 0          | 643    | 62     | 232       | 1     | 167    | 0         | 1     | 6      | 3120         |
| <b>PEAK HR FACTOR :</b>     | 0.851      |        | 0.904 |            |        | 0.833  |           |       | 0.292  |           |       | 0.914  |              |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 1  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 1  | 0  | 0  |

| NB | SB | EB | WB |
|----|----|----|----|
| 0  | 1  | 0  | 0  |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-005

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

| NS/EW Streets:              | Pacific Coast Hwy |         | Pacific Coast Hwy |            |         | Pier Ave |           |         | Pier Ave |           |         | TOTAL   |              |
|-----------------------------|-------------------|---------|-------------------|------------|---------|----------|-----------|---------|----------|-----------|---------|---------|--------------|
|                             | NORTHBOUND        |         |                   | SOUTHBOUND |         |          | EASTBOUND |         |          | WESTBOUND |         |         |              |
| LANES:                      | NL<br>2           | NT<br>3 | NR<br>0           | SL<br>1    | ST<br>3 | SR<br>0  | EL<br>2   | ET<br>0 | ER<br>1  | WL<br>0   | WT<br>1 | WR<br>0 |              |
| 4:00 PM                     | 89                | 269     | 4                 | 1          | 423     | 40       | 48        | 1       | 81       | 0         | 0       | 1       | 957          |
| 4:15 PM                     | 63                | 238     | 1                 | 1          | 403     | 28       | 38        | 0       | 69       | 0         | 0       | 3       | 844          |
| 4:30 PM                     | 75                | 245     | 2                 | 0          | 438     | 27       | 57        | 0       | 66       | 0         | 0       | 1       | 911          |
| 4:45 PM                     | 89                | 275     | 1                 | 1          | 489     | 35       | 50        | 0       | 64       | 0         | 0       | 1       | 1005         |
| 5:00 PM                     | 59                | 230     | 1                 | 1          | 432     | 41       | 55        | 1       | 71       | 0         | 0       | 1       | 892          |
| 5:15 PM                     | 95                | 277     | 4                 | 2          | 422     | 39       | 61        | 0       | 48       | 1         | 0       | 5       | 954          |
| 5:30 PM                     | 77                | 282     | 0                 | 2          | 461     | 32       | 64        | 0       | 61       | 0         | 0       | 5       | 984          |
| 5:45 PM                     | 89                | 257     | 1                 | 1          | 471     | 42       | 42        | 0       | 59       | 0         | 0       | 2       | 964          |
| <b>TOTAL VOLUMES :</b>      | 636               | 2073    | 14                | 9          | 3539    | 284      | 415       | 2       | 519      | 1         | 0       | 19      | 7511         |
| <b>APPROACH %'s :</b>       | 23.36%            | 76.13%  | 0.51%             | 0.23%      | 92.35%  | 7.41%    | 44.34%    | 0.21%   | 55.45%   | 5.00%     | 0.00%   | 95.00%  |              |
| <b>PEAK HR START TIME :</b> | 445 PM            |         |                   |            |         |          |           |         |          |           |         |         | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 320               | 1064    | 6                 | 6          | 1804    | 147      | 230       | 1       | 244      | 1         | 0       | 12      | 3835         |
| <b>PEAK HR FACTOR :</b>     | 0.924             |         |                   | 0.932      |         |          | 0.935     |         |          | 0.542     |         |         | 0.954        |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 1  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 1  | 0  | 0  |
| 0      | 1  | 0  | 0  |
| 0      | 2  | 0  | 0  |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-006

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

**NS/EW Streets:** Pacific Coast Hwy Pacific Coast Hwy 2nd St 2nd St

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
|         | 1          | 3   | 0  | 0          | 3   | 0  | 0         | 1  | 0  | 0         | 1  | 0  |       |
| 7:00 AM | 1          | 713 | 0  | 0          | 212 | 3  | 17        | 0  | 5  | 2         | 0  | 1  | 954   |
| 7:15 AM | 2          | 659 | 0  | 0          | 274 | 11 | 21        | 0  | 1  | 1         | 1  | 7  | 977   |
| 7:30 AM | 0          | 593 | 1  | 0          | 304 | 6  | 29        | 0  | 7  | 3         | 0  | 8  | 951   |
| 7:45 AM | 7          | 391 | 1  | 0          | 267 | 14 | 22        | 0  | 4  | 5         | 1  | 4  | 716   |
| 8:00 AM | 8          | 395 | 1  | 0          | 244 | 17 | 33        | 0  | 11 | 3         | 3  | 11 | 726   |
| 8:15 AM | 2          | 430 | 0  | 0          | 292 | 15 | 18        | 0  | 5  | 3         | 1  | 7  | 773   |
| 8:30 AM | 5          | 443 | 0  | 2          | 311 | 6  | 24        | 0  | 5  | 0         | 1  | 0  | 797   |
| 8:45 AM | 9          | 526 | 1  | 1          | 274 | 11 | 13        | 0  | 5  | 1         | 0  | 4  | 845   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |

|                        |       |        |       |       |        |       |        |       |        |        |        |        |       |
|------------------------|-------|--------|-------|-------|--------|-------|--------|-------|--------|--------|--------|--------|-------|
| <b>TOTAL VOLUMES :</b> | NL    | NT     | NR    | SL    | ST     | SR    | EL     | ET    | ER     | WL     | WT     | WR     | TOTAL |
| <b>APPROACH %'s :</b>  | 34    | 4150   | 4     | 3     | 2178   | 83    | 177    | 0     | 43     | 18     | 7      | 42     | 6739  |
|                        | 0.81% | 99.09% | 0.10% | 0.13% | 96.20% | 3.67% | 80.45% | 0.00% | 19.55% | 26.87% | 10.45% | 62.69% |       |

|    |    |    |    |
|----|----|----|----|
| NB | SB | EB | WB |
| 0  | 0  | 0  | 0  |

|                             |        |      |   |       |      |    |       |   |    |       |   |    |              |
|-----------------------------|--------|------|---|-------|------|----|-------|---|----|-------|---|----|--------------|
| <b>PEAK HR START TIME :</b> | 700 AM |      |   |       |      |    |       |   |    |       |   |    | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 10     | 2356 | 2 | 0     | 1057 | 34 | 89    | 0 | 17 | 11    | 2 | 20 | 3598         |
| <b>PEAK HR FACTOR :</b>     | 0.829  |      |   | 0.880 |      |    | 0.736 |   |    | 0.750 |   |    | 0.921        |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-006

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

**NS/EW Streets:**

|                   |                   |        |        |
|-------------------|-------------------|--------|--------|
| Pacific Coast Hwy | Pacific Coast Hwy | 2nd St | 2nd St |
|-------------------|-------------------|--------|--------|

| LANES:  | NORTHBOUND |         |         | SOUTHBOUND |         |         | EASTBOUND |         |         | WESTBOUND |         |         | TOTAL |
|---------|------------|---------|---------|------------|---------|---------|-----------|---------|---------|-----------|---------|---------|-------|
|         | NL<br>1    | NT<br>3 | NR<br>0 | SL<br>0    | ST<br>3 | SR<br>0 | EL<br>0   | ET<br>1 | ER<br>0 | WL<br>0   | WT<br>1 | WR<br>0 |       |
| 4:00 PM | 11         | 347     | 0       | 0          | 492     | 12      | 19        | 0       | 9       | 1         | 0       | 9       | 900   |
| 4:15 PM | 8          | 340     | 2       | 1          | 502     | 16      | 15        | 0       | 9       | 3         | 1       | 7       | 904   |
| 4:30 PM | 13         | 363     | 0       | 0          | 501     | 15      | 25        | 0       | 6       | 1         | 1       | 3       | 928   |
| 4:45 PM | 14         | 385     | 0       | 1          | 551     | 21      | 20        | 0       | 9       | 4         | 0       | 0       | 1005  |
| 5:00 PM | 10         | 359     | 1       | 0          | 540     | 11      | 15        | 0       | 16      | 1         | 2       | 4       | 959   |
| 5:15 PM | 11         | 383     | 1       | 0          | 542     | 19      | 28        | 0       | 12      | 7         | 1       | 2       | 1006  |
| 5:30 PM | 6          | 385     | 1       | 0          | 541     | 20      | 27        | 0       | 5       | 2         | 1       | 6       | 994   |
| 5:45 PM | 6          | 343     | 2       | 2          | 561     | 17      | 19        | 0       | 12      | 0         | 0       | 7       | 969   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 1      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |

|                        |          |            |         |         |            |           |           |         |          |          |         |          |               |
|------------------------|----------|------------|---------|---------|------------|-----------|-----------|---------|----------|----------|---------|----------|---------------|
| <b>TOTAL VOLUMES :</b> | NL<br>79 | NT<br>2905 | NR<br>7 | SL<br>4 | ST<br>4230 | SR<br>131 | EL<br>168 | ET<br>0 | ER<br>78 | WL<br>19 | WT<br>6 | WR<br>38 | TOTAL<br>7665 |
| <b>APPROACH %'s :</b>  | 2.64%    | 97.12%     | 0.23%   | 0.09%   | 96.91%     | 3.00%     | 68.29%    | 0.00%   | 31.71%   | 30.16%   | 9.52%   | 60.32%   |               |

|         |         |         |         |
|---------|---------|---------|---------|
| NB<br>1 | SB<br>0 | EB<br>0 | WB<br>0 |
|---------|---------|---------|---------|

|                             |        |      |   |       |      |    |       |   |    |       |   |    |       |
|-----------------------------|--------|------|---|-------|------|----|-------|---|----|-------|---|----|-------|
| <b>PEAK HR START TIME :</b> | 445 PM |      |   |       |      |    |       |   |    |       |   |    | TOTAL |
| <b>PEAK HR VOL :</b>        | 41     | 1512 | 3 | 1     | 2174 | 71 | 90    | 0 | 42 | 14    | 4 | 12 | 3964  |
| <b>PEAK HR FACTOR :</b>     | 0.975  |      |   | 0.980 |      |    | 0.825 |   |    | 0.750 |   |    | 0.985 |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-007

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

|                       |                   |                   |         |         |
|-----------------------|-------------------|-------------------|---------|---------|
| <b>NS/EW Streets:</b> | Pacific Coast Hwy | Pacific Coast Hwy | 16th St | 16th St |
|-----------------------|-------------------|-------------------|---------|---------|

| LANES:  | NORTHBOUND |         |         | SOUTHBOUND |         |         | EASTBOUND |         |         | WESTBOUND |         |         | TOTAL |
|---------|------------|---------|---------|------------|---------|---------|-----------|---------|---------|-----------|---------|---------|-------|
|         | NL<br>1    | NT<br>3 | NR<br>0 | SL<br>1    | ST<br>2 | SR<br>1 | EL<br>1   | ET<br>0 | ER<br>1 | WL<br>1   | WT<br>0 | WR<br>1 |       |
| 7:00 AM | 13         | 598     | 1       | 1          | 140     | 26      | 20        | 0       | 12      | 0         | 0       | 1       | 812   |
| 7:15 AM | 19         | 527     | 3       | 0          | 174     | 24      | 7         | 0       | 18      | 1         | 0       | 1       | 774   |
| 7:30 AM | 17         | 416     | 11      | 3          | 156     | 26      | 14        | 0       | 11      | 2         | 0       | 3       | 659   |
| 7:45 AM | 13         | 316     | 9       | 2          | 163     | 31      | 25        | 0       | 18      | 5         | 0       | 2       | 584   |
| 8:00 AM | 17         | 392     | 16      | 4          | 201     | 30      | 16        | 0       | 15      | 4         | 0       | 3       | 698   |
| 8:15 AM | 19         | 369     | 22      | 4          | 210     | 30      | 29        | 0       | 19      | 10        | 0       | 8       | 720   |
| 8:30 AM | 25         | 349     | 5       | 4          | 230     | 48      | 17        | 0       | 18      | 5         | 0       | 9       | 710   |
| 8:45 AM | 18         | 466     | 4       | 3          | 228     | 38      | 14        | 0       | 10      | 7         | 0       | 4       | 792   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |

|   |   |   |   |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 |
| 0 | 1 | 0 | 0 |
| 0 | 1 | 0 | 0 |
| 1 | 0 | 0 | 0 |

|                        |           |            |          |          |            |           |           |         |           |          |         |          |               |
|------------------------|-----------|------------|----------|----------|------------|-----------|-----------|---------|-----------|----------|---------|----------|---------------|
| <b>TOTAL VOLUMES :</b> | NL<br>141 | NT<br>3433 | NR<br>71 | SL<br>21 | ST<br>1502 | SR<br>253 | EL<br>142 | ET<br>0 | ER<br>121 | WL<br>34 | WT<br>0 | WR<br>31 | TOTAL<br>5749 |
| <b>APPROACH %'s :</b>  | 3.87%     | 94.18%     | 1.95%    | 1.18%    | 84.57%     | 14.25%    | 53.99%    | 0.00%   | 46.01%    | 52.31%   | 0.00%   | 47.69%   |               |

|         |         |         |         |
|---------|---------|---------|---------|
| NB<br>3 | SB<br>2 | EB<br>0 | WB<br>0 |
|---------|---------|---------|---------|

|                             |        |      |    |       |     |     |       |   |    |       |   |    |       |
|-----------------------------|--------|------|----|-------|-----|-----|-------|---|----|-------|---|----|-------|
| <b>PEAK HR START TIME :</b> | 800 AM |      |    |       |     |     |       |   |    |       |   |    | TOTAL |
| <b>PEAK HR VOL :</b>        | 79     | 1576 | 47 | 15    | 869 | 146 | 76    | 0 | 62 | 26    | 0 | 24 | 2920  |
| <b>PEAK HR FACTOR :</b>     | 0.872  |      |    | 0.913 |     |     | 0.719 |   |    | 0.694 |   |    | 0.922 |

**CONTROL :** Signalized



# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-007

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

**NS/EW Streets:**

| LANES:                      | Pacific Coast Hwy |        |       | Pacific Coast Hwy |        |        | 16th St   |       |        | 16th St   |       |        | TOTAL |              |
|-----------------------------|-------------------|--------|-------|-------------------|--------|--------|-----------|-------|--------|-----------|-------|--------|-------|--------------|
|                             | NORTHBOUND        |        |       | SOUTHBOUND        |        |        | EASTBOUND |       |        | WESTBOUND |       |        |       |              |
|                             | NL                | NT     | NR    | SL                | ST     | SR     | EL        | ET    | ER     | WL        | WT    | WR     |       |              |
|                             | 1                 | 3      | 0     | 1                 | 2      | 1      | 1         | 0     | 1      | 1         | 0     | 1      |       |              |
| 4:00 PM                     | 12                | 255    | 5     | 1                 | 404    | 61     | 33        | 0     | 27     | 5         | 0     | 1      | 804   |              |
| 4:15 PM                     | 19                | 263    | 7     | 0                 | 455    | 50     | 28        | 0     | 19     | 5         | 0     | 3      | 849   |              |
| 4:30 PM                     | 33                | 295    | 9     | 3                 | 460    | 57     | 32        | 0     | 17     | 4         | 0     | 1      | 911   |              |
| 4:45 PM                     | 30                | 284    | 4     | 0                 | 486    | 47     | 18        | 0     | 21     | 5         | 0     | 2      | 897   |              |
| 5:00 PM                     | 10                | 265    | 3     | 0                 | 475    | 42     | 34        | 0     | 24     | 2         | 0     | 0      | 855   |              |
| 5:15 PM                     | 29                | 290    | 8     | 0                 | 455    | 57     | 27        | 0     | 23     | 5         | 0     | 0      | 894   |              |
| 5:30 PM                     | 25                | 288    | 3     | 2                 | 447    | 58     | 28        | 0     | 28     | 2         | 0     | 1      | 882   |              |
| 5:45 PM                     | 19                | 270    | 3     | 2                 | 467    | 42     | 36        | 0     | 22     | 6         | 0     | 1      | 868   |              |
| <b>TOTAL VOLUMES :</b>      | 177               | 2210   | 42    | 8                 | 3649   | 414    | 236       | 0     | 181    | 34        | 0     | 9      | 6960  |              |
| <b>APPROACH %'s :</b>       | 7.29%             | 90.98% | 1.73% | 0.20%             | 89.63% | 10.17% | 56.59%    | 0.00% | 43.41% | 79.07%    | 0.00% | 20.93% |       |              |
| <b>PEAK HR START TIME :</b> | 430 PM            |        |       |                   |        |        |           |       |        |           |       |        |       | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 102               | 1134   | 24    | 3                 | 1876   | 203    | 111       | 0     | 85     | 16        | 0     | 3      | 3557  |              |
| <b>PEAK HR FACTOR :</b>     | 0.935             |        |       | 0.977             |        |        | 0.845     |       |        | 0.679     |       |        | 0.976 |              |

| UTURNS    |           |           |           |
|-----------|-----------|-----------|-----------|
| NB        | SB        | EB        | WB        |
| 0         | 0         | 0         | 0         |
| 0         | 0         | 0         | 0         |
| 1         | 1         | 0         | 0         |
| 2         | 0         | 0         | 0         |
| 0         | 0         | 0         | 0         |
| 2         | 0         | 0         | 0         |
| 2         | 1         | 0         | 0         |
| 1         | 0         | 0         | 0         |
| <b>NB</b> | <b>SB</b> | <b>EB</b> | <b>WB</b> |
| 8         | 2         | 0         | 0         |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-008

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

| NS/EW Streets: | Pacific Coast Hwy | Pacific Coast Hwy | 21st St | 21st St |
|----------------|-------------------|-------------------|---------|---------|
|----------------|-------------------|-------------------|---------|---------|

| LANES:  | NORTHBOUND |         |         | SOUTHBOUND |         |         | EASTBOUND |         |         | WESTBOUND |         |         | TOTAL |
|---------|------------|---------|---------|------------|---------|---------|-----------|---------|---------|-----------|---------|---------|-------|
|         | NL<br>1    | NT<br>3 | NR<br>0 | SL<br>1    | ST<br>3 | SR<br>0 | EL<br>0   | ET<br>1 | ER<br>0 | WL<br>0   | WT<br>1 | WR<br>0 |       |
| 7:00 AM | 32         | 529     | 9       | 1          | 149     | 6       | 14        | 8       | 8       | 7         | 7       | 6       | 776   |
| 7:15 AM | 18         | 476     | 5       | 4          | 182     | 8       | 7         | 16      | 1       | 4         | 7       | 14      | 742   |
| 7:30 AM | 34         | 398     | 11      | 3          | 175     | 7       | 8         | 29      | 2       | 13        | 17      | 10      | 707   |
| 7:45 AM | 36         | 260     | 11      | 6          | 181     | 5       | 20        | 20      | 3       | 7         | 33      | 7       | 589   |
| 8:00 AM | 12         | 361     | 6       | 8          | 198     | 14      | 10        | 25      | 6       | 10        | 14      | 11      | 675   |
| 8:15 AM | 14         | 335     | 12      | 10         | 218     | 4       | 10        | 27      | 2       | 18        | 13      | 8       | 671   |
| 8:30 AM | 18         | 336     | 11      | 5          | 257     | 10      | 19        | 16      | 7       | 19        | 28      | 11      | 737   |
| 8:45 AM | 15         | 485     | 9       | 6          | 256     | 4       | 33        | 23      | 5       | 8         | 20      | 5       | 869   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 1  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |

|                        |           |            |          |          |            |          |           |           |          |          |           |          |               |
|------------------------|-----------|------------|----------|----------|------------|----------|-----------|-----------|----------|----------|-----------|----------|---------------|
| <b>TOTAL VOLUMES :</b> | NL<br>179 | NT<br>3180 | NR<br>74 | SL<br>43 | ST<br>1616 | SR<br>58 | EL<br>121 | ET<br>164 | ER<br>34 | WL<br>86 | WT<br>139 | WR<br>72 | TOTAL<br>5766 |
| <b>APPROACH %'s :</b>  | 5.21%     | 92.63%     | 2.16%    | 2.50%    | 94.12%     | 3.38%    | 37.93%    | 51.41%    | 10.66%   | 28.96%   | 46.80%    | 24.24%   |               |

|    |    |    |    |
|----|----|----|----|
| NB | SB | EB | WB |
| 0  | 0  | 0  | 1  |

|                             |        |      |    |       |     |    |       |    |    |       |    |    |       |
|-----------------------------|--------|------|----|-------|-----|----|-------|----|----|-------|----|----|-------|
| <b>PEAK HR START TIME :</b> | 800 AM |      |    |       |     |    |       |    |    |       |    |    | TOTAL |
| <b>PEAK HR VOL :</b>        | 59     | 1517 | 38 | 29    | 929 | 32 | 72    | 91 | 20 | 55    | 75 | 35 | 2952  |
| <b>PEAK HR FACTOR :</b>     | 0.793  |      |    | 0.910 |     |    | 0.750 |    |    | 0.711 |    |    | 0.849 |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-008

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

**NS/EW Streets:**

|                   |                   |         |         |
|-------------------|-------------------|---------|---------|
| Pacific Coast Hwy | Pacific Coast Hwy | 21st St | 21st St |
|-------------------|-------------------|---------|---------|

| LANES:  | NORTHBOUND |         |         | SOUTHBOUND |         |         | EASTBOUND |         |         | WESTBOUND |         |         | TOTAL |
|---------|------------|---------|---------|------------|---------|---------|-----------|---------|---------|-----------|---------|---------|-------|
|         | NL<br>1    | NT<br>3 | NR<br>0 | SL<br>1    | ST<br>3 | SR<br>0 | EL<br>0   | ET<br>1 | ER<br>0 | WL<br>0   | WT<br>1 | WR<br>0 |       |
| 4:00 PM | 14         | 282     | 0       | 14         | 475     | 9       | 6         | 7       | 2       | 11        | 7       | 5       | 832   |
| 4:15 PM | 8          | 293     | 3       | 11         | 523     | 21      | 7         | 9       | 4       | 9         | 5       | 7       | 900   |
| 4:30 PM | 9          | 287     | 9       | 11         | 520     | 12      | 5         | 15      | 6       | 5         | 11      | 1       | 891   |
| 4:45 PM | 8          | 272     | 11      | 14         | 544     | 15      | 8         | 10      | 10      | 5         | 15      | 2       | 914   |
| 5:00 PM | 11         | 281     | 5       | 25         | 546     | 19      | 3         | 9       | 4       | 8         | 12      | 7       | 930   |
| 5:15 PM | 10         | 311     | 3       | 15         | 517     | 11      | 4         | 12      | 5       | 6         | 16      | 9       | 919   |
| 5:30 PM | 16         | 294     | 5       | 15         | 555     | 25      | 5         | 9       | 4       | 6         | 11      | 4       | 949   |
| 5:45 PM | 13         | 296     | 4       | 23         | 553     | 28      | 6         | 9       | 4       | 1         | 8       | 2       | 947   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 1      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 1  | 0  | 0  |
| 0      | 1  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |

|                        |          |            |          |           |            |           |          |          |          |          |          |          |               |
|------------------------|----------|------------|----------|-----------|------------|-----------|----------|----------|----------|----------|----------|----------|---------------|
| <b>TOTAL VOLUMES :</b> | NL<br>89 | NT<br>2316 | NR<br>40 | SL<br>128 | ST<br>4233 | SR<br>140 | EL<br>44 | ET<br>80 | ER<br>39 | WL<br>51 | WT<br>85 | WR<br>37 | TOTAL<br>7282 |
| <b>APPROACH %'s :</b>  | 3.64%    | 94.72%     | 1.64%    | 2.84%     | 94.05%     | 3.11%     | 26.99%   | 49.08%   | 23.93%   | 29.48%   | 49.13%   | 21.39%   |               |

|         |         |         |         |
|---------|---------|---------|---------|
| NB<br>1 | SB<br>2 | EB<br>0 | WB<br>0 |
|---------|---------|---------|---------|

|                             |        |      |    |       |      |    |       |    |    |       |    |    |       |
|-----------------------------|--------|------|----|-------|------|----|-------|----|----|-------|----|----|-------|
| <b>PEAK HR START TIME :</b> | 500 PM |      |    |       |      |    |       |    |    |       |    |    | TOTAL |
| <b>PEAK HR VOL :</b>        | 50     | 1182 | 17 | 78    | 2171 | 83 | 18    | 39 | 17 | 21    | 47 | 22 | 3745  |
| <b>PEAK HR FACTOR :</b>     | 0.964  |      |    | 0.965 |      |    | 0.881 |    |    | 0.726 |    |    | 0.987 |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-009

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

|                       |              |              |              |              |
|-----------------------|--------------|--------------|--------------|--------------|
| <b>NS/EW Streets:</b> | Prospect Ave | Prospect Ave | Artesia Blvd | Artesia Blvd |
|-----------------------|--------------|--------------|--------------|--------------|

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
| 7:00 AM | 27         | 4  | 37 | 12         | 1  | 3  | 8         | 114 | 3  | 12        | 176 | 16 | 413   |
| 7:15 AM | 34         | 13 | 53 | 5          | 4  | 2  | 10        | 138 | 8  | 19        | 188 | 10 | 484   |
| 7:30 AM | 37         | 40 | 84 | 11         | 9  | 13 | 16        | 206 | 7  | 31        | 251 | 17 | 722   |
| 7:45 AM | 45         | 37 | 91 | 8          | 11 | 17 | 16        | 164 | 16 | 38        | 298 | 28 | 769   |
| 8:00 AM | 31         | 28 | 62 | 4          | 9  | 8  | 5         | 127 | 29 | 28        | 273 | 37 | 641   |
| 8:15 AM | 47         | 30 | 83 | 7          | 4  | 5  | 15        | 144 | 27 | 26        | 269 | 21 | 678   |
| 8:30 AM | 61         | 28 | 91 | 8          | 6  | 5  | 7         | 133 | 12 | 22        | 269 | 26 | 668   |
| 8:45 AM | 50         | 18 | 74 | 12         | 9  | 4  | 9         | 153 | 11 | 41        | 286 | 26 | 693   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 3  | 1  |
| 0      | 0  | 3  | 0  |
| 0      | 0  | 0  | 3  |
| 1      | 0  | 0  | 3  |
| 0      | 0  | 1  | 1  |
| 0      | 0  | 4  | 0  |
| 0      | 0  | 1  | 1  |
| 0      | 0  | 1  | 3  |

|                        |        |        |        |        |        |        |       |        |       |       |        |       |       |
|------------------------|--------|--------|--------|--------|--------|--------|-------|--------|-------|-------|--------|-------|-------|
| <b>TOTAL VOLUMES :</b> | NL     | NT     | NR     | SL     | ST     | SR     | EL    | ET     | ER    | WL    | WT     | WR    | TOTAL |
| <b>APPROACH %'s :</b>  | 332    | 198    | 575    | 67     | 53     | 57     | 86    | 1179   | 113   | 217   | 2010   | 181   | 5068  |
|                        | 30.05% | 17.92% | 52.04% | 37.85% | 29.94% | 32.20% | 6.24% | 85.56% | 8.20% | 9.01% | 83.47% | 7.52% |       |

|    |    |    |    |
|----|----|----|----|
| NB | SB | EB | WB |
| 1  | 0  | 13 | 12 |

|                             |        |     |     |       |    |    |       |     |    |       |      |     |              |
|-----------------------------|--------|-----|-----|-------|----|----|-------|-----|----|-------|------|-----|--------------|
| <b>PEAK HR START TIME :</b> | 730 AM |     |     |       |    |    |       |     |    |       |      |     | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 160    | 135 | 320 | 30    | 33 | 43 | 52    | 641 | 79 | 123   | 1091 | 103 | 2810         |
| <b>PEAK HR FACTOR :</b>     | 0.889  |     |     | 0.736 |    |    | 0.843 |     |    | 0.905 |      |     | 0.914        |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-009

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

| NS/EW Streets:              | Prospect Ave |          | Prospect Ave |            |           | Artesia Blvd |           |            | Artesia Blvd |           |            | TOTAL    |               |
|-----------------------------|--------------|----------|--------------|------------|-----------|--------------|-----------|------------|--------------|-----------|------------|----------|---------------|
|                             | NORTHBOUND   |          |              | SOUTHBOUND |           |              | EASTBOUND |            |              | WESTBOUND |            |          |               |
| LANES:                      | NL<br>0      | NT<br>1  | NR<br>1      | SL<br>0    | ST<br>1   | SR<br>0      | EL<br>1   | ET<br>2    | ER<br>0      | WL<br>1   | WT<br>2    | WR<br>0  |               |
| 4:00 PM                     | 24           | 7        | 35           | 13         | 19        | 7            | 12        | 218        | 36           | 31        | 190        | 7        | 599           |
| 4:15 PM                     | 32           | 12       | 29           | 12         | 17        | 15           | 8         | 215        | 27           | 43        | 207        | 9        | 626           |
| 4:30 PM                     | 26           | 10       | 36           | 10         | 13        | 13           | 4         | 255        | 28           | 33        | 213        | 8        | 649           |
| 4:45 PM                     | 31           | 8        | 34           | 18         | 23        | 9            | 7         | 239        | 20           | 32        | 220        | 3        | 644           |
| 5:00 PM                     | 25           | 8        | 33           | 16         | 34        | 6            | 12        | 275        | 40           | 59        | 193        | 4        | 705           |
| 5:15 PM                     | 41           | 10       | 40           | 16         | 19        | 10           | 14        | 249        | 27           | 37        | 175        | 11       | 649           |
| 5:30 PM                     | 28           | 5        | 31           | 13         | 16        | 11           | 13        | 238        | 22           | 49        | 207        | 11       | 644           |
| 5:45 PM                     | 30           | 6        | 36           | 22         | 22        | 8            | 5         | 233        | 30           | 35        | 167        | 12       | 606           |
| <b>TOTAL VOLUMES :</b>      | NL<br>237    | NT<br>66 | NR<br>274    | SL<br>120  | ST<br>163 | SR<br>79     | EL<br>75  | ET<br>1922 | ER<br>230    | WL<br>319 | WT<br>1572 | WR<br>65 | TOTAL<br>5122 |
| <b>APPROACH %'s :</b>       | 41.07%       | 11.44%   | 47.49%       | 33.15%     | 45.03%    | 21.82%       | 3.37%     | 86.30%     | 10.33%       | 16.31%    | 80.37%     | 3.32%    |               |
| <b>PEAK HR START TIME :</b> | 430 PM       |          |              |            |           |              |           |            |              |           |            |          | TOTAL         |
| <b>PEAK HR VOL :</b>        | 123          | 36       | 143          | 60         | 89        | 38           | 37        | 1018       | 115          | 161       | 801        | 26       | 2647          |
| <b>PEAK HR FACTOR :</b>     | 0.830        |          | 0.835        |            |           | 0.894        |           |            | 0.965        |           |            | 0.939    |               |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 3  | 2  |
| 0      | 0  | 0  | 2  |
| 0      | 0  | 2  | 0  |
| 0      | 0  | 5  | 0  |
| 0      | 0  | 2  | 2  |
| 0      | 0  | 5  | 0  |
| 0      | 0  | 3  | 0  |
| 0      | 0  | 1  | 0  |
| NB     | SB | EB | WB |
| 0      | 0  | 21 | 6  |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-010

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

|                       |              |              |               |               |
|-----------------------|--------------|--------------|---------------|---------------|
| <b>NS/EW Streets:</b> | Prospect Ave | Prospect Ave | Aviation Blvd | Aviation Blvd |
|-----------------------|--------------|--------------|---------------|---------------|

| LANES:  | NORTHBOUND |         |         | SOUTHBOUND |         |         | EASTBOUND |         |         | WESTBOUND |         |         | TOTAL |
|---------|------------|---------|---------|------------|---------|---------|-----------|---------|---------|-----------|---------|---------|-------|
|         | NL<br>1    | NT<br>1 | NR<br>1 | SL<br>1    | ST<br>1 | SR<br>1 | EL<br>1   | ET<br>2 | ER<br>1 | WL<br>1   | WT<br>2 | WR<br>0 |       |
| 7:00 AM | 16         | 31      | 76      | 13         | 6       | 10      | 2         | 203     | 7       | 19        | 105     | 6       | 494   |
| 7:15 AM | 10         | 42      | 70      | 8          | 20      | 8       | 1         | 209     | 1       | 50        | 161     | 5       | 585   |
| 7:30 AM | 13         | 62      | 83      | 11         | 22      | 9       | 9         | 203     | 5       | 51        | 195     | 9       | 672   |
| 7:45 AM | 28         | 63      | 103     | 13         | 28      | 11      | 9         | 195     | 3       | 45        | 173     | 9       | 680   |
| 8:00 AM | 29         | 75      | 103     | 8          | 24      | 10      | 21        | 185     | 6       | 33        | 168     | 12      | 674   |
| 8:15 AM | 26         | 82      | 101     | 14         | 31      | 17      | 31        | 178     | 9       | 37        | 174     | 20      | 720   |
| 8:30 AM | 19         | 71      | 122     | 22         | 34      | 27      | 23        | 198     | 14      | 38        | 206     | 16      | 790   |
| 8:45 AM | 26         | 65      | 104     | 18         | 36      | 19      | 5         | 191     | 5       | 47        | 200     | 8       | 724   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
|        |    |    |    |

|                        |           |           |           |           |           |           |           |            |          |           |            |          |               |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|----------|-----------|------------|----------|---------------|
| <b>TOTAL VOLUMES :</b> | NL<br>167 | NT<br>491 | NR<br>762 | SL<br>107 | ST<br>201 | SR<br>111 | EL<br>101 | ET<br>1562 | ER<br>50 | WL<br>320 | WT<br>1382 | WR<br>85 | TOTAL<br>5339 |
| <b>APPROACH %'s :</b>  | 11.76%    | 34.58%    | 53.66%    | 25.54%    | 47.97%    | 26.49%    | 5.90%     | 91.19%     | 2.92%    | 17.91%    | 77.34%     | 4.76%    |               |

|         |         |         |         |
|---------|---------|---------|---------|
| NB<br>0 | SB<br>0 | EB<br>0 | WB<br>0 |
|---------|---------|---------|---------|

|                             |        |     |     |       |     |    |       |     |    |       |     |    |       |
|-----------------------------|--------|-----|-----|-------|-----|----|-------|-----|----|-------|-----|----|-------|
| <b>PEAK HR START TIME :</b> | 800 AM |     |     |       |     |    |       |     |    |       |     |    | TOTAL |
| <b>PEAK HR VOL :</b>        | 100    | 293 | 430 | 62    | 125 | 73 | 80    | 752 | 34 | 155   | 748 | 56 | 2908  |
| <b>PEAK HR FACTOR :</b>     | 0.971  |     |     | 0.783 |     |    | 0.921 |     |    | 0.922 |     |    | 0.920 |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-010

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

| NS/EW Streets:              | Prospect Ave |         |         | Prospect Ave |         |         | Aviation Blvd |         |         | Aviation Blvd |         |         | TOTAL |              |
|-----------------------------|--------------|---------|---------|--------------|---------|---------|---------------|---------|---------|---------------|---------|---------|-------|--------------|
|                             | NORTHBOUND   |         |         | SOUTHBOUND   |         |         | EASTBOUND     |         |         | WESTBOUND     |         |         |       |              |
| LANES:                      | NL<br>1      | NT<br>1 | NR<br>1 | SL<br>1      | ST<br>1 | SR<br>1 | EL<br>1       | ET<br>2 | ER<br>1 | WL<br>1       | WT<br>2 | WR<br>0 |       |              |
| 4:00 PM                     | 16           | 39      | 40      | 17           | 52      | 13      | 8             | 197     | 20      | 63            | 194     | 8       | 667   |              |
| 4:15 PM                     | 20           | 49      | 38      | 28           | 54      | 13      | 5             | 155     | 15      | 71            | 183     | 13      | 644   |              |
| 4:30 PM                     | 13           | 36      | 54      | 30           | 66      | 13      | 5             | 169     | 12      | 76            | 195     | 15      | 684   |              |
| 4:45 PM                     | 20           | 45      | 48      | 20           | 56      | 13      | 10            | 168     | 18      | 70            | 243     | 11      | 722   |              |
| 5:00 PM                     | 12           | 36      | 46      | 32           | 76      | 18      | 8             | 207     | 18      | 93            | 248     | 7       | 801   |              |
| 5:15 PM                     | 15           | 62      | 45      | 34           | 85      | 19      | 8             | 173     | 21      | 75            | 204     | 7       | 748   |              |
| 5:30 PM                     | 13           | 40      | 52      | 22           | 96      | 17      | 9             | 159     | 16      | 84            | 210     | 14      | 732   |              |
| 5:45 PM                     | 18           | 46      | 60      | 28           | 68      | 8       | 9             | 160     | 12      | 77            | 227     | 10      | 723   |              |
| <b>TOTAL VOLUMES :</b>      | 127          | 353     | 383     | 211          | 553     | 114     | 62            | 1388    | 132     | 609           | 1704    | 85      | 5721  |              |
| <b>APPROACH %'s :</b>       | 14.72%       | 40.90%  | 44.38%  | 24.03%       | 62.98%  | 12.98%  | 3.92%         | 87.74%  | 8.34%   | 25.40%        | 71.06%  | 3.54%   |       |              |
| <b>PEAK HR START TIME :</b> | 500 PM       |         |         |              |         |         |               |         |         |               |         |         |       | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 58           | 184     | 203     | 116          | 325     | 62      | 34            | 699     | 67      | 329           | 889     | 38      | 3004  |              |
| <b>PEAK HR FACTOR :</b>     | 0.897        |         |         | 0.911        |         |         | 0.858         |         |         | 0.902         |         |         | 0.938 |              |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |

|         |         |         |         |
|---------|---------|---------|---------|
| NB<br>0 | SB<br>0 | EB<br>0 | WB<br>0 |
|---------|---------|---------|---------|

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-011

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

|                       |              |              |          |          |
|-----------------------|--------------|--------------|----------|----------|
| <b>NS/EW Streets:</b> | Prospect Ave | Prospect Ave | Anita St | Anita St |
|-----------------------|--------------|--------------|----------|----------|

| LANES:  | NORTHBOUND |         |         | SOUTHBOUND |         |         | EASTBOUND |         |         | WESTBOUND |         |         | TOTAL |
|---------|------------|---------|---------|------------|---------|---------|-----------|---------|---------|-----------|---------|---------|-------|
|         | NL<br>1    | NT<br>1 | NR<br>1 | SL<br>1    | ST<br>2 | SR<br>0 | EL<br>1   | ET<br>2 | ER<br>0 | WL<br>1   | WT<br>2 | WR<br>0 |       |
| 7:00 AM | 51         | 87      | 14      | 7          | 44      | 3       | 1         | 87      | 10      | 21        | 112     | 14      | 451   |
| 7:15 AM | 47         | 69      | 18      | 10         | 83      | 7       | 1         | 93      | 13      | 46        | 150     | 20      | 557   |
| 7:30 AM | 60         | 114     | 53      | 10         | 120     | 8       | 5         | 118     | 20      | 63        | 212     | 15      | 798   |
| 7:45 AM | 55         | 115     | 74      | 12         | 49      | 2       | 12        | 160     | 20      | 34        | 198     | 22      | 753   |
| 8:00 AM | 70         | 119     | 52      | 19         | 62      | 12      | 22        | 139     | 15      | 22        | 180     | 21      | 733   |
| 8:15 AM | 59         | 130     | 43      | 13         | 68      | 13      | 25        | 110     | 23      | 25        | 137     | 28      | 674   |
| 8:30 AM | 55         | 134     | 31      | 20         | 76      | 4       | 10        | 105     | 25      | 24        | 131     | 20      | 635   |
| 8:45 AM | 50         | 120     | 38      | 16         | 53      | 9       | 24        | 103     | 17      | 25        | 172     | 23      | 650   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 1  |
| 0      | 0  | 1  | 0  |
| 0      | 0  | 1  | 2  |
| 0      | 0  | 1  | 0  |

|                        |           |           |           |           |           |          |           |           |           |           |            |           |               |
|------------------------|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|------------|-----------|---------------|
| <b>TOTAL VOLUMES :</b> | NL<br>447 | NT<br>888 | NR<br>323 | SL<br>107 | ST<br>555 | SR<br>58 | EL<br>100 | ET<br>915 | ER<br>143 | WL<br>260 | WT<br>1292 | WR<br>163 | TOTAL<br>5251 |
| <b>APPROACH %'s :</b>  | 26.96%    | 53.56%    | 19.48%    | 14.86%    | 77.08%    | 8.06%    | 8.64%     | 79.02%    | 12.35%    | 15.16%    | 75.34%     | 9.50%     |               |

|         |         |         |         |
|---------|---------|---------|---------|
| NB<br>0 | SB<br>0 | EB<br>3 | WB<br>3 |
|---------|---------|---------|---------|

|                             |        |     |     |       |     |    |       |     |    |       |     |    |              |
|-----------------------------|--------|-----|-----|-------|-----|----|-------|-----|----|-------|-----|----|--------------|
| <b>PEAK HR START TIME :</b> | 730 AM |     |     |       |     |    |       |     |    |       |     |    | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 244    | 478 | 222 | 54    | 299 | 35 | 64    | 527 | 78 | 144   | 727 | 86 | 2958         |
| <b>PEAK HR FACTOR :</b>     | 0.967  |     |     | 0.703 |     |    | 0.871 |     |    | 0.825 |     |    | 0.927        |

**CONTROL :** Signalized



# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-011

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

| NS/EW Streets:              | Prospect Ave |           | Prospect Ave |            |           | Anita St |           |            | Anita St  |           |            | TOTAL     |               |
|-----------------------------|--------------|-----------|--------------|------------|-----------|----------|-----------|------------|-----------|-----------|------------|-----------|---------------|
|                             | NORTHBOUND   |           |              | SOUTHBOUND |           |          | EASTBOUND |            |           | WESTBOUND |            |           |               |
| LANES:                      | NL<br>1      | NT<br>1   | NR<br>1      | SL<br>1    | ST<br>2   | SR<br>0  | EL<br>1   | ET<br>2    | ER<br>0   | WL<br>1   | WT<br>2    | WR<br>0   |               |
| 4:00 PM                     | 36           | 70        | 20           | 12         | 96        | 11       | 3         | 152        | 16        | 11        | 130        | 18        | 575           |
| 4:15 PM                     | 23           | 58        | 10           | 17         | 120       | 12       | 5         | 151        | 21        | 21        | 155        | 28        | 621           |
| 4:30 PM                     | 23           | 95        | 20           | 23         | 119       | 16       | 3         | 108        | 18        | 21        | 144        | 24        | 614           |
| 4:45 PM                     | 36           | 68        | 9            | 22         | 101       | 10       | 3         | 127        | 25        | 29        | 177        | 27        | 634           |
| 5:00 PM                     | 35           | 81        | 29           | 23         | 125       | 11       | 7         | 159        | 24        | 22        | 140        | 16        | 672           |
| 5:15 PM                     | 37           | 99        | 22           | 25         | 141       | 10       | 8         | 122        | 17        | 24        | 185        | 32        | 722           |
| 5:30 PM                     | 40           | 98        | 24           | 19         | 127       | 16       | 10        | 141        | 21        | 19        | 181        | 31        | 727           |
| 5:45 PM                     | 33           | 77        | 19           | 19         | 142       | 13       | 6         | 129        | 21        | 25        | 194        | 22        | 700           |
| <b>TOTAL VOLUMES :</b>      | NL<br>263    | NT<br>646 | NR<br>153    | SL<br>160  | ST<br>971 | SR<br>99 | EL<br>45  | ET<br>1089 | ER<br>163 | WL<br>172 | WT<br>1306 | WR<br>198 | TOTAL<br>5265 |
| <b>APPROACH %'s :</b>       | 24.76%       | 60.83%    | 14.41%       | 13.01%     | 78.94%    | 8.05%    | 3.47%     | 83.96%     | 12.57%    | 10.26%    | 77.92%     | 11.81%    |               |
| <b>PEAK HR START TIME :</b> | 500 PM       |           |              |            |           |          |           |            |           |           |            |           | TOTAL         |
| <b>PEAK HR VOL :</b>        | 145          | 355       | 94           | 86         | 535       | 50       | 31        | 551        | 83        | 90        | 700        | 101       | 2821          |
| <b>PEAK HR FACTOR :</b>     | 0.917        |           |              | 0.953      |           |          |           | 0.875      |           |           | 0.924      |           | 0.970         |

| UTURNS  |         |         |         |
|---------|---------|---------|---------|
| NB      | SB      | EB      | WB      |
| 0       | 0       | 0       | 0       |
| 0       | 0       | 0       | 3       |
| 0       | 0       | 1       | 0       |
| 0       | 0       | 0       | 1       |
| 0       | 0       | 1       | 0       |
| 0       | 0       | 1       | 0       |
| 0       | 0       | 0       | 0       |
| 0       | 0       | 0       | 0       |
| NB<br>0 | SB<br>0 | EB<br>3 | WB<br>4 |

**CONTROL :** Signalized

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-012

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

| NS/EW Streets:              | Manhattan Ave |        | Manhattan Ave |            |        | 27th St |           |         | 27th St |           |        | TOTAL  |       |              |
|-----------------------------|---------------|--------|---------------|------------|--------|---------|-----------|---------|---------|-----------|--------|--------|-------|--------------|
|                             | NORTHBOUND    |        |               | SOUTHBOUND |        |         | EASTBOUND |         |         | WESTBOUND |        |        |       |              |
| LANES:                      | NL            | NT     | NR            | SL         | ST     | SR      | EL        | ET      | ER      | WL        | WT     | WR     |       |              |
|                             | 0             | 1      | 0             | 1          | 1      | 0       | 0         | 1       | 0       | 0         | 1      | 0      |       |              |
| 7:00 AM                     | 0             | 32     | 14            | 12         | 5      | 0       | 0         | 1       | 0       | 1         | 3      | 8      | 76    |              |
| 7:15 AM                     | 1             | 41     | 14            | 9          | 6      | 0       | 0         | 0       | 0       | 6         | 2      | 12     | 91    |              |
| 7:30 AM                     | 0             | 49     | 16            | 16         | 9      | 0       | 0         | 0       | 0       | 12        | 3      | 9      | 114   |              |
| 7:45 AM                     | 1             | 84     | 15            | 14         | 30     | 1       | 0         | 0       | 0       | 14        | 4      | 20     | 183   |              |
| 8:00 AM                     | 1             | 84     | 30            | 18         | 27     | 0       | 0         | 0       | 0       | 13        | 4      | 20     | 197   |              |
| 8:15 AM                     | 0             | 75     | 23            | 16         | 23     | 0       | 0         | 0       | 0       | 7         | 3      | 16     | 163   |              |
| 8:30 AM                     | 1             | 51     | 21            | 18         | 16     | 1       | 0         | 0       | 0       | 5         | 3      | 15     | 131   |              |
| 8:45 AM                     | 1             | 73     | 26            | 8          | 20     | 0       | 0         | 0       | 0       | 13        | 2      | 14     | 157   |              |
| <b>TOTAL VOLUMES :</b>      | 5             | 489    | 159           | 111        | 136    | 2       | 0         | 1       | 0       | 71        | 24     | 114    | 1112  |              |
| <b>APPROACH %'s :</b>       | 0.77%         | 74.89% | 24.35%        | 44.58%     | 54.62% | 0.80%   | 0.00%     | 100.00% | 0.00%   | 33.97%    | 11.48% | 54.55% |       |              |
| <b>PEAK HR START TIME :</b> | 745 AM        |        |               |            |        |         |           |         |         |           |        |        |       | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 3             | 294    | 89            | 66         | 96     | 2       | 0         | 0       | 0       | 39        | 14     | 71     | 674   |              |
| <b>PEAK HR FACTOR :</b>     | 0.839         |        |               | 0.911      |        |         | 0.000     |         |         | 0.816     |        |        | 0.855 |              |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |
| 1      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 1      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 1      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 1      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 3      | 0  | 0  | 0  |

**CONTROL :** 3-Way Stop(NB/SB/WB)

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-012

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

|                       |               |               |         |         |
|-----------------------|---------------|---------------|---------|---------|
| <b>NS/EW Streets:</b> | Manhattan Ave | Manhattan Ave | 27th St | 27th St |
|-----------------------|---------------|---------------|---------|---------|

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
|         | 0          | 1  | 0  | 1          | 1  | 0  | 0         | 1  | 0  | 0         | 1  | 0  |       |
| 4:00 PM | 0          | 28 | 11 | 13         | 27 | 0  | 0         | 0  | 0  | 11        | 1  | 19 | 110   |
| 4:15 PM | 0          | 18 | 18 | 17         | 28 | 0  | 0         | 0  | 0  | 16        | 3  | 14 | 114   |
| 4:30 PM | 0          | 20 | 11 | 27         | 29 | 0  | 0         | 0  | 0  | 21        | 1  | 17 | 126   |
| 4:45 PM | 0          | 31 | 15 | 17         | 35 | 2  | 0         | 0  | 0  | 10        | 6  | 9  | 125   |
| 5:00 PM | 0          | 26 | 10 | 14         | 55 | 0  | 1         | 0  | 0  | 14        | 4  | 18 | 142   |
| 5:15 PM | 1          | 20 | 11 | 17         | 43 | 1  | 1         | 0  | 0  | 16        | 5  | 20 | 135   |
| 5:30 PM | 0          | 30 | 13 | 15         | 47 | 1  | 0         | 0  | 0  | 19        | 5  | 22 | 152   |
| 5:45 PM | 0          | 16 | 12 | 18         | 53 | 2  | 0         | 0  | 0  | 14        | 7  | 16 | 138   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |
| 0      | 0  | 0  | 0  |

|                        |       |        |        |        |        |       |         |       |       |        |        |        |       |
|------------------------|-------|--------|--------|--------|--------|-------|---------|-------|-------|--------|--------|--------|-------|
| <b>TOTAL VOLUMES :</b> | NL    | NT     | NR     | SL     | ST     | SR    | EL      | ET    | ER    | WL     | WT     | WR     | TOTAL |
| <b>APPROACH %'s :</b>  | 1     | 189    | 101    | 138    | 317    | 6     | 2       | 0     | 0     | 121    | 32     | 135    | 1042  |
|                        | 0.34% | 64.95% | 34.71% | 29.93% | 68.76% | 1.30% | 100.00% | 0.00% | 0.00% | 42.01% | 11.11% | 46.88% |       |

|    |    |    |    |
|----|----|----|----|
| NB | SB | EB | WB |
| 0  | 0  | 0  | 0  |

|                             |        |    |    |       |     |   |       |   |   |       |    |    |              |
|-----------------------------|--------|----|----|-------|-----|---|-------|---|---|-------|----|----|--------------|
| <b>PEAK HR START TIME :</b> | 500 PM |    |    |       |     |   |       |   |   |       |    |    | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 1      | 92 | 46 | 64    | 198 | 4 | 2     | 0 | 0 | 63    | 21 | 76 | 567          |
| <b>PEAK HR FACTOR :</b>     | 0.808  |    |    | 0.911 |     |   | 0.500 |   |   | 0.870 |    |    | 0.933        |

**CONTROL :** 3-Way Stop(NB/SB/WB)

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-013

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

| NS/EW Streets: | Valley Dr | Valley Dr | Gould Ave | Gould Ave |
|----------------|-----------|-----------|-----------|-----------|
|----------------|-----------|-----------|-----------|-----------|

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 7:00 AM | 1          | 24 | 16 | 16         | 16 | 1  | 5         | 59 | 1  | 17        | 53 | 11 | 220   |
| 7:15 AM | 1          | 36 | 28 | 37         | 15 | 2  | 7         | 47 | 7  | 17        | 45 | 12 | 254   |
| 7:30 AM | 1          | 35 | 15 | 21         | 19 | 10 | 5         | 62 | 7  | 45        | 61 | 31 | 312   |
| 7:45 AM | 3          | 41 | 37 | 20         | 44 | 8  | 10        | 53 | 11 | 54        | 67 | 27 | 375   |
| 8:00 AM | 5          | 45 | 32 | 17         | 29 | 10 | 16        | 63 | 8  | 35        | 60 | 25 | 345   |
| 8:15 AM | 3          | 54 | 30 | 18         | 32 | 7  | 15        | 66 | 11 | 20        | 58 | 20 | 334   |
| 8:30 AM | 8          | 40 | 21 | 22         | 35 | 10 | 9         | 53 | 8  | 33        | 69 | 13 | 321   |
| 8:45 AM | 2          | 29 | 17 | 21         | 29 | 9  | 8         | 57 | 4  | 16        | 57 | 17 | 266   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
|        |    |    |    |

|                        | NL    | NT     | NR     | SL     | ST     | SR     | EL     | ET     | ER    | WL     | WT     | WR     | TOTAL |
|------------------------|-------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|-------|
| <b>TOTAL VOLUMES :</b> | 24    | 304    | 196    | 172    | 219    | 57     | 75     | 460    | 57    | 237    | 470    | 156    | 2427  |
| <b>APPROACH %'s :</b>  | 4.58% | 58.02% | 37.40% | 38.39% | 48.88% | 12.72% | 12.67% | 77.70% | 9.63% | 27.46% | 54.46% | 18.08% |       |

| NB | SB | EB | WB |
|----|----|----|----|
| 0  | 0  | 0  | 0  |

| PEAK HR START TIME :    | 745 AM |     |     |       |     |    |       |     |    |       |     |    | TOTAL |
|-------------------------|--------|-----|-----|-------|-----|----|-------|-----|----|-------|-----|----|-------|
| <b>PEAK HR VOL :</b>    | 19     | 180 | 120 | 77    | 140 | 35 | 50    | 235 | 38 | 142   | 254 | 85 | 1375  |
| <b>PEAK HR FACTOR :</b> | 0.917  |     |     | 0.875 |     |    | 0.878 |     |    | 0.813 |     |    | 0.917 |

**CONTROL :** 4-Way Stop(NB/SB/EB/WB)

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-013

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

| NS/EW Streets:              | Valley Dr  |        |        | Valley Dr  |        |       | Gould Ave |        |        | Gould Ave |        |       | TOTAL |              |
|-----------------------------|------------|--------|--------|------------|--------|-------|-----------|--------|--------|-----------|--------|-------|-------|--------------|
|                             | NORTHBOUND |        |        | SOUTHBOUND |        |       | EASTBOUND |        |        | WESTBOUND |        |       |       |              |
| LANES:                      | NL         | NT     | NR     | SL         | ST     | SR    | EL        | ET     | ER     | WL        | WT     | WR    |       |              |
|                             | 0          | 1      | 1      | 0          | 1      | 0     | 0         | 1      | 1      | 1         | 1      | 0     |       |              |
| 4:00 PM                     | 4          | 24     | 26     | 23         | 58     | 14    | 9         | 55     | 11     | 22        | 58     | 5     | 309   |              |
| 4:15 PM                     | 6          | 19     | 21     | 27         | 67     | 6     | 7         | 59     | 10     | 25        | 71     | 4     | 322   |              |
| 4:30 PM                     | 4          | 22     | 7      | 19         | 68     | 14    | 5         | 67     | 10     | 34        | 63     | 9     | 322   |              |
| 4:45 PM                     | 7          | 15     | 23     | 20         | 73     | 5     | 9         | 62     | 8      | 27        | 66     | 15    | 330   |              |
| 5:00 PM                     | 2          | 16     | 24     | 18         | 81     | 10    | 4         | 55     | 9      | 32        | 75     | 12    | 338   |              |
| 5:15 PM                     | 5          | 29     | 16     | 25         | 75     | 15    | 5         | 57     | 9      | 30        | 65     | 11    | 342   |              |
| 5:30 PM                     | 4          | 17     | 16     | 20         | 87     | 10    | 6         | 62     | 5      | 27        | 65     | 14    | 333   |              |
| 5:45 PM                     | 0          | 20     | 18     | 21         | 68     | 9     | 4         | 49     | 6      | 23        | 64     | 12    | 294   |              |
| <b>TOTAL VOLUMES :</b>      | 32         | 162    | 151    | 173        | 577    | 83    | 49        | 466    | 68     | 220       | 527    | 82    | 2590  |              |
| <b>APPROACH %'s :</b>       | 9.28%      | 46.96% | 43.77% | 20.77%     | 69.27% | 9.96% | 8.40%     | 79.93% | 11.66% | 26.54%    | 63.57% | 9.89% |       |              |
| <b>PEAK HR START TIME :</b> | 445 PM     |        |        |            |        |       |           |        |        |           |        |       |       | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 18         | 77     | 79     | 83         | 316    | 40    | 24        | 236    | 31     | 116       | 271    | 52    | 1343  |              |
| <b>PEAK HR FACTOR :</b>     | 0.870      |        |        | 0.938      |        |       | 0.921     |        |        | 0.922     |        |       | 0.982 |              |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
| 0      | 0  | 0  | 0  |

|         |         |         |         |
|---------|---------|---------|---------|
| NB<br>0 | SB<br>0 | EB<br>0 | WB<br>0 |
|---------|---------|---------|---------|

**CONTROL :** 4-Way Stop(NB/SB/EB/WB)

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-112

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

**NS/EW Streets:** Manhattan Ave /Greenwich    Manhattan Ave /Greenwich    27th St    27th St

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 7:00 AM | 0          | 38 | 19 | 0          | 13 | 0  | 0         | 0  | 0  | 14        | 0  | 0  | 84    |
| 7:15 AM | 0          | 46 | 27 | 0          | 9  | 0  | 0         | 0  | 0  | 11        | 0  | 0  | 93    |
| 7:30 AM | 0          | 66 | 29 | 0          | 9  | 0  | 0         | 0  | 0  | 19        | 0  | 0  | 123   |
| 7:45 AM | 0          | 66 | 27 | 0          | 22 | 0  | 0         | 0  | 0  | 23        | 0  | 0  | 138   |
| 8:00 AM | 0          | 81 | 33 | 0          | 24 | 0  | 0         | 0  | 0  | 18        | 0  | 0  | 156   |
| 8:15 AM | 0          | 79 | 38 | 0          | 20 | 0  | 0         | 0  | 0  | 21        | 0  | 0  | 158   |
| 8:30 AM | 0          | 72 | 40 | 0          | 20 | 0  | 0         | 0  | 0  | 27        | 0  | 0  | 159   |
| 8:45 AM | 0          | 73 | 23 | 0          | 26 | 0  | 0         | 0  | 0  | 26        | 0  | 0  | 148   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
|        |    |    |    |

|                        | NL    | NT     | NR     | SL    | ST      | SR    | EL      | ET      | ER      | WL      | WT    | WR    | TOTAL |
|------------------------|-------|--------|--------|-------|---------|-------|---------|---------|---------|---------|-------|-------|-------|
| <b>TOTAL VOLUMES :</b> | 0     | 521    | 236    | 0     | 143     | 0     | 0       | 0       | 0       | 159     | 0     | 0     | 1059  |
| <b>APPROACH %'s :</b>  | 0.00% | 68.82% | 31.18% | 0.00% | 100.00% | 0.00% | #DIV/0! | #DIV/0! | #DIV/0! | 100.00% | 0.00% | 0.00% |       |

| NB | SB | EB | WB |
|----|----|----|----|
| 0  | 0  | 0  | 0  |

| PEAK HR START TIME :    | 800 AM |     |     |       |    |   |       |   |   |       |   |   | TOTAL |
|-------------------------|--------|-----|-----|-------|----|---|-------|---|---|-------|---|---|-------|
| <b>PEAK HR VOL :</b>    | 0      | 305 | 134 | 0     | 90 | 0 | 0     | 0 | 0 | 92    | 0 | 0 | 621   |
| <b>PEAK HR FACTOR :</b> | 0.938  |     |     | 0.865 |    |   | 0.000 |   |   | 0.852 |   |   | 0.976 |

**CONTROL :** 4-Way Stop(NB/SB/EB/WB)

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-112

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

**NS/EW Streets:** Manhattan Ave /Greenwich    Manhattan Ave /Greenwich    27th St    27th St

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 4:00 PM | 0          | 25 | 26 | 0          | 46 | 0  | 0         | 0  | 0  | 20        | 0  | 0  | 117   |
| 4:15 PM | 0          | 27 | 21 | 0          | 55 | 0  | 0         | 0  | 0  | 27        | 0  | 0  | 130   |
| 4:30 PM | 0          | 28 | 21 | 0          | 61 | 0  | 0         | 0  | 0  | 28        | 0  | 0  | 138   |
| 4:45 PM | 0          | 26 | 20 | 0          | 44 | 0  | 0         | 0  | 0  | 29        | 0  | 0  | 119   |
| 5:00 PM | 0          | 27 | 26 | 0          | 59 | 0  | 0         | 0  | 0  | 26        | 0  | 0  | 138   |
| 5:15 PM | 0          | 33 | 16 | 0          | 68 | 0  | 0         | 0  | 0  | 23        | 0  | 0  | 140   |
| 5:30 PM | 0          | 22 | 19 | 0          | 56 | 0  | 0         | 0  | 0  | 25        | 0  | 0  | 122   |
| 5:45 PM | 0          | 29 | 15 | 0          | 59 | 0  | 0         | 0  | 0  | 25        | 0  | 0  | 128   |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
|        |    |    |    |

|                        | NL    | NT     | NR     | SL    | ST      | SR    | EL      | ET      | ER      | WL      | WT    | WR    | TOTAL |
|------------------------|-------|--------|--------|-------|---------|-------|---------|---------|---------|---------|-------|-------|-------|
| <b>TOTAL VOLUMES :</b> | 0     | 217    | 164    | 0     | 448     | 0     | 0       | 0       | 0       | 203     | 0     | 0     | 1032  |
| <b>APPROACH %'s :</b>  | 0.00% | 56.96% | 43.04% | 0.00% | 100.00% | 0.00% | #DIV/0! | #DIV/0! | #DIV/0! | 100.00% | 0.00% | 0.00% |       |

| NB | SB | EB | WB |
|----|----|----|----|
| 0  | 0  | 0  | 0  |

| <b>PEAK HR START TIME :</b> | 430 PM |     |    |       |     |   |       |   |   |       |   |   | <b>TOTAL</b> |
|-----------------------------|--------|-----|----|-------|-----|---|-------|---|---|-------|---|---|--------------|
| <b>PEAK HR VOL :</b>        | 0      | 114 | 83 | 0     | 232 | 0 | 0     | 0 | 0 | 106   | 0 | 0 | 535          |
| <b>PEAK HR FACTOR :</b>     | 0.929  |     |    | 0.853 |     |   | 0.000 |   |   | 0.914 |   |   | 0.955        |

**CONTROL :** 4-Way Stop(NB/SB/EB/WB)

# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-212

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**AM**

|                       |               |               |                   |                   |
|-----------------------|---------------|---------------|-------------------|-------------------|
| <b>NS/EW Streets:</b> | Manhattan Ave | Manhattan Ave | Greenwich Village | Greenwich Village |
|-----------------------|---------------|---------------|-------------------|-------------------|

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 7:00 AM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 0  | 0         | 0  | 0  | 0     |
| 7:15 AM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 0  | 0         | 0  | 0  | 0     |
| 7:30 AM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 0  | 0         | 0  | 0  | 0     |
| 7:45 AM | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 0  | 5         | 0  | 0  | 6     |
| 8:00 AM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 1  | 0         | 0  | 0  | 1     |
| 8:15 AM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 0  | 0         | 0  | 0  | 0     |
| 8:30 AM | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 0  | 0         | 0  | 0  | 1     |
| 8:45 AM | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 1  | 0         | 0  | 0  | 2     |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
|        |    |    |    |

|                        |         |       |       |         |         |         |       |       |         |         |         |         |       |
|------------------------|---------|-------|-------|---------|---------|---------|-------|-------|---------|---------|---------|---------|-------|
| <b>TOTAL VOLUMES :</b> | NL      | NT    | NR    | SL      | ST      | SR      | EL    | ET    | ER      | WL      | WT      | WR      | TOTAL |
| <b>APPROACH %'s :</b>  | 3       | 0     | 0     | 0       | 0       | 0       | 0     | 0     | 7       | 0       | 0       | 0       | 10    |
|                        | 100.00% | 0.00% | 0.00% | #DIV/0! | #DIV/0! | #DIV/0! | 0.00% | 0.00% | 100.00% | #DIV/0! | #DIV/0! | #DIV/0! |       |

|    |    |    |    |
|----|----|----|----|
| NB | SB | EB | WB |
| 0  | 0  | 0  | 0  |

|                             |        |   |   |       |   |   |       |   |   |       |   |   |              |
|-----------------------------|--------|---|---|-------|---|---|-------|---|---|-------|---|---|--------------|
| <b>PEAK HR START TIME :</b> | 745 AM |   |   |       |   |   |       |   |   |       |   |   | <b>TOTAL</b> |
| <b>PEAK HR VOL :</b>        | 2      | 0 | 0 | 0     | 0 | 0 | 0     | 0 | 6 | 0     | 0 | 0 | 8            |
| <b>PEAK HR FACTOR :</b>     | 0.500  |   |   | 0.000 |   |   | 0.300 |   |   | 0.000 |   |   | 0.333        |

**CONTROL :** 4-Way Stop(NB/SB/EB/WB)



# Intersection Turning Movement

Prepared by:

**National Data & Surveying Services**

**Project ID:** 14-5524-212

**Day:** Wednesday

**City:** Hermosa Beach

**Date:** 9/10/2014

**PM**

|                       |               |               |                   |                   |
|-----------------------|---------------|---------------|-------------------|-------------------|
| <b>NS/EW Streets:</b> | Manhattan Ave | Manhattan Ave | Greenwich Village | Greenwich Village |
|-----------------------|---------------|---------------|-------------------|-------------------|

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 4:00 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 0  | 0         | 0  | 0  | 0     |
| 4:15 PM | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 1  | 0         | 0  | 0  | 2     |
| 4:30 PM | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 2  | 0         | 0  | 0  | 3     |
| 4:45 PM | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 0  | 0         | 0  | 0  | 1     |
| 5:00 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 2  | 0         | 0  | 0  | 2     |
| 5:15 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 1  | 0         | 0  | 0  | 1     |
| 5:30 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 0  | 0         | 0  | 0  | 0     |
| 5:45 PM | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 0  | 2  | 0         | 0  | 0  | 3     |

| UTURNS |    |    |    |
|--------|----|----|----|
| NB     | SB | EB | WB |
|        |    |    |    |

|                        |         |       |       |         |         |         |       |       |         |         |         |         |       |
|------------------------|---------|-------|-------|---------|---------|---------|-------|-------|---------|---------|---------|---------|-------|
| <b>TOTAL VOLUMES :</b> | NL      | NT    | NR    | SL      | ST      | SR      | EL    | ET    | ER      | WL      | WT      | WR      | TOTAL |
| <b>APPROACH %'s :</b>  | 4       | 0     | 0     | 0       | 0       | 0       | 0     | 0     | 8       | 0       | 0       | 0       | 12    |
|                        | 100.00% | 0.00% | 0.00% | #DIV/0! | #DIV/0! | #DIV/0! | 0.00% | 0.00% | 100.00% | #DIV/0! | #DIV/0! | #DIV/0! |       |

|    |    |    |    |
|----|----|----|----|
| NB | SB | EB | WB |
| 0  | 0  | 0  | 0  |

|                             |        |   |   |       |   |   |       |   |   |       |   |   |       |
|-----------------------------|--------|---|---|-------|---|---|-------|---|---|-------|---|---|-------|
| <b>PEAK HR START TIME :</b> | 415 PM |   |   |       |   |   |       |   |   |       |   |   | TOTAL |
| <b>PEAK HR VOL :</b>        | 3      | 0 | 0 | 0     | 0 | 0 | 0     | 0 | 5 | 0     | 0 | 0 | 8     |
| <b>PEAK HR FACTOR :</b>     | 0.750  |   |   | 0.000 |   |   | 0.625 |   |   | 0.000 |   |   | 0.667 |

**CONTROL :** 4-Way Stop(NB/SB/EB/WB)

## **SEGMENTS**

**VOLUME**

Hermosa Ave Bet. 27th St &amp; 22nd St

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_001

| DAILY TOTALS   |       |       |    |     | NB    | SB             | EB    | WB    | Total |     |       |
|----------------|-------|-------|----|-----|-------|----------------|-------|-------|-------|-----|-------|
|                |       |       |    |     | 4,250 | 4,124          | 0     | 0     | 8,374 |     |       |
| AM Period      | NB    | SB    | EB | WB  | TOTAL | PM Period      | NB    | SB    | EB    | WB  | TOTAL |
| 00:00          | 3     | 9     |    |     | 12    | 12:00          | 59    | 60    |       |     | 119   |
| 00:15          | 8     | 10    |    |     | 18    | 12:15          | 59    | 74    |       |     | 133   |
| 00:30          | 4     | 8     |    |     | 12    | 12:30          | 48    | 58    |       |     | 106   |
| 00:45          | 10    | 25    | 4  | 31  | 14    | 12:45          | 53    | 219   | 59    | 251 | 112   |
| 01:00          | 4     | 2     |    |     | 6     | 13:00          | 64    | 65    |       |     | 129   |
| 01:15          | 7     | 5     |    |     | 12    | 13:15          | 47    | 66    |       |     | 113   |
| 01:30          | 3     | 2     |    |     | 5     | 13:30          | 56    | 62    |       |     | 118   |
| 01:45          | 1     | 15    | 6  | 15  | 7     | 13:45          | 61    | 228   | 59    | 252 | 120   |
| 02:00          | 2     | 2     |    |     | 4     | 14:00          | 57    | 74    |       |     | 131   |
| 02:15          | 2     | 1     |    |     | 3     | 14:15          | 70    | 57    |       |     | 127   |
| 02:30          | 0     | 1     |    |     | 1     | 14:30          | 57    | 70    |       |     | 127   |
| 02:45          | 0     | 4     | 3  | 7   | 3     | 14:45          | 44    | 228   | 54    | 255 | 98    |
| 03:00          | 1     | 0     |    |     | 1     | 15:00          | 50    | 69    |       |     | 119   |
| 03:15          | 1     | 1     |    |     | 2     | 15:15          | 63    | 61    |       |     | 124   |
| 03:30          | 0     | 2     |    |     | 2     | 15:30          | 54    | 73    |       |     | 127   |
| 03:45          | 2     | 4     | 0  | 3   | 2     | 15:45          | 67    | 234   | 83    | 286 | 150   |
| 04:00          | 0     | 0     |    |     | 0     | 16:00          | 42    | 90    |       |     | 132   |
| 04:15          | 4     | 0     |    |     | 4     | 16:15          | 67    | 97    |       |     | 164   |
| 04:30          | 0     | 2     |    |     | 2     | 16:30          | 57    | 103   |       |     | 160   |
| 04:45          | 3     | 7     | 1  | 3   | 4     | 16:45          | 73    | 239   | 99    | 389 | 172   |
| 05:00          | 5     | 3     |    |     | 8     | 17:00          | 50    | 101   |       |     | 151   |
| 05:15          | 11    | 7     |    |     | 18    | 17:15          | 67    | 122   |       |     | 189   |
| 05:30          | 18    | 12    |    |     | 30    | 17:30          | 52    | 99    |       |     | 151   |
| 05:45          | 20    | 54    | 12 | 34  | 32    | 17:45          | 55    | 224   | 97    | 419 | 152   |
| 06:00          | 29    | 10    |    |     | 39    | 18:00          | 54    | 108   |       |     | 162   |
| 06:15          | 33    | 15    |    |     | 48    | 18:15          | 58    | 97    |       |     | 155   |
| 06:30          | 43    | 17    |    |     | 60    | 18:30          | 63    | 91    |       |     | 154   |
| 06:45          | 57    | 162   | 20 | 62  | 77    | 18:45          | 45    | 220   | 85    | 381 | 130   |
| 07:00          | 68    | 26    |    |     | 94    | 19:00          | 61    | 95    |       |     | 156   |
| 07:15          | 101   | 31    |    |     | 132   | 19:15          | 47    | 75    |       |     | 122   |
| 07:30          | 123   | 32    |    |     | 155   | 19:30          | 48    | 75    |       |     | 123   |
| 07:45          | 164   | 456   | 50 | 139 | 214   | 19:45          | 50    | 206   | 55    | 300 | 105   |
| 08:00          | 192   | 63    |    |     | 255   | 20:00          | 31    | 42    |       |     | 73    |
| 08:15          | 165   | 46    |    |     | 211   | 20:15          | 42    | 39    |       |     | 81    |
| 08:30          | 123   | 54    |    |     | 177   | 20:30          | 26    | 46    |       |     | 72    |
| 08:45          | 113   | 593   | 60 | 223 | 173   | 20:45          | 28    | 127   | 33    | 160 | 61    |
| 09:00          | 79    | 49    |    |     | 128   | 21:00          | 29    | 39    |       |     | 68    |
| 09:15          | 57    | 52    |    |     | 109   | 21:15          | 36    | 39    |       |     | 75    |
| 09:30          | 82    | 42    |    |     | 124   | 21:30          | 28    | 37    |       |     | 65    |
| 09:45          | 57    | 275   | 55 | 198 | 112   | 21:45          | 31    | 124   | 40    | 155 | 71    |
| 10:00          | 59    | 51    |    |     | 110   | 22:00          | 17    | 36    |       |     | 53    |
| 10:15          | 63    | 30    |    |     | 93    | 22:15          | 34    | 25    |       |     | 59    |
| 10:30          | 64    | 41    |    |     | 105   | 22:30          | 22    | 16    |       |     | 38    |
| 10:45          | 48    | 234   | 55 | 177 | 103   | 22:45          | 14    | 87    | 14    | 91  | 28    |
| 11:00          | 50    | 64    |    |     | 114   | 23:00          | 13    | 16    |       |     | 29    |
| 11:15          | 53    | 64    |    |     | 117   | 23:15          | 12    | 15    |       |     | 27    |
| 11:30          | 72    | 62    |    |     | 134   | 23:30          | 15    | 10    |       |     | 25    |
| 11:45          | 63    | 238   | 53 | 243 | 116   | 23:45          | 7     | 47    | 9     | 50  | 16    |
| <b>TOTALS</b>  | 2067  | 1135  |    |     | 3202  | <b>TOTALS</b>  | 2183  | 2989  |       |     | 5172  |
| <b>SPLIT %</b> | 64.6% | 35.4% |    |     | 38.2% | <b>SPLIT %</b> | 42.2% | 57.8% |       |     | 61.8% |

| DAILY TOTALS    |       |       |       |       | NB              | SB              | EB    | WB    | Total |       |       |
|-----------------|-------|-------|-------|-------|-----------------|-----------------|-------|-------|-------|-------|-------|
|                 |       |       |       |       | 4,250           | 4,124           | 0     | 0     | 8,374 |       |       |
| AM Peak Hour    | 07:30 | 11:30 |       | 07:45 | PM Peak Hour    | 16:15           | 17:15 |       | 16:30 |       |       |
| AM Pk Volume    | 644   | 249   |       | 857   | PM Pk Volume    | 247             | 426   |       | 672   |       |       |
| Pk Hr Factor    | 0.839 | 0.841 |       | 0.840 | Pk Hr Factor    | 0.846           | 0.873 |       | 0.889 |       |       |
| 7 - 9 Volume    | 1049  | 362   | 0     | 0     | 1411            | 4 - 6 Volume    | 463   | 808   | 0     | 0     | 1271  |
| 7 - 9 Peak Hour | 07:30 | 08:00 |       | 07:45 | 4 - 6 Peak Hour | 16:15           | 16:30 |       | 16:30 |       |       |
| 7 - 9 Pk Volume | 644   | 223   | 0     | 0     | 857             | 4 - 6 Pk Volume | 247   | 425   | 0     | 0     | 672   |
| Pk Hr Factor    | 0.839 | 0.885 | 0.000 | 0.000 | 0.840           | Pk Hr Factor    | 0.846 | 0.871 | 0.000 | 0.000 | 0.889 |

**VOLUME**

Hermosa Ave Bet. 22nd St &amp; 16th St

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_002

| DAILY TOTALS   |       |       |    |     | NB    | SB             | EB    | WB    | Total |     |       |
|----------------|-------|-------|----|-----|-------|----------------|-------|-------|-------|-----|-------|
|                |       |       |    |     | 3,859 | 4,148          | 0     | 0     | 8,007 |     |       |
| AM Period      | NB    | SB    | EB | WB  | TOTAL | PM Period      | NB    | SB    | EB    | WB  | TOTAL |
| 00:00          | 4     | 8     |    |     | 12    | 12:00          | 50    | 65    |       |     | 115   |
| 00:15          | 8     | 8     |    |     | 16    | 12:15          | 53    | 77    |       |     | 130   |
| 00:30          | 3     | 7     |    |     | 10    | 12:30          | 43    | 57    |       |     | 100   |
| 00:45          | 10    | 25    | 4  | 27  | 14    | 12:45          | 52    | 198   | 68    | 267 | 120   |
| 01:00          | 4     | 2     |    |     | 6     | 13:00          | 60    | 68    |       |     | 128   |
| 01:15          | 8     | 5     |    |     | 13    | 13:15          | 43    | 66    |       |     | 109   |
| 01:30          | 3     | 4     |    |     | 7     | 13:30          | 49    | 49    |       |     | 98    |
| 01:45          | 1     | 16    | 5  | 16  | 6     | 13:45          | 49    | 201   | 60    | 243 | 109   |
| 02:00          | 2     | 3     |    |     | 5     | 14:00          | 52    | 76    |       |     | 128   |
| 02:15          | 3     | 1     |    |     | 4     | 14:15          | 60    | 64    |       |     | 124   |
| 02:30          | 0     | 1     |    |     | 1     | 14:30          | 62    | 71    |       |     | 133   |
| 02:45          | 1     | 6     | 4  | 9   | 5     | 14:45          | 44    | 218   | 69    | 280 | 113   |
| 03:00          | 0     | 0     |    |     | 0     | 15:00          | 44    | 72    |       |     | 116   |
| 03:15          | 2     | 1     |    |     | 3     | 15:15          | 51    | 68    |       |     | 119   |
| 03:30          | 0     | 2     |    |     | 2     | 15:30          | 58    | 75    |       |     | 133   |
| 03:45          | 1     | 3     | 0  | 3   | 1     | 15:45          | 59    | 212   | 89    | 304 | 148   |
| 04:00          | 0     | 0     |    |     | 0     | 16:00          | 45    | 88    |       |     | 133   |
| 04:15          | 3     | 0     |    |     | 3     | 16:15          | 62    | 101   |       |     | 163   |
| 04:30          | 0     | 2     |    |     | 2     | 16:30          | 48    | 103   |       |     | 151   |
| 04:45          | 4     | 7     | 1  | 3   | 5     | 16:45          | 75    | 230   | 100   | 392 | 175   |
| 05:00          | 5     | 5     |    |     | 10    | 17:00          | 55    | 94    |       |     | 149   |
| 05:15          | 5     | 5     |    |     | 10    | 17:15          | 64    | 129   |       |     | 193   |
| 05:30          | 16    | 11    |    |     | 27    | 17:30          | 58    | 92    |       |     | 150   |
| 05:45          | 15    | 41    | 11 | 32  | 26    | 17:45          | 50    | 227   | 103   | 418 | 153   |
| 06:00          | 20    | 10    |    |     | 30    | 18:00          | 60    | 106   |       |     | 166   |
| 06:15          | 23    | 19    |    |     | 42    | 18:15          | 59    | 98    |       |     | 157   |
| 06:30          | 30    | 15    |    |     | 45    | 18:30          | 50    | 84    |       |     | 134   |
| 06:45          | 53    | 126   | 20 | 64  | 73    | 18:45          | 43    | 212   | 84    | 372 | 127   |
| 07:00          | 55    | 24    |    |     | 79    | 19:00          | 61    | 93    |       |     | 154   |
| 07:15          | 100   | 31    |    |     | 131   | 19:15          | 40    | 76    |       |     | 116   |
| 07:30          | 94    | 35    |    |     | 129   | 19:30          | 40    | 68    |       |     | 108   |
| 07:45          | 144   | 393   | 58 | 148 | 202   | 19:45          | 36    | 177   | 45    | 282 | 81    |
| 08:00          | 161   | 57    |    |     | 218   | 20:00          | 32    | 37    |       |     | 69    |
| 08:15          | 148   | 54    |    |     | 202   | 20:15          | 37    | 34    |       |     | 71    |
| 08:30          | 110   | 58    |    |     | 168   | 20:30          | 30    | 43    |       |     | 73    |
| 08:45          | 101   | 520   | 55 | 224 | 156   | 20:45          | 24    | 123   | 38    | 152 | 62    |
| 09:00          | 80    | 49    |    |     | 129   | 21:00          | 33    | 37    |       |     | 70    |
| 09:15          | 61    | 47    |    |     | 108   | 21:15          | 24    | 34    |       |     | 58    |
| 09:30          | 71    | 39    |    |     | 110   | 21:30          | 24    | 34    |       |     | 58    |
| 09:45          | 51    | 263   | 55 | 190 | 106   | 21:45          | 30    | 111   | 40    | 145 | 70    |
| 10:00          | 44    | 51    |    |     | 95    | 22:00          | 16    | 36    |       |     | 52    |
| 10:15          | 50    | 38    |    |     | 88    | 22:15          | 30    | 26    |       |     | 56    |
| 10:30          | 56    | 44    |    |     | 100   | 22:30          | 18    | 16    |       |     | 34    |
| 10:45          | 46    | 196   | 55 | 188 | 101   | 22:45          | 14    | 78    | 11    | 89  | 25    |
| 11:00          | 51    | 66    |    |     | 117   | 23:00          | 12    | 14    |       |     | 26    |
| 11:15          | 56    | 65    |    |     | 121   | 23:15          | 12    | 15    |       |     | 27    |
| 11:30          | 58    | 58    |    |     | 116   | 23:30          | 18    | 12    |       |     | 30    |
| 11:45          | 61    | 226   | 60 | 249 | 121   | 23:45          | 8     | 50    | 10    | 51  | 18    |
| <b>TOTALS</b>  | 1822  | 1153  |    |     | 2975  | <b>TOTALS</b>  | 2037  | 2995  |       |     | 5032  |
| <b>SPLIT %</b> | 61.2% | 38.8% |    |     | 37.2% | <b>SPLIT %</b> | 40.5% | 59.5% |       |     | 62.8% |

| DAILY TOTALS |  |  |  |  | NB    | SB    | EB | WB | Total |
|--------------|--|--|--|--|-------|-------|----|----|-------|
|              |  |  |  |  | 3,859 | 4,148 | 0  | 0  | 8,007 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    | 07:45 | 11:30 |       |       | 07:45 | PM Peak Hour    | 16:45 | 17:15 |       |       | 16:30 |
| AM Pk Volume    | 563   | 260   |       |       | 790   | PM Pk Volume    | 252   | 430   |       |       | 668   |
| Pk Hr Factor    | 0.874 | 0.844 |       |       | 0.906 | Pk Hr Factor    | 0.840 | 0.833 |       |       | 0.865 |
| 7 - 9 Volume    | 913   | 372   | 0     | 0     | 1285  | 4 - 6 Volume    | 457   | 810   | 0     | 0     | 1267  |
| 7 - 9 Peak Hour | 07:45 | 07:45 |       |       | 07:45 | 4 - 6 Peak Hour | 16:45 | 16:30 |       |       | 16:30 |
| 7 - 9 Pk Volume | 563   | 227   | 0     | 0     | 790   | 4 - 6 Pk Volume | 252   | 426   | 0     | 0     | 668   |
| Pk Hr Factor    | 0.874 | 0.978 | 0.000 | 0.000 | 0.906 | Pk Hr Factor    | 0.840 | 0.826 | 0.000 | 0.000 | 0.865 |

**VOLUME**

Hermosa Ave Bet. 16th St &amp; 8th St

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_003

| DAILY TOTALS   |              |              |    |     | NB           | SB             | EB           | WB           | Total  |     |              |
|----------------|--------------|--------------|----|-----|--------------|----------------|--------------|--------------|--------|-----|--------------|
|                |              |              |    |     | 5,646        | 5,482          | 0            | 0            | 11,128 |     |              |
| AM Period      | NB           | SB           | EB | WB  | TOTAL        | PM Period      | NB           | SB           | EB     | WB  | TOTAL        |
| 00:00          | 28           | 26           |    |     | 54           | 12:00          | 86           | 75           |        |     | 161          |
| 00:15          | 21           | 27           |    |     | 48           | 12:15          | 86           | 81           |        |     | 167          |
| 00:30          | 17           | 22           |    |     | 39           | 12:30          | 73           | 71           |        |     | 144          |
| 00:45          | 26           | 92           | 27 | 102 | 53           | 12:45          | 77           | 322          | 68     | 295 | 145          |
| 01:00          | 21           | 28           |    |     | 49           | 13:00          | 89           | 85           |        |     | 174          |
| 01:15          | 20           | 20           |    |     | 40           | 13:15          | 99           | 76           |        |     | 175          |
| 01:30          | 20           | 18           |    |     | 38           | 13:30          | 87           | 110          |        |     | 197          |
| 01:45          | 12           | 73           | 17 | 83  | 29           | 13:45          | 82           | 357          | 89     | 360 | 171          |
| 02:00          | 18           | 21           |    |     | 39           | 14:00          | 86           | 94           |        |     | 180          |
| 02:15          | 10           | 9            |    |     | 19           | 14:15          | 75           | 78           |        |     | 153          |
| 02:30          | 7            | 6            |    |     | 13           | 14:30          | 88           | 106          |        |     | 194          |
| 02:45          | 3            | 38           | 3  | 39  | 6            | 14:45          | 86           | 335          | 113    | 391 | 199          |
| 03:00          | 5            | 5            |    |     | 10           | 15:00          | 61           | 103          |        |     | 164          |
| 03:15          | 4            | 1            |    |     | 5            | 15:15          | 68           | 84           |        |     | 152          |
| 03:30          | 1            | 5            |    |     | 6            | 15:30          | 76           | 106          |        |     | 182          |
| 03:45          | 3            | 13           | 1  | 12  | 4            | 15:45          | 84           | 289          | 90     | 383 | 174          |
| 04:00          | 1            | 1            |    |     | 2            | 16:00          | 78           | 91           |        |     | 169          |
| 04:15          | 2            | 2            |    |     | 4            | 16:15          | 82           | 86           |        |     | 168          |
| 04:30          | 2            | 3            |    |     | 5            | 16:30          | 73           | 97           |        |     | 170          |
| 04:45          | 2            | 7            | 4  | 10  | 6            | 16:45          | 87           | 320          | 123    | 397 | 210          |
| 05:00          | 5            | 5            |    |     | 10           | 17:00          | 84           | 114          |        |     | 198          |
| 05:15          | 8            | 6            |    |     | 14           | 17:15          | 91           | 129          |        |     | 220          |
| 05:30          | 11           | 13           |    |     | 24           | 17:30          | 86           | 122          |        |     | 208          |
| 05:45          | 16           | 40           | 10 | 34  | 26           | 17:45          | 92           | 353          | 126    | 491 | 218          |
| 06:00          | 22           | 13           |    |     | 35           | 18:00          | 93           | 118          |        |     | 211          |
| 06:15          | 20           | 12           |    |     | 32           | 18:15          | 92           | 118          |        |     | 210          |
| 06:30          | 29           | 22           |    |     | 51           | 18:30          | 79           | 99           |        |     | 178          |
| 06:45          | 35           | 106          | 29 | 76  | 64           | 18:45          | 83           | 347          | 97     | 432 | 180          |
| 07:00          | 64           | 39           |    |     | 103          | 19:00          | 85           | 99           |        |     | 184          |
| 07:15          | 88           | 30           |    |     | 118          | 19:15          | 77           | 90           |        |     | 167          |
| 07:30          | 98           | 41           |    |     | 139          | 19:30          | 72           | 103          |        |     | 175          |
| 07:45          | 158          | 408          | 57 | 167 | 215          | 19:45          | 69           | 303          | 62     | 354 | 131          |
| 08:00          | 178          | 49           |    |     | 227          | 20:00          | 62           | 73           |        |     | 135          |
| 08:15          | 182          | 71           |    |     | 253          | 20:15          | 49           | 68           |        |     | 117          |
| 08:30          | 141          | 66           |    |     | 207          | 20:30          | 53           | 70           |        |     | 123          |
| 08:45          | 129          | 630          | 52 | 238 | 181          | 20:45          | 69           | 233          | 57     | 268 | 126          |
| 09:00          | 88           | 52           |    |     | 140          | 21:00          | 51           | 57           |        |     | 108          |
| 09:15          | 78           | 60           |    |     | 138          | 21:15          | 51           | 65           |        |     | 116          |
| 09:30          | 29           | 53           |    |     | 82           | 21:30          | 45           | 57           |        |     | 102          |
| 09:45          | 84           | 279          | 80 | 245 | 164          | 21:45          | 44           | 191          | 53     | 232 | 97           |
| 10:00          | 79           | 73           |    |     | 152          | 22:00          | 39           | 53           |        |     | 92           |
| 10:15          | 65           | 51           |    |     | 116          | 22:15          | 39           | 44           |        |     | 83           |
| 10:30          | 79           | 71           |    |     | 150          | 22:30          | 31           | 42           |        |     | 73           |
| 10:45          | 93           | 316          | 80 | 275 | 173          | 22:45          | 48           | 157          | 38     | 177 | 86           |
| 11:00          | 80           | 60           |    |     | 140          | 23:00          | 31           | 47           |        |     | 78           |
| 11:15          | 85           | 61           |    |     | 146          | 23:15          | 27           | 28           |        |     | 55           |
| 11:30          | 77           | 78           |    |     | 155          | 23:30          | 35           | 38           |        |     | 73           |
| 11:45          | 78           | 320          | 82 | 281 | 160          | 23:45          | 24           | 117          | 27     | 140 | 51           |
| <b>TOTALS</b>  | <b>2322</b>  | <b>1562</b>  |    |     | <b>3884</b>  | <b>TOTALS</b>  | <b>3324</b>  | <b>3920</b>  |        |     | <b>7244</b>  |
| <b>SPLIT %</b> | <b>59.8%</b> | <b>40.2%</b> |    |     | <b>34.9%</b> | <b>SPLIT %</b> | <b>45.9%</b> | <b>54.1%</b> |        |     | <b>65.1%</b> |

| DAILY TOTALS |  |  |  |  | NB    | SB    | EB | WB | Total  |
|--------------|--|--|--|--|-------|-------|----|----|--------|
|              |  |  |  |  | 5,646 | 5,482 | 0  | 0  | 11,128 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    | 07:45 | 11:30 |       |       | 07:45 | PM Peak Hour    | 17:30 | 17:15 |       |       | 17:15 |
| AM Pk Volume    | 659   | 316   |       |       | 902   | PM Pk Volume    | 363   | 495   |       |       | 857   |
| Pk Hr Factor    | 0.905 | 0.963 |       |       | 0.891 | Pk Hr Factor    | 0.976 | 0.959 |       |       | 0.974 |
| 7 - 9 Volume    | 1038  | 405   | 0     | 0     | 1443  | 4 - 6 Volume    | 673   | 888   | 0     | 0     | 1561  |
| 7 - 9 Peak Hour | 07:45 | 07:45 |       |       | 07:45 | 4 - 6 Peak Hour | 17:00 | 17:00 |       |       | 17:00 |
| 7 - 9 Pk Volume | 659   | 243   | 0     | 0     | 902   | 4 - 6 Pk Volume | 353   | 491   | 0     | 0     | 844   |
| Pk Hr Factor    | 0.905 | 0.856 | 0.000 | 0.000 | 0.891 | Pk Hr Factor    | 0.959 | 0.952 | 0.000 | 0.000 | 0.959 |

**VOLUME**

Hermosa Ave Bet. 8th St &amp; Herondo St

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_004

| DAILY TOTALS   |       |       |    |     | NB    | SB             | EB    | WB    | Total |     |       |
|----------------|-------|-------|----|-----|-------|----------------|-------|-------|-------|-----|-------|
|                |       |       |    |     | 4,824 | 4,253          | 0     | 0     | 9,077 |     |       |
| AM Period      | NB    | SB    | EB | WB  | TOTAL | PM Period      | NB    | SB    | EB    | WB  | TOTAL |
| 00:00          | 8     | 6     |    |     | 14    | 12:00          | 40    | 61    |       |     | 101   |
| 00:15          | 7     | 11    |    |     | 18    | 12:15          | 62    | 67    |       |     | 129   |
| 00:30          | 6     | 8     |    |     | 14    | 12:30          | 73    | 57    |       |     | 130   |
| 00:45          | 7     | 28    | 7  | 32  | 14    | 12:45          | 62    | 237   | 73    | 258 | 135   |
| 01:00          | 1     | 7     |    |     | 8     | 13:00          | 62    | 54    |       |     | 116   |
| 01:15          | 4     | 5     |    |     | 9     | 13:15          | 67    | 63    |       |     | 130   |
| 01:30          | 1     | 3     |    |     | 4     | 13:30          | 62    | 64    |       |     | 126   |
| 01:45          | 1     | 7     | 2  | 17  | 3     | 13:45          | 55    | 246   | 57    | 238 | 112   |
| 02:00          | 2     | 8     |    |     | 10    | 14:00          | 52    | 73    |       |     | 125   |
| 02:15          | 2     | 1     |    |     | 3     | 14:15          | 70    | 81    |       |     | 151   |
| 02:30          | 0     | 3     |    |     | 3     | 14:30          | 69    | 60    |       |     | 129   |
| 02:45          | 1     | 5     | 2  | 14  | 3     | 14:45          | 69    | 260   | 76    | 290 | 145   |
| 03:00          | 2     | 2     |    |     | 4     | 15:00          | 65    | 70    |       |     | 135   |
| 03:15          | 0     | 1     |    |     | 1     | 15:15          | 58    | 74    |       |     | 132   |
| 03:30          | 2     | 0     |    |     | 2     | 15:30          | 58    | 87    |       |     | 145   |
| 03:45          | 2     | 6     | 1  | 4   | 3     | 15:45          | 67    | 248   | 71    | 302 | 138   |
| 04:00          | 2     | 4     |    |     | 6     | 16:00          | 52    | 91    |       |     | 143   |
| 04:15          | 3     | 3     |    |     | 6     | 16:15          | 75    | 97    |       |     | 172   |
| 04:30          | 2     | 3     |    |     | 5     | 16:30          | 63    | 94    |       |     | 157   |
| 04:45          | 1     | 8     | 4  | 14  | 5     | 16:45          | 69    | 259   | 106   | 388 | 175   |
| 05:00          | 3     | 7     |    |     | 10    | 17:00          | 74    | 105   |       |     | 179   |
| 05:15          | 6     | 5     |    |     | 11    | 17:15          | 91    | 113   |       |     | 204   |
| 05:30          | 15    | 6     |    |     | 21    | 17:30          | 71    | 106   |       |     | 177   |
| 05:45          | 17    | 41    | 5  | 23  | 22    | 17:45          | 86    | 322   | 83    | 407 | 169   |
| 06:00          | 25    | 5     |    |     | 30    | 18:00          | 75    | 90    |       |     | 165   |
| 06:15          | 31    | 27    |    |     | 58    | 18:15          | 78    | 101   |       |     | 179   |
| 06:30          | 40    | 19    |    |     | 59    | 18:30          | 75    | 97    |       |     | 172   |
| 06:45          | 65    | 161   | 24 | 75  | 89    | 18:45          | 69    | 297   | 87    | 375 | 156   |
| 07:00          | 77    | 29    |    |     | 106   | 19:00          | 81    | 81    |       |     | 162   |
| 07:15          | 117   | 40    |    |     | 157   | 19:15          | 58    | 83    |       |     | 141   |
| 07:30          | 186   | 35    |    |     | 221   | 19:30          | 46    | 63    |       |     | 109   |
| 07:45          | 221   | 601   | 59 | 163 | 280   | 19:45          | 63    | 248   | 40    | 267 | 103   |
| 08:00          | 227   | 74    |    |     | 301   | 20:00          | 41    | 41    |       |     | 82    |
| 08:15          | 169   | 71    |    |     | 240   | 20:15          | 36    | 64    |       |     | 100   |
| 08:30          | 136   | 57    |    |     | 193   | 20:30          | 51    | 41    |       |     | 92    |
| 08:45          | 143   | 675   | 43 | 245 | 186   | 20:45          | 33    | 161   | 35    | 181 | 68    |
| 09:00          | 96    | 39    |    |     | 135   | 21:00          | 40    | 45    |       |     | 85    |
| 09:15          | 83    | 44    |    |     | 127   | 21:15          | 27    | 40    |       |     | 67    |
| 09:30          | 75    | 43    |    |     | 118   | 21:30          | 21    | 36    |       |     | 57    |
| 09:45          | 76    | 330   | 48 | 174 | 124   | 21:45          | 24    | 112   | 46    | 167 | 70    |
| 10:00          | 49    | 42    |    |     | 91    | 22:00          | 23    | 34    |       |     | 57    |
| 10:15          | 45    | 53    |    |     | 98    | 22:15          | 22    | 34    |       |     | 56    |
| 10:30          | 60    | 63    |    |     | 123   | 22:30          | 19    | 19    |       |     | 38    |
| 10:45          | 59    | 213   | 48 | 206 | 107   | 22:45          | 16    | 80    | 20    | 107 | 36    |
| 11:00          | 59    | 63    |    |     | 122   | 23:00          | 16    | 15    |       |     | 31    |
| 11:15          | 62    | 63    |    |     | 125   | 23:15          | 2     | 14    |       |     | 16    |
| 11:30          | 67    | 62    |    |     | 129   | 23:30          | 10    | 18    |       |     | 28    |
| 11:45          | 54    | 242   | 61 | 249 | 115   | 23:45          | 9     | 37    | 10    | 57  | 19    |
| <b>TOTALS</b>  | 2317  | 1216  |    |     | 3533  | <b>TOTALS</b>  | 2507  | 3037  |       |     | 5544  |
| <b>SPLIT %</b> | 65.6% | 34.4% |    |     | 38.9% | <b>SPLIT %</b> | 45.2% | 54.8% |       |     | 61.1% |

| DAILY TOTALS |  |  |  |  | NB    | SB    | EB | WB | Total |
|--------------|--|--|--|--|-------|-------|----|----|-------|
|              |  |  |  |  | 4,824 | 4,253 | 0  | 0  | 9,077 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    | 07:30 | 07:45 |       |       | 07:30 | PM Peak Hour    | 17:15 | 16:45 |       |       | 16:45 |
| AM Pk Volume    | 803   | 261   |       |       | 1042  | PM Pk Volume    | 323   | 430   |       |       | 735   |
| Pk Hr Factor    | 0.884 | 0.882 |       |       | 0.865 | Pk Hr Factor    | 0.887 | 0.951 |       |       | 0.901 |
| 7 - 9 Volume    | 1276  | 408   | 0     | 0     | 1684  | 4 - 6 Volume    | 581   | 795   | 0     | 0     | 1376  |
| 7 - 9 Peak Hour | 07:30 | 07:45 |       |       | 07:30 | 4 - 6 Peak Hour | 17:00 | 16:45 |       |       | 16:45 |
| 7 - 9 Pk Volume | 803   | 261   | 0     | 0     | 1042  | 4 - 6 Pk Volume | 322   | 430   | 0     | 0     | 735   |
| Pk Hr Factor    | 0.884 | 0.882 | 0.000 | 0.000 | 0.865 | Pk Hr Factor    | 0.885 | 0.951 | 0.000 | 0.000 | 0.901 |

**VOLUME**

Valley Dr Bet. Gould Ave & Pier Ave

Day: Wednesday  
Date: 9/10/2014

City: Hermosa Beach  
Project #: CA14\_5525\_005

| DAILY TOTALS   |    |        |     |    |       | NB             | SB    | EB     | WB  | Total |       |
|----------------|----|--------|-----|----|-------|----------------|-------|--------|-----|-------|-------|
|                |    |        |     |    |       | 0              | 5,044 | 0      | 0   | 5,044 |       |
| AM Period      | NB | SB     | EB  | WB | TOTAL | PM Period      | NB    | SB     | EB  | WB    | TOTAL |
| 00:00          | 0  | 6      |     |    | 6     | 12:00          | 0     | 68     |     |       | 68    |
| 00:15          | 0  | 4      |     |    | 4     | 12:15          | 0     | 72     |     |       | 72    |
| 00:30          | 0  | 6      |     |    | 6     | 12:30          | 0     | 64     |     |       | 64    |
| 00:45          | 0  | 4      | 20  |    | 4     | 12:45          | 0     | 70     | 274 |       | 70    |
| 01:00          | 0  | 3      |     |    | 3     | 13:00          | 0     | 87     |     |       | 87    |
| 01:15          | 0  | 2      |     |    | 2     | 13:15          | 0     | 80     |     |       | 80    |
| 01:30          | 0  | 1      |     |    | 1     | 13:30          | 0     | 91     |     |       | 91    |
| 01:45          | 0  | 0      | 6   |    | 0     | 13:45          | 0     | 62     | 320 |       | 62    |
| 02:00          | 0  | 1      |     |    | 1     | 14:00          | 0     | 78     |     |       | 78    |
| 02:15          | 0  | 0      |     |    | 0     | 14:15          | 0     | 72     |     |       | 72    |
| 02:30          | 0  | 0      |     |    | 0     | 14:30          | 0     | 78     |     |       | 78    |
| 02:45          | 0  | 2      | 3   |    | 2     | 14:45          | 0     | 82     | 310 |       | 82    |
| 03:00          | 0  | 1      |     |    | 1     | 15:00          | 0     | 92     |     |       | 92    |
| 03:15          | 0  | 0      |     |    | 0     | 15:15          | 0     | 112    |     |       | 112   |
| 03:30          | 0  | 0      |     |    | 0     | 15:30          | 0     | 84     |     |       | 84    |
| 03:45          | 0  | 1      | 2   |    | 1     | 15:45          | 0     | 98     | 386 |       | 98    |
| 04:00          | 0  | 2      |     |    | 2     | 16:00          | 0     | 112    |     |       | 112   |
| 04:15          | 0  | 1      |     |    | 1     | 16:15          | 0     | 109    |     |       | 109   |
| 04:30          | 0  | 3      |     |    | 3     | 16:30          | 0     | 141    |     |       | 141   |
| 04:45          | 0  | 2      | 8   |    | 2     | 16:45          | 0     | 137    | 499 |       | 137   |
| 05:00          | 0  | 3      |     |    | 3     | 17:00          | 0     | 125    |     |       | 125   |
| 05:15          | 0  | 4      |     |    | 4     | 17:15          | 0     | 154    |     |       | 154   |
| 05:30          | 0  | 6      |     |    | 6     | 17:30          | 0     | 142    |     |       | 142   |
| 05:45          | 0  | 11     | 24  |    | 11    | 17:45          | 0     | 130    | 551 |       | 130   |
| 06:00          | 0  | 12     |     |    | 12    | 18:00          | 0     | 132    |     |       | 132   |
| 06:15          | 0  | 17     |     |    | 17    | 18:15          | 0     | 107    |     |       | 107   |
| 06:30          | 0  | 21     |     |    | 21    | 18:30          | 0     | 104    |     |       | 104   |
| 06:45          | 0  | 30     | 80  |    | 30    | 18:45          | 0     | 95     | 438 |       | 95    |
| 07:00          | 0  | 33     |     |    | 33    | 19:00          | 0     | 114    |     |       | 114   |
| 07:15          | 0  | 62     |     |    | 62    | 19:15          | 0     | 99     |     |       | 99    |
| 07:30          | 0  | 58     |     |    | 58    | 19:30          | 0     | 64     |     |       | 64    |
| 07:45          | 0  | 66     | 219 |    | 66    | 19:45          | 0     | 61     | 338 |       | 61    |
| 08:00          | 0  | 115    |     |    | 115   | 20:00          | 0     | 57     |     |       | 57    |
| 08:15          | 0  | 80     |     |    | 80    | 20:15          | 0     | 48     |     |       | 48    |
| 08:30          | 0  | 68     |     |    | 68    | 20:30          | 0     | 33     |     |       | 33    |
| 08:45          | 0  | 58     | 321 |    | 58    | 20:45          | 0     | 36     | 174 |       | 36    |
| 09:00          | 0  | 75     |     |    | 75    | 21:00          | 0     | 41     |     |       | 41    |
| 09:15          | 0  | 61     |     |    | 61    | 21:15          | 0     | 31     |     |       | 31    |
| 09:30          | 0  | 70     |     |    | 70    | 21:30          | 0     | 32     |     |       | 32    |
| 09:45          | 0  | 62     | 268 |    | 62    | 21:45          | 0     | 23     | 127 |       | 23    |
| 10:00          | 0  | 67     |     |    | 67    | 22:00          | 0     | 38     |     |       | 38    |
| 10:15          | 0  | 53     |     |    | 53    | 22:15          | 0     | 16     |     |       | 16    |
| 10:30          | 0  | 61     |     |    | 61    | 22:30          | 0     | 20     |     |       | 20    |
| 10:45          | 0  | 73     | 254 |    | 73    | 22:45          | 0     | 14     | 88  |       | 14    |
| 11:00          | 0  | 61     |     |    | 61    | 23:00          | 0     | 11     |     |       | 11    |
| 11:15          | 0  | 67     |     |    | 67    | 23:15          | 0     | 12     |     |       | 12    |
| 11:30          | 0  | 84     |     |    | 84    | 23:30          | 0     | 14     |     |       | 14    |
| 11:45          | 0  | 80     | 292 |    | 80    | 23:45          | 0     | 5      | 42  |       | 5     |
| <b>TOTALS</b>  |    | 1497   |     |    | 1497  | <b>TOTALS</b>  |       | 3547   |     |       | 3547  |
| <b>SPLIT %</b> |    | 100.0% |     |    | 29.7% | <b>SPLIT %</b> |       | 100.0% |     |       | 70.3% |

| DAILY TOTALS |  |  |  |  |  | NB | SB    | EB | WB | Total |
|--------------|--|--|--|--|--|----|-------|----|----|-------|
|              |  |  |  |  |  | 0  | 5,044 | 0  | 0  | 5,044 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    |       | 07:45 |       |       | 07:45 | PM Peak Hour    |       | 16:45 |       |       | 16:45 |
| AM Pk Volume    |       | 329   |       |       | 329   | PM Pk Volume    |       | 558   |       |       | 558   |
| Pk Hr Factor    |       | 0.715 |       |       | 0.715 | Pk Hr Factor    |       | 0.906 |       |       | 0.906 |
| 7 - 9 Volume    | 0     | 540   | 0     | 0     | 540   | 4 - 6 Volume    | 0     | 1050  | 0     | 0     | 1050  |
| 7 - 9 Peak Hour |       | 07:45 |       |       | 07:45 | 4 - 6 Peak Hour |       | 16:45 |       |       | 16:45 |
| 7 - 9 Pk Volume | 0     | 329   | 0     | 0     | 329   | 4 - 6 Pk Volume | 0     | 558   | 0     | 0     | 558   |
| Pk Hr Factor    | 0.000 | 0.715 | 0.000 | 0.000 | 0.715 | Pk Hr Factor    | 0.000 | 0.906 | 0.000 | 0.000 | 0.906 |

**VOLUME**

Valley Dr Bet. Pier Ave &amp; 8th St

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_006

| DAILY TOTALS   |       |       |    |     | NB    | SB             | EB    | WB    | Total |     |       |
|----------------|-------|-------|----|-----|-------|----------------|-------|-------|-------|-----|-------|
|                |       |       |    |     | 3,181 | 3,328          | 0     | 0     | 6,509 |     |       |
| AM Period      | NB    | SB    | EB | WB  | TOTAL | PM Period      | NB    | SB    | EB    | WB  | TOTAL |
| 00:00          | 0     | 6     |    |     | 6     | 12:00          | 58    | 41    |       |     | 99    |
| 00:15          | 0     | 1     |    |     | 1     | 12:15          | 51    | 45    |       |     | 96    |
| 00:30          | 2     | 1     |    |     | 3     | 12:30          | 74    | 58    |       |     | 132   |
| 00:45          | 0     | 2     | 0  | 8   | 0     | 12:45          | 65    | 248   | 39    | 183 | 104   |
| 01:00          | 1     | 3     |    |     | 4     | 13:00          | 62    | 49    |       |     | 111   |
| 01:15          | 2     | 8     |    |     | 10    | 13:15          | 84    | 35    |       |     | 119   |
| 01:30          | 3     | 4     |    |     | 7     | 13:30          | 78    | 38    |       |     | 116   |
| 01:45          | 0     | 6     | 0  | 15  | 0     | 13:45          | 99    | 323   | 40    | 162 | 139   |
| 02:00          | 0     | 2     |    |     | 2     | 14:00          | 77    | 38    |       |     | 115   |
| 02:15          | 0     | 3     |    |     | 3     | 14:15          | 75    | 54    |       |     | 129   |
| 02:30          | 1     | 2     |    |     | 3     | 14:30          | 74    | 42    |       |     | 116   |
| 02:45          | 1     | 2     | 3  | 10  | 4     | 14:45          | 63    | 289   | 57    | 191 | 120   |
| 03:00          | 0     | 1     |    |     | 1     | 15:00          | 95    | 82    |       |     | 177   |
| 03:15          | 0     | 1     |    |     | 1     | 15:15          | 92    | 83    |       |     | 175   |
| 03:30          | 0     | 1     |    |     | 1     | 15:30          | 83    | 62    |       |     | 145   |
| 03:45          | 0     | 0     | 3  |     | 0     | 15:45          | 89    | 359   | 81    | 308 | 170   |
| 04:00          | 0     | 2     |    |     | 2     | 16:00          | 39    | 66    |       |     | 105   |
| 04:15          | 1     | 1     |    |     | 2     | 16:15          | 28    | 77    |       |     | 105   |
| 04:30          | 2     | 0     |    |     | 2     | 16:30          | 33    | 87    |       |     | 120   |
| 04:45          | 1     | 4     | 0  | 3   | 1     | 16:45          | 36    | 136   | 93    | 323 | 129   |
| 05:00          | 2     | 4     |    |     | 6     | 17:00          | 32    | 92    |       |     | 124   |
| 05:15          | 2     | 2     |    |     | 4     | 17:15          | 38    | 81    |       |     | 119   |
| 05:30          | 2     | 2     |    |     | 4     | 17:30          | 58    | 77    |       |     | 135   |
| 05:45          | 9     | 15    | 5  | 13  | 14    | 17:45          | 33    | 161   | 89    | 339 | 122   |
| 06:00          | 4     | 2     |    |     | 6     | 18:00          | 52    | 93    |       |     | 145   |
| 06:15          | 13    | 8     |    |     | 21    | 18:15          | 41    | 87    |       |     | 128   |
| 06:30          | 19    | 15    |    |     | 34    | 18:30          | 39    | 79    |       |     | 118   |
| 06:45          | 36    | 72    | 19 | 44  | 55    | 18:45          | 26    | 158   | 84    | 343 | 110   |
| 07:00          | 19    | 16    |    |     | 35    | 19:00          | 25    | 71    |       |     | 96    |
| 07:15          | 27    | 29    |    |     | 56    | 19:15          | 20    | 83    |       |     | 103   |
| 07:30          | 48    | 31    |    |     | 79    | 19:30          | 28    | 39    |       |     | 67    |
| 07:45          | 101   | 195   | 37 | 113 | 138   | 19:45          | 13    | 86    | 47    | 240 | 60    |
| 08:00          | 80    | 70    |    |     | 150   | 20:00          | 18    | 43    |       |     | 61    |
| 08:15          | 59    | 46    |    |     | 105   | 20:15          | 11    | 52    |       |     | 63    |
| 08:30          | 76    | 36    |    |     | 112   | 20:30          | 12    | 26    |       |     | 38    |
| 08:45          | 79    | 294   | 33 | 185 | 112   | 20:45          | 8     | 49    | 31    | 152 | 39    |
| 09:00          | 73    | 38    |    |     | 111   | 21:00          | 12    | 31    |       |     | 43    |
| 09:15          | 64    | 43    |    |     | 107   | 21:15          | 10    | 23    |       |     | 33    |
| 09:30          | 51    | 37    |    |     | 88    | 21:30          | 7     | 28    |       |     | 35    |
| 09:45          | 23    | 211   | 41 | 159 | 64    | 21:45          | 11    | 40    | 24    | 106 | 35    |
| 10:00          | 44    | 42    |    |     | 86    | 22:00          | 10    | 23    |       |     | 33    |
| 10:15          | 58    | 39    |    |     | 97    | 22:15          | 4     | 8     |       |     | 12    |
| 10:30          | 61    | 56    |    |     | 117   | 22:30          | 5     | 6     |       |     | 11    |
| 10:45          | 77    | 240   | 42 | 179 | 119   | 22:45          | 6     | 25    | 11    | 48  | 17    |
| 11:00          | 63    | 35    |    |     | 98    | 23:00          | 4     | 10    |       |     | 14    |
| 11:15          | 62    | 35    |    |     | 97    | 23:15          | 2     | 5     |       |     | 7     |
| 11:30          | 66    | 55    |    |     | 121   | 23:30          | 3     | 8     |       |     | 11    |
| 11:45          | 65    | 256   | 49 | 174 | 114   | 23:45          | 1     | 10    | 4     | 27  | 5     |
| <b>TOTALS</b>  | 1297  | 906   |    |     | 2203  | <b>TOTALS</b>  | 1884  | 2422  |       |     | 4306  |
| <b>SPLIT %</b> | 58.9% | 41.1% |    |     | 33.8% | <b>SPLIT %</b> | 43.8% | 56.2% |       |     | 66.2% |

| DAILY TOTALS |  |  |  |  | NB    | SB    | EB | WB | Total |
|--------------|--|--|--|--|-------|-------|----|----|-------|
|              |  |  |  |  | 3,181 | 3,328 | 0  | 0  | 6,509 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    | 07:45 | 11:45 |       |       | 07:45 | PM Peak Hour    | 15:00 | 16:30 |       |       | 15:00 |
| AM Pk Volume    | 316   | 193   |       |       | 505   | PM Pk Volume    | 359   | 353   |       |       | 667   |
| Pk Hr Factor    | 0.782 | 0.832 |       |       | 0.842 | Pk Hr Factor    | 0.945 | 0.949 |       |       | 0.942 |
| 7 - 9 Volume    | 489   | 298   | 0     | 0     | 787   | 4 - 6 Volume    | 297   | 662   | 0     | 0     | 959   |
| 7 - 9 Peak Hour | 07:45 | 07:45 |       |       | 07:45 | 4 - 6 Peak Hour | 16:45 | 16:30 |       |       | 16:45 |
| 7 - 9 Pk Volume | 316   | 189   | 0     | 0     | 505   | 4 - 6 Pk Volume | 164   | 353   | 0     | 0     | 507   |
| Pk Hr Factor    | 0.782 | 0.675 | 0.000 | 0.000 | 0.842 | Pk Hr Factor    | 0.707 | 0.949 | 0.000 | 0.000 | 0.939 |



**VOLUME**

Ardmore Ave Bet. 16th St &amp; 11th St

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_007

| DAILY TOTALS   |       |       |    |     |       | NB             | SB    | EB    | WB | Total |       |
|----------------|-------|-------|----|-----|-------|----------------|-------|-------|----|-------|-------|
|                |       |       |    |     |       | 2,171          | 2,055 | 0     | 0  | 4,226 |       |
| AM Period      | NB    | SB    | EB | WB  | TOTAL | PM Period      | NB    | SB    | EB | WB    | TOTAL |
| 00:00          | 2     | 4     |    |     | 6     | 12:00          | 38    | 23    |    |       | 61    |
| 00:15          | 1     | 0     |    |     | 1     | 12:15          | 28    | 18    |    |       | 46    |
| 00:30          | 0     | 2     |    |     | 2     | 12:30          | 29    | 27    |    |       | 56    |
| 00:45          | 0     | 3     | 3  | 9   | 3     | 12:45          | 31    | 126   | 28 | 96    | 59    |
| 01:00          | 1     | 1     |    |     | 2     | 13:00          | 33    | 23    |    |       | 56    |
| 01:15          | 1     | 4     |    |     | 5     | 13:15          | 40    | 23    |    |       | 63    |
| 01:30          | 0     | 0     |    |     | 0     | 13:30          | 31    | 22    |    |       | 53    |
| 01:45          | 0     | 2     | 0  | 5   | 0     | 13:45          | 27    | 131   | 26 | 94    | 53    |
| 02:00          | 1     | 1     |    |     | 2     | 14:00          | 39    | 26    |    |       | 65    |
| 02:15          | 0     | 1     |    |     | 1     | 14:15          | 25    | 26    |    |       | 51    |
| 02:30          | 1     | 1     |    |     | 2     | 14:30          | 43    | 34    |    |       | 77    |
| 02:45          | 1     | 3     | 0  | 3   | 1     | 14:45          | 33    | 140   | 43 | 129   | 76    |
| 03:00          | 1     | 1     |    |     | 2     | 15:00          | 37    | 47    |    |       | 84    |
| 03:15          | 0     | 1     |    |     | 1     | 15:15          | 37    | 40    |    |       | 77    |
| 03:30          | 1     | 0     |    |     | 1     | 15:30          | 32    | 35    |    |       | 67    |
| 03:45          | 0     | 2     | 0  | 2   | 0     | 15:45          | 38    | 144   | 36 | 158   | 74    |
| 04:00          | 1     | 2     |    |     | 3     | 16:00          | 33    | 31    |    |       | 64    |
| 04:15          | 3     | 2     |    |     | 5     | 16:15          | 33    | 43    |    |       | 76    |
| 04:30          | 2     | 2     |    |     | 4     | 16:30          | 41    | 59    |    |       | 100   |
| 04:45          | 1     | 7     | 4  | 10  | 5     | 16:45          | 33    | 140   | 58 | 191   | 91    |
| 05:00          | 1     | 4     |    |     | 5     | 17:00          | 45    | 69    |    |       | 114   |
| 05:15          | 4     | 5     |    |     | 9     | 17:15          | 41    | 77    |    |       | 118   |
| 05:30          | 4     | 4     |    |     | 8     | 17:30          | 32    | 73    |    |       | 105   |
| 05:45          | 5     | 14    | 6  | 19  | 11    | 17:45          | 38    | 156   | 66 | 285   | 104   |
| 06:00          | 14    | 9     |    |     | 23    | 18:00          | 44    | 69    |    |       | 113   |
| 06:15          | 18    | 8     |    |     | 26    | 18:15          | 34    | 51    |    |       | 85    |
| 06:30          | 23    | 8     |    |     | 31    | 18:30          | 35    | 42    |    |       | 77    |
| 06:45          | 25    | 80    | 15 | 40  | 40    | 18:45          | 27    | 140   | 56 | 218   | 83    |
| 07:00          | 36    | 16    |    |     | 52    | 19:00          | 34    | 46    |    |       | 80    |
| 07:15          | 50    | 18    |    |     | 68    | 19:15          | 30    | 54    |    |       | 84    |
| 07:30          | 81    | 21    |    |     | 102   | 19:30          | 33    | 37    |    |       | 70    |
| 07:45          | 77    | 244   | 30 | 85  | 107   | 19:45          | 28    | 125   | 24 | 161   | 52    |
| 08:00          | 67    | 23    |    |     | 90    | 20:00          | 24    | 22    |    |       | 46    |
| 08:15          | 47    | 26    |    |     | 73    | 20:15          | 20    | 21    |    |       | 41    |
| 08:30          | 45    | 32    |    |     | 77    | 20:30          | 13    | 25    |    |       | 38    |
| 08:45          | 46    | 205   | 27 | 108 | 73    | 20:45          | 14    | 71    | 16 | 84    | 30    |
| 09:00          | 33    | 25    |    |     | 58    | 21:00          | 8     | 17    |    |       | 25    |
| 09:15          | 33    | 19    |    |     | 52    | 21:15          | 7     | 8     |    |       | 15    |
| 09:30          | 29    | 29    |    |     | 58    | 21:30          | 4     | 8     |    |       | 12    |
| 09:45          | 32    | 127   | 30 | 103 | 62    | 21:45          | 6     | 25    | 4  | 37    | 10    |
| 10:00          | 26    | 22    |    |     | 48    | 22:00          | 13    | 12    |    |       | 25    |
| 10:15          | 32    | 17    |    |     | 49    | 22:15          | 8     | 8     |    |       | 16    |
| 10:30          | 29    | 21    |    |     | 50    | 22:30          | 6     | 5     |    |       | 11    |
| 10:45          | 33    | 120   | 28 | 88  | 61    | 22:45          | 4     | 31    | 2  | 27    | 6     |
| 11:00          | 32    | 26    |    |     | 58    | 23:00          | 1     | 5     |    |       | 6     |
| 11:15          | 36    | 19    |    |     | 55    | 23:15          | 2     | 1     |    |       | 3     |
| 11:30          | 39    | 21    |    |     | 60    | 23:30          | 1     | 3     |    |       | 4     |
| 11:45          | 22    | 129   | 23 | 89  | 45    | 23:45          | 2     | 6     | 5  | 14    | 7     |
| <b>TOTALS</b>  | 936   | 561   |    |     | 1497  | <b>TOTALS</b>  | 1235  | 1494  |    |       | 2729  |
| <b>SPLIT %</b> | 62.5% | 37.5% |    |     | 35.4% | <b>SPLIT %</b> | 45.3% | 54.7% |    |       | 64.6% |

| DAILY TOTALS |  |  |  |  |  | NB    | SB    | EB | WB | Total |
|--------------|--|--|--|--|--|-------|-------|----|----|-------|
|              |  |  |  |  |  | 2,171 | 2,055 | 0  | 0  | 4,226 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    | 07:15 | 07:45 |       |       | 07:30 | PM Peak Hour    | 16:30 | 17:00 |       |       | 17:00 |
| AM Pk Volume    | 275   | 111   |       |       | 372   | PM Pk Volume    | 160   | 285   |       |       | 441   |
| Pk Hr Factor    | 0.849 | 0.867 |       |       | 0.869 | Pk Hr Factor    | 0.889 | 0.925 |       |       | 0.934 |
| 7 - 9 Volume    | 449   | 193   | 0     | 0     | 642   | 4 - 6 Volume    | 296   | 476   | 0     | 0     | 772   |
| 7 - 9 Peak Hour | 07:15 | 07:45 |       |       | 07:30 | 4 - 6 Peak Hour | 16:30 | 17:00 |       |       | 17:00 |
| 7 - 9 Pk Volume | 275   | 111   | 0     | 0     | 372   | 4 - 6 Pk Volume | 160   | 285   | 0     | 0     | 441   |
| Pk Hr Factor    | 0.849 | 0.867 | 0.000 | 0.000 | 0.869 | Pk Hr Factor    | 0.889 | 0.925 | 0.000 | 0.000 | 0.934 |

**VOLUME**

Ardmore Ave Bet. 8th St &amp; 2nd St

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_008

| DAILY TOTALS   |              |              |    |    | NB           | SB             | EB           | WB           | Total |     |              |
|----------------|--------------|--------------|----|----|--------------|----------------|--------------|--------------|-------|-----|--------------|
|                |              |              |    |    | 1,787        | 1,218          | 0            | 0            | 3,005 |     |              |
| AM Period      | NB           | SB           | EB | WB | TOTAL        | PM Period      | NB           | SB           | EB    | WB  | TOTAL        |
| 00:00          | 1            | 0            |    |    | 1            | 12:00          | 29           | 12           |       |     | 41           |
| 00:15          | 0            | 0            |    |    | 0            | 12:15          | 16           | 21           |       |     | 37           |
| 00:30          | 1            | 1            |    |    | 2            | 12:30          | 32           | 14           |       |     | 46           |
| 00:45          | 0            | 2            | 0  | 1  | 0            | 12:45          | 34           | 111          | 21    | 68  | 55           |
| 01:00          | 0            | 0            |    |    | 0            | 13:00          | 22           | 20           |       |     | 42           |
| 01:15          | 0            | 1            |    |    | 1            | 13:15          | 31           | 20           |       |     | 51           |
| 01:30          | 1            | 4            |    |    | 5            | 13:30          | 40           | 17           |       |     | 57           |
| 01:45          | 0            | 1            | 0  | 5  | 0            | 13:45          | 27           | 120          | 23    | 80  | 50           |
| 02:00          | 0            | 0            |    |    | 0            | 14:00          | 20           | 31           |       |     | 51           |
| 02:15          | 1            | 0            |    |    | 1            | 14:15          | 21           | 17           |       |     | 38           |
| 02:30          | 0            | 1            |    |    | 1            | 14:30          | 26           | 17           |       |     | 43           |
| 02:45          | 0            | 1            | 0  | 1  | 0            | 14:45          | 20           | 87           | 20    | 85  | 40           |
| 03:00          | 0            | 0            |    |    | 0            | 15:00          | 33           | 17           |       |     | 50           |
| 03:15          | 0            | 0            |    |    | 0            | 15:15          | 35           | 19           |       |     | 54           |
| 03:30          | 1            | 0            |    |    | 1            | 15:30          | 31           | 15           |       |     | 46           |
| 03:45          | 0            | 1            | 1  | 1  | 1            | 15:45          | 32           | 131          | 15    | 66  | 47           |
| 04:00          | 4            | 0            |    |    | 4            | 16:00          | 23           | 20           |       |     | 43           |
| 04:15          | 2            | 0            |    |    | 2            | 16:15          | 29           | 28           |       |     | 57           |
| 04:30          | 1            | 0            |    |    | 1            | 16:30          | 29           | 25           |       |     | 54           |
| 04:45          | 1            | 8            | 1  | 1  | 2            | 16:45          | 36           | 117          | 39    | 112 | 75           |
| 05:00          | 1            | 0            |    |    | 1            | 17:00          | 28           | 31           |       |     | 59           |
| 05:15          | 4            | 0            |    |    | 4            | 17:15          | 28           | 37           |       |     | 65           |
| 05:30          | 3            | 4            |    |    | 7            | 17:30          | 30           | 47           |       |     | 77           |
| 05:45          | 7            | 15           | 7  | 11 | 14           | 17:45          | 32           | 118          | 34    | 149 | 66           |
| 06:00          | 3            | 3            |    |    | 6            | 18:00          | 29           | 34           |       |     | 63           |
| 06:15          | 20           | 3            |    |    | 23           | 18:15          | 28           | 23           |       |     | 51           |
| 06:30          | 19           | 8            |    |    | 27           | 18:30          | 24           | 25           |       |     | 49           |
| 06:45          | 27           | 69           | 7  | 21 | 34           | 18:45          | 19           | 100          | 27    | 109 | 46           |
| 07:00          | 25           | 7            |    |    | 32           | 19:00          | 28           | 30           |       |     | 58           |
| 07:15          | 23           | 14           |    |    | 37           | 19:15          | 16           | 27           |       |     | 43           |
| 07:30          | 55           | 18           |    |    | 73           | 19:30          | 16           | 18           |       |     | 34           |
| 07:45          | 96           | 199          | 14 | 53 | 110          | 19:45          | 16           | 76           | 14    | 89  | 30           |
| 08:00          | 63           | 24           |    |    | 87           | 20:00          | 9            | 11           |       |     | 20           |
| 08:15          | 61           | 18           |    |    | 79           | 20:15          | 10           | 16           |       |     | 26           |
| 08:30          | 68           | 13           |    |    | 81           | 20:30          | 11           | 7            |       |     | 18           |
| 08:45          | 48           | 240          | 14 | 69 | 62           | 20:45          | 13           | 43           | 5     | 39  | 18           |
| 09:00          | 34           | 21           |    |    | 55           | 21:00          | 8            | 12           |       |     | 20           |
| 09:15          | 26           | 14           |    |    | 40           | 21:15          | 12           | 1            |       |     | 13           |
| 09:30          | 29           | 21           |    |    | 50           | 21:30          | 7            | 6            |       |     | 13           |
| 09:45          | 32           | 121          | 23 | 79 | 55           | 21:45          | 3            | 30           | 9     | 28  | 12           |
| 10:00          | 22           | 12           |    |    | 34           | 22:00          | 3            | 3            |       |     | 6            |
| 10:15          | 23           | 23           |    |    | 46           | 22:15          | 6            | 5            |       |     | 11           |
| 10:30          | 21           | 19           |    |    | 40           | 22:30          | 6            | 2            |       |     | 8            |
| 10:45          | 19           | 85           | 26 | 80 | 45           | 22:45          | 7            | 22           | 1     | 11  | 8            |
| 11:00          | 20           | 9            |    |    | 29           | 23:00          | 3            | 3            |       |     | 6            |
| 11:15          | 20           | 12           |    |    | 32           | 23:15          | 4            | 2            |       |     | 6            |
| 11:30          | 25           | 11           |    |    | 36           | 23:30          | 2            | 1            |       |     | 3            |
| 11:45          | 13           | 78           | 21 | 53 | 34           | 23:45          | 3            | 12           | 1     | 7   | 4            |
| <b>TOTALS</b>  | <b>820</b>   | <b>375</b>   |    |    | <b>1195</b>  | <b>TOTALS</b>  | <b>967</b>   | <b>843</b>   |       |     | <b>1810</b>  |
| <b>SPLIT %</b> | <b>68.6%</b> | <b>31.4%</b> |    |    | <b>39.8%</b> | <b>SPLIT %</b> | <b>53.4%</b> | <b>46.6%</b> |       |     | <b>60.2%</b> |

| DAILY TOTALS |  |  |  |  | NB    | SB    | EB | WB | Total |
|--------------|--|--|--|--|-------|-------|----|----|-------|
|              |  |  |  |  | 1,787 | 1,218 | 0  | 0  | 3,005 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    | 07:45 | 10:00 |       |       | 07:45 | PM Peak Hour    | 15:00 | 16:45 |       |       | 16:45 |
| AM Pk Volume    | 288   | 80    |       |       | 357   | PM Pk Volume    | 131   | 154   |       |       | 276   |
| Pk Hr Factor    | 0.750 | 0.769 |       |       | 0.811 | Pk Hr Factor    | 0.936 | 0.819 |       |       | 0.896 |
| 7 - 9 Volume    | 439   | 122   | 0     | 0     | 561   | 4 - 6 Volume    | 235   | 261   | 0     | 0     | 496   |
| 7 - 9 Peak Hour | 07:45 | 07:30 |       |       | 07:45 | 4 - 6 Peak Hour | 16:15 | 16:45 |       |       | 16:45 |
| 7 - 9 Pk Volume | 288   | 74    | 0     | 0     | 357   | 4 - 6 Pk Volume | 122   | 154   | 0     | 0     | 276   |
| Pk Hr Factor    | 0.750 | 0.771 | 0.000 | 0.000 | 0.811 | Pk Hr Factor    | 0.847 | 0.819 | 0.000 | 0.000 | 0.896 |

**VOLUME**

Pacific Coast Hwy Bet. Artesia Blvd &amp; Aviation Blvd

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_009

| DAILY TOTALS   |       |      |       |      |       |           |                |       |     |       | NB     |       | SB     |  | EB |  | WB |  | Total  |  |
|----------------|-------|------|-------|------|-------|-----------|----------------|-------|-----|-------|--------|-------|--------|--|----|--|----|--|--------|--|
|                |       |      |       |      |       |           |                |       |     |       | 23,054 |       | 20,800 |  | 0  |  | 0  |  | 43,854 |  |
| AM Period      | NB    | SB   | EB    | WB   | TOTAL | PM Period | NB             | SB    | EB  | WB    | TOTAL  |       |        |  |    |  |    |  |        |  |
| 00:00          | 19    | 20   |       |      | 39    | 12:00     | 314            | 322   |     |       | 636    |       |        |  |    |  |    |  |        |  |
| 00:15          | 22    | 15   |       |      | 37    | 12:15     | 345            | 291   |     |       | 636    |       |        |  |    |  |    |  |        |  |
| 00:30          | 12    | 20   |       |      | 32    | 12:30     | 349            | 333   |     |       | 682    |       |        |  |    |  |    |  |        |  |
| 00:45          | 15    | 68   | 20    | 75   | 35    | 12:45     | 334            | 1342  | 289 | 1235  | 623    | 2577  |        |  |    |  |    |  |        |  |
| 01:00          | 6     | 16   |       |      | 22    | 13:00     | 312            | 294   |     |       | 606    |       |        |  |    |  |    |  |        |  |
| 01:15          | 10    | 24   |       |      | 34    | 13:15     | 315            | 322   |     |       | 637    |       |        |  |    |  |    |  |        |  |
| 01:30          | 5     | 14   |       |      | 19    | 13:30     | 322            | 303   |     |       | 625    |       |        |  |    |  |    |  |        |  |
| 01:45          | 13    | 34   | 13    | 67   | 26    | 13:45     | 280            | 1229  | 345 | 1264  | 625    | 2493  |        |  |    |  |    |  |        |  |
| 02:00          | 4     | 17   |       |      | 21    | 14:00     | 326            | 351   |     |       | 677    |       |        |  |    |  |    |  |        |  |
| 02:15          | 8     | 5    |       |      | 13    | 14:15     | 310            | 309   |     |       | 619    |       |        |  |    |  |    |  |        |  |
| 02:30          | 6     | 6    |       |      | 12    | 14:30     | 320            | 328   |     |       | 648    |       |        |  |    |  |    |  |        |  |
| 02:45          | 6     | 24   | 11    | 39   | 17    | 14:45     | 299            | 1255  | 303 | 1291  | 602    | 2546  |        |  |    |  |    |  |        |  |
| 03:00          | 12    | 8    |       |      | 20    | 15:00     | 344            | 343   |     |       | 687    |       |        |  |    |  |    |  |        |  |
| 03:15          | 16    | 11   |       |      | 27    | 15:15     | 316            | 376   |     |       | 692    |       |        |  |    |  |    |  |        |  |
| 03:30          | 20    | 10   |       |      | 30    | 15:30     | 343            | 405   |     |       | 748    |       |        |  |    |  |    |  |        |  |
| 03:45          | 25    | 73   | 2     | 31   | 27    | 15:45     | 272            | 1275  | 381 | 1505  | 653    | 2780  |        |  |    |  |    |  |        |  |
| 04:00          | 38    | 8    |       |      | 46    | 16:00     | 277            | 452   |     |       | 729    |       |        |  |    |  |    |  |        |  |
| 04:15          | 55    | 8    |       |      | 63    | 16:15     | 283            | 493   |     |       | 776    |       |        |  |    |  |    |  |        |  |
| 04:30          | 99    | 12   |       |      | 111   | 16:30     | 309            | 504   |     |       | 813    |       |        |  |    |  |    |  |        |  |
| 04:45          | 103   | 295  | 14    | 42   | 117   | 16:45     | 290            | 1159  | 494 | 1943  | 784    | 3102  |        |  |    |  |    |  |        |  |
| 05:00          | 144   | 19   |       |      | 163   | 17:00     | 302            | 501   |     |       | 803    |       |        |  |    |  |    |  |        |  |
| 05:15          | 147   | 40   |       |      | 187   | 17:15     | 331            | 485   |     |       | 816    |       |        |  |    |  |    |  |        |  |
| 05:30          | 253   | 47   |       |      | 300   | 17:30     | 326            | 503   |     |       | 829    |       |        |  |    |  |    |  |        |  |
| 05:45          | 260   | 804  | 31    | 137  | 291   | 17:45     | 300            | 1259  | 487 | 1976  | 787    | 3235  |        |  |    |  |    |  |        |  |
| 06:00          | 344   | 61   |       |      | 405   | 18:00     | 310            | 503   |     |       | 813    |       |        |  |    |  |    |  |        |  |
| 06:15          | 388   | 89   |       |      | 477   | 18:15     | 273            | 414   |     |       | 687    |       |        |  |    |  |    |  |        |  |
| 06:30          | 527   | 86   |       |      | 613   | 18:30     | 296            | 424   |     |       | 720    |       |        |  |    |  |    |  |        |  |
| 06:45          | 571   | 1830 | 122   | 358  | 693   | 18:45     | 273            | 1152  | 399 | 1740  | 672    | 2892  |        |  |    |  |    |  |        |  |
| 07:00          | 606   | 180  |       |      | 786   | 19:00     | 318            | 412   |     |       | 730    |       |        |  |    |  |    |  |        |  |
| 07:15          | 554   | 143  |       |      | 697   | 19:15     | 254            | 340   |     |       | 594    |       |        |  |    |  |    |  |        |  |
| 07:30          | 426   | 183  |       |      | 609   | 19:30     | 258            | 362   |     |       | 620    |       |        |  |    |  |    |  |        |  |
| 07:45          | 321   | 1907 | 192   | 698  | 513   | 19:45     | 234            | 1064  | 379 | 1493  | 613    | 2557  |        |  |    |  |    |  |        |  |
| 08:00          | 378   | 204  |       |      | 582   | 20:00     | 259            | 302   |     |       | 561    |       |        |  |    |  |    |  |        |  |
| 08:15          | 385   | 269  |       |      | 654   | 20:15     | 237            | 281   |     |       | 518    |       |        |  |    |  |    |  |        |  |
| 08:30          | 369   | 251  |       |      | 620   | 20:30     | 214            | 261   |     |       | 475    |       |        |  |    |  |    |  |        |  |
| 08:45          | 504   | 1636 | 290   | 1014 | 794   | 20:45     | 185            | 895   | 229 | 1073  | 414    | 1968  |        |  |    |  |    |  |        |  |
| 09:00          | 480   | 270  |       |      | 750   | 21:00     | 221            | 259   |     |       | 480    |       |        |  |    |  |    |  |        |  |
| 09:15          | 442   | 202  |       |      | 644   | 21:15     | 160            | 220   |     |       | 380    |       |        |  |    |  |    |  |        |  |
| 09:30          | 427   | 257  |       |      | 684   | 21:30     | 150            | 190   |     |       | 340    |       |        |  |    |  |    |  |        |  |
| 09:45          | 392   | 1741 | 236   | 965  | 628   | 21:45     | 131            | 662   | 161 | 830   | 292    | 1492  |        |  |    |  |    |  |        |  |
| 10:00          | 333   | 235  |       |      | 568   | 22:00     | 131            | 166   |     |       | 297    |       |        |  |    |  |    |  |        |  |
| 10:15          | 317   | 239  |       |      | 556   | 22:15     | 102            | 147   |     |       | 249    |       |        |  |    |  |    |  |        |  |
| 10:30          | 345   | 275  |       |      | 620   | 22:30     | 95             | 130   |     |       | 225    |       |        |  |    |  |    |  |        |  |
| 10:45          | 372   | 1367 | 242   | 991  | 614   | 22:45     | 77             | 405   | 106 | 549   | 183    | 954   |        |  |    |  |    |  |        |  |
| 11:00          | 350   | 278  |       |      | 628   | 23:00     | 67             | 113   |     |       | 180    |       |        |  |    |  |    |  |        |  |
| 11:15          | 323   | 308  |       |      | 631   | 23:15     | 69             | 77    |     |       | 146    |       |        |  |    |  |    |  |        |  |
| 11:30          | 317   | 276  |       |      | 593   | 23:30     | 59             | 69    |     |       | 128    |       |        |  |    |  |    |  |        |  |
| 11:45          | 353   | 1343 | 303   | 1165 | 656   | 23:45     | 40             | 235   | 60  | 319   | 100    | 554   |        |  |    |  |    |  |        |  |
| <b>TOTALS</b>  | 11122 |      | 5582  |      | 16704 |           | <b>TOTALS</b>  | 11932 |     | 15218 |        | 27150 |        |  |    |  |    |  |        |  |
| <b>SPLIT %</b> | 66.6% |      | 33.4% |      | 38.1% |           | <b>SPLIT %</b> | 43.9% |     | 56.1% |        | 61.9% |        |  |    |  |    |  |        |  |

| DAILY TOTALS |  |  |  |  |  |  |  |  |  |  | NB     |  | SB     |  | EB |  | WB |  | Total  |  |
|--------------|--|--|--|--|--|--|--|--|--|--|--------|--|--------|--|----|--|----|--|--------|--|
|              |  |  |  |  |  |  |  |  |  |  | 23,054 |  | 20,800 |  | 0  |  | 0  |  | 43,854 |  |

|                 |       |       |       |       |       |                 |       |       |       |       |       |  |  |  |  |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|--|--|--|--|
| AM Peak Hour    | 06:30 | 11:45 |       |       | 08:45 | PM Peak Hour    | 12:00 | 16:15 |       |       | 17:15 |  |  |  |  |
| AM Pk Volume    | 2258  | 1249  |       |       | 2872  | PM Pk Volume    | 1342  | 1992  |       |       | 3245  |  |  |  |  |
| Pk Hr Factor    | 0.932 | 0.938 |       |       | 0.904 | Pk Hr Factor    | 0.961 | 0.988 |       |       | 0.979 |  |  |  |  |
| 7 - 9 Volume    | 3543  | 1712  | 0     | 0     | 5255  | 4 - 6 Volume    | 2418  | 3919  | 0     | 0     | 6337  |  |  |  |  |
| 7 - 9 Peak Hour | 07:00 | 08:00 |       |       | 08:00 | 4 - 6 Peak Hour | 17:00 | 16:15 |       |       | 17:00 |  |  |  |  |
| 7 - 9 Pk Volume | 1907  | 1014  | 0     | 0     | 2650  | 4 - 6 Pk Volume | 1259  | 1992  | 0     | 0     | 3235  |  |  |  |  |
| Pk Hr Factor    | 0.787 | 0.874 | 0.000 | 0.000 | 0.834 | Pk Hr Factor    | 0.951 | 0.988 | 0.000 | 0.000 | 0.976 |  |  |  |  |

**VOLUME**

Pacific Coast Hwy Bet. Aviation Blvd &amp; 2nd St

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_010

| DAILY TOTALS   |       |      |       |      |       |           |                |       |      |       | NB     |       | SB     |  | EB |  | WB |  | Total  |
|----------------|-------|------|-------|------|-------|-----------|----------------|-------|------|-------|--------|-------|--------|--|----|--|----|--|--------|
|                |       |      |       |      |       |           |                |       |      |       | 26,877 |       | 24,560 |  | 0  |  | 0  |  | 51,437 |
| AM Period      | NB    | SB   | EB    | WB   | TOTAL | PM Period | NB             | SB    | EB   | WB    | TOTAL  |       |        |  |    |  |    |  |        |
| 00:00          | 42    | 50   |       |      | 92    | 12:00     | 349            | 372   |      |       | 721    |       |        |  |    |  |    |  |        |
| 00:15          | 40    | 52   |       |      | 92    | 12:15     | 383            | 343   |      |       | 726    |       |        |  |    |  |    |  |        |
| 00:30          | 29    | 34   |       |      | 63    | 12:30     | 388            | 387   |      |       | 775    |       |        |  |    |  |    |  |        |
| 00:45          | 24    | 135  | 38    | 174  | 62    | 309       | 12:45          | 397   | 1517 | 318   | 1420   | 715   | 2937   |  |    |  |    |  |        |
| 01:00          | 19    | 29   |       |      | 48    | 13:00     | 345            | 310   |      |       | 655    |       |        |  |    |  |    |  |        |
| 01:15          | 13    | 22   |       |      | 35    | 13:15     | 357            | 348   |      |       | 705    |       |        |  |    |  |    |  |        |
| 01:30          | 16    | 28   |       |      | 44    | 13:30     | 397            | 390   |      |       | 787    |       |        |  |    |  |    |  |        |
| 01:45          | 18    | 66   | 17    | 96   | 35    | 162       | 13:45          | 321   | 1420 | 354   | 1402   | 675   | 2822   |  |    |  |    |  |        |
| 02:00          | 11    | 18   |       |      | 29    | 14:00     | 360            | 363   |      |       | 723    |       |        |  |    |  |    |  |        |
| 02:15          | 16    | 14   |       |      | 30    | 14:15     | 376            | 327   |      |       | 703    |       |        |  |    |  |    |  |        |
| 02:30          | 15    | 9    |       |      | 24    | 14:30     | 347            | 394   |      |       | 741    |       |        |  |    |  |    |  |        |
| 02:45          | 10    | 52   | 9     | 50   | 19    | 102       | 14:45          | 349   | 1432 | 386   | 1470   | 735   | 2902   |  |    |  |    |  |        |
| 03:00          | 15    | 13   |       |      | 28    | 15:00     | 406            | 372   |      |       | 778    |       |        |  |    |  |    |  |        |
| 03:15          | 18    | 13   |       |      | 31    | 15:15     | 404            | 434   |      |       | 838    |       |        |  |    |  |    |  |        |
| 03:30          | 25    | 13   |       |      | 38    | 15:30     | 400            | 421   |      |       | 821    |       |        |  |    |  |    |  |        |
| 03:45          | 29    | 87   | 13    | 52   | 42    | 139       | 15:45          | 359   | 1569 | 423   | 1650   | 782   | 3219   |  |    |  |    |  |        |
| 04:00          | 44    | 10   |       |      | 54    | 16:00     | 379            | 493   |      |       | 872    |       |        |  |    |  |    |  |        |
| 04:15          | 61    | 23   |       |      | 84    | 16:15     | 339            | 510   |      |       | 849    |       |        |  |    |  |    |  |        |
| 04:30          | 110   | 26   |       |      | 136   | 16:30     | 403            | 528   |      |       | 931    |       |        |  |    |  |    |  |        |
| 04:45          | 114   | 329  | 35    | 94   | 149   | 423       | 16:45          | 383   | 1504 | 560   | 2091   | 943   | 3595   |  |    |  |    |  |        |
| 05:00          | 160   | 40   |       |      | 200   | 17:00     | 392            | 561   |      |       | 953    |       |        |  |    |  |    |  |        |
| 05:15          | 163   | 41   |       |      | 204   | 17:15     | 403            | 552   |      |       | 955    |       |        |  |    |  |    |  |        |
| 05:30          | 281   | 65   |       |      | 346   | 17:30     | 428            | 569   |      |       | 997    |       |        |  |    |  |    |  |        |
| 05:45          | 289   | 893  | 69    | 215  | 358   | 1108      | 17:45          | 330   | 1553 | 560   | 2242   | 890   | 3795   |  |    |  |    |  |        |
| 06:00          | 382   | 100  |       |      | 482   | 18:00     | 356            | 545   |      |       | 901    |       |        |  |    |  |    |  |        |
| 06:15          | 431   | 109  |       |      | 540   | 18:15     | 312            | 505   |      |       | 817    |       |        |  |    |  |    |  |        |
| 06:30          | 586   | 136  |       |      | 722   | 18:30     | 339            | 478   |      |       | 817    |       |        |  |    |  |    |  |        |
| 06:45          | 634   | 2033 | 156   | 501  | 790   | 2534      | 18:45          | 312   | 1319 | 460   | 1988   | 772   | 3307   |  |    |  |    |  |        |
| 07:00          | 737   | 203  |       |      | 940   | 19:00     | 364            | 450   |      |       | 814    |       |        |  |    |  |    |  |        |
| 07:15          | 665   | 293  |       |      | 958   | 19:15     | 291            | 383   |      |       | 674    |       |        |  |    |  |    |  |        |
| 07:30          | 645   | 300  |       |      | 945   | 19:30     | 296            | 419   |      |       | 715    |       |        |  |    |  |    |  |        |
| 07:45          | 400   | 2447 | 294   | 1090 | 694   | 3537      | 19:45          | 268   | 1219 | 415   | 1667   | 683   | 2886   |  |    |  |    |  |        |
| 08:00          | 445   | 265  |       |      | 710   | 20:00     | 297            | 386   |      |       | 683    |       |        |  |    |  |    |  |        |
| 08:15          | 438   | 324  |       |      | 762   | 20:15     | 274            | 332   |      |       | 606    |       |        |  |    |  |    |  |        |
| 08:30          | 405   | 300  |       |      | 705   | 20:30     | 243            | 357   |      |       | 600    |       |        |  |    |  |    |  |        |
| 08:45          | 554   | 1842 | 296   | 1185 | 850   | 3027      | 20:45          | 214   | 1028 | 297   | 1372   | 511   | 2400   |  |    |  |    |  |        |
| 09:00          | 533   | 344  |       |      | 877   | 21:00     | 255            | 323   |      |       | 578    |       |        |  |    |  |    |  |        |
| 09:15          | 491   | 244  |       |      | 735   | 21:15     | 186            | 264   |      |       | 450    |       |        |  |    |  |    |  |        |
| 09:30          | 474   | 306  |       |      | 780   | 21:30     | 172            | 269   |      |       | 441    |       |        |  |    |  |    |  |        |
| 09:45          | 433   | 1931 | 285   | 1179 | 718   | 3110      | 21:45          | 151   | 764  | 195   | 1051   | 346   | 1815   |  |    |  |    |  |        |
| 10:00          | 365   | 286  |       |      | 651   | 22:00     | 148            | 215   |      |       | 363    |       |        |  |    |  |    |  |        |
| 10:15          | 352   | 301  |       |      | 653   | 22:15     | 114            | 159   |      |       | 273    |       |        |  |    |  |    |  |        |
| 10:30          | 383   | 276  |       |      | 659   | 22:30     | 110            | 169   |      |       | 279    |       |        |  |    |  |    |  |        |
| 10:45          | 413   | 1513 | 315   | 1178 | 728   | 2691      | 22:45          | 90    | 462  | 136   | 679    | 226   | 1141   |  |    |  |    |  |        |
| 11:00          | 389   | 307  |       |      | 696   | 23:00     | 73             | 135   |      |       | 208    |       |        |  |    |  |    |  |        |
| 11:15          | 359   | 314  |       |      | 673   | 23:15     | 81             | 106   |      |       | 187    |       |        |  |    |  |    |  |        |
| 11:30          | 352   | 368  |       |      | 720   | 23:30     | 67             | 86    |      |       | 153    |       |        |  |    |  |    |  |        |
| 11:45          | 392   | 1492 | 333   | 1322 | 725   | 2814      | 23:45          | 49    | 270  | 65    | 392    | 114   | 662    |  |    |  |    |  |        |
| <b>TOTALS</b>  | 12820 |      | 7136  |      | 19956 |           | <b>TOTALS</b>  | 14057 |      | 17424 |        | 31481 |        |  |    |  |    |  |        |
| <b>SPLIT %</b> | 64.2% |      | 35.8% |      | 38.8% |           | <b>SPLIT %</b> | 44.7% |      | 55.3% |        | 61.2% |        |  |    |  |    |  |        |

| DAILY TOTALS |  |  |  |  |  |  |  |  |  |  | NB     |  | SB     |  | EB |  | WB |  | Total  |
|--------------|--|--|--|--|--|--|--|--|--|--|--------|--|--------|--|----|--|----|--|--------|
|              |  |  |  |  |  |  |  |  |  |  | 26,877 |  | 24,560 |  | 0  |  | 0  |  | 51,437 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |  |  |  |  |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|--|--|--|--|
| AM Peak Hour    | 06:45 | 11:45 |       |       | 06:45 | PM Peak Hour    | 16:45 | 16:45 |       |       | 16:45 |  |  |  |  |
| AM Pk Volume    | 2681  | 1435  |       |       | 3633  | PM Pk Volume    | 1606  | 2242  |       |       | 3848  |  |  |  |  |
| Pk Hr Factor    | 0.909 | 0.927 |       |       | 0.948 | Pk Hr Factor    | 0.938 | 0.985 |       |       | 0.965 |  |  |  |  |
| 7 - 9 Volume    | 4289  | 2275  | 0     | 0     | 6564  | 4 - 6 Volume    | 3057  | 4333  | 0     | 0     | 7390  |  |  |  |  |
| 7 - 9 Peak Hour | 07:00 | 08:00 |       |       | 07:00 | 4 - 6 Peak Hour | 16:45 | 16:45 |       |       | 16:45 |  |  |  |  |
| 7 - 9 Pk Volume | 2447  | 1185  | 0     | 0     | 3537  | 4 - 6 Pk Volume | 1606  | 2242  | 0     | 0     | 3848  |  |  |  |  |
| Pk Hr Factor    | 0.830 | 0.914 | 0.000 | 0.000 | 0.923 | Pk Hr Factor    | 0.938 | 0.985 | 0.000 | 0.000 | 0.965 |  |  |  |  |

**VOLUME**

Prospect Ave Bet. Artesia Blvd &amp; Aviation Blvd

Day: Wednesday

Date: 9/10/2014

City: Hermosa Beach

Project #: CA14\_5525\_011

| DAILY TOTALS   |       |       |    |     |       | NB             | SB    | EB    | WB | Total |       |
|----------------|-------|-------|----|-----|-------|----------------|-------|-------|----|-------|-------|
|                |       |       |    |     |       | 3,241          | 2,936 | 0     | 0  | 6,177 |       |
| AM Period      | NB    | SB    | EB | WB  | TOTAL | PM Period      | NB    | SB    | EB | WB    | TOTAL |
| 00:00          | 1     | 1     |    |     | 2     | 12:00          | 29    | 46    |    |       | 75    |
| 00:15          | 1     | 4     |    |     | 5     | 12:15          | 39    | 34    |    |       | 73    |
| 00:30          | 1     | 2     |    |     | 3     | 12:30          | 42    | 57    |    |       | 99    |
| 00:45          | 3     | 6     | 2  | 9   | 5     | 12:45          | 45    | 155   | 77 | 214   | 122   |
| 01:00          | 2     | 4     |    |     | 6     | 13:00          | 50    | 69    |    |       | 119   |
| 01:15          | 0     | 0     |    |     | 0     | 13:15          | 91    | 35    |    |       | 126   |
| 01:30          | 1     | 2     |    |     | 3     | 13:30          | 50    | 46    |    |       | 96    |
| 01:45          | 1     | 4     | 1  | 7   | 2     | 13:45          | 41    | 232   | 47 | 197   | 88    |
| 02:00          | 0     | 0     |    |     | 0     | 14:00          | 33    | 43    |    |       | 76    |
| 02:15          | 3     | 0     |    |     | 3     | 14:15          | 53    | 43    |    |       | 96    |
| 02:30          | 0     | 0     |    |     | 0     | 14:30          | 41    | 33    |    |       | 74    |
| 02:45          | 1     | 4     | 0  |     | 1     | 14:45          | 52    | 179   | 56 | 175   | 108   |
| 03:00          | 0     | 0     |    |     | 0     | 15:00          | 52    | 50    |    |       | 102   |
| 03:15          | 1     | 1     |    |     | 2     | 15:15          | 55    | 44    |    |       | 99    |
| 03:30          | 0     | 0     |    |     | 0     | 15:30          | 44    | 50    |    |       | 94    |
| 03:45          | 0     | 1     | 0  | 1   | 0     | 15:45          | 49    | 200   | 59 | 203   | 108   |
| 04:00          | 1     | 0     |    |     | 1     | 16:00          | 45    | 69    |    |       | 114   |
| 04:15          | 1     | 0     |    |     | 1     | 16:15          | 58    | 78    |    |       | 136   |
| 04:30          | 2     | 2     |    |     | 4     | 16:30          | 67    | 58    |    |       | 125   |
| 04:45          | 7     | 11    | 1  | 3   | 8     | 16:45          | 48    | 218   | 81 | 286   | 129   |
| 05:00          | 6     | 2     |    |     | 8     | 17:00          | 45    | 119   |    |       | 164   |
| 05:15          | 5     | 4     |    |     | 9     | 17:15          | 73    | 73    |    |       | 146   |
| 05:30          | 15    | 0     |    |     | 15    | 17:30          | 56    | 95    |    |       | 151   |
| 05:45          | 20    | 46    | 5  | 11  | 25    | 17:45          | 50    | 224   | 78 | 365   | 128   |
| 06:00          | 17    | 5     |    |     | 22    | 18:00          | 48    | 93    |    |       | 141   |
| 06:15          | 20    | 5     |    |     | 25    | 18:15          | 48    | 58    |    |       | 106   |
| 06:30          | 38    | 22    |    |     | 60    | 18:30          | 54    | 72    |    |       | 126   |
| 06:45          | 31    | 106   | 12 | 44  | 43    | 18:45          | 46    | 196   | 83 | 306   | 129   |
| 07:00          | 49    | 14    |    |     | 63    | 19:00          | 44    | 80    |    |       | 124   |
| 07:15          | 74    | 26    |    |     | 100   | 19:15          | 42    | 51    |    |       | 93    |
| 07:30          | 135   | 35    |    |     | 170   | 19:30          | 16    | 36    |    |       | 52    |
| 07:45          | 115   | 373   | 50 | 125 | 165   | 19:45          | 16    | 118   | 28 | 195   | 44    |
| 08:00          | 105   | 73    |    |     | 178   | 20:00          | 24    | 40    |    |       | 64    |
| 08:15          | 138   | 52    |    |     | 190   | 20:15          | 30    | 29    |    |       | 59    |
| 08:30          | 150   | 42    |    |     | 192   | 20:30          | 14    | 35    |    |       | 49    |
| 08:45          | 99    | 492   | 35 | 202 | 134   | 20:45          | 9     | 77    | 32 | 136   | 41    |
| 09:00          | 73    | 31    |    |     | 104   | 21:00          | 12    | 19    |    |       | 31    |
| 09:15          | 50    | 25    |    |     | 75    | 21:15          | 8     | 17    |    |       | 25    |
| 09:30          | 53    | 29    |    |     | 82    | 21:30          | 10    | 15    |    |       | 25    |
| 09:45          | 43    | 219   | 27 | 112 | 70    | 21:45          | 7     | 37    | 11 | 62    | 18    |
| 10:00          | 31    | 24    |    |     | 55    | 22:00          | 5     | 9     |    |       | 14    |
| 10:15          | 37    | 31    |    |     | 68    | 22:15          | 4     | 7     |    |       | 11    |
| 10:30          | 36    | 24    |    |     | 60    | 22:30          | 5     | 6     |    |       | 11    |
| 10:45          | 42    | 146   | 27 | 106 | 69    | 22:45          | 2     | 16    | 8  | 30    | 10    |
| 11:00          | 44    | 37    |    |     | 81    | 23:00          | 1     | 5     |    |       | 6     |
| 11:15          | 44    | 34    |    |     | 78    | 23:15          | 5     | 2     |    |       | 7     |
| 11:30          | 48    | 29    |    |     | 77    | 23:30          | 1     | 1     |    |       | 2     |
| 11:45          | 34    | 170   | 38 | 138 | 72    | 23:45          | 4     | 11    | 1  | 9     | 5     |
| <b>TOTALS</b>  | 1578  | 758   |    |     | 2336  | <b>TOTALS</b>  | 1663  | 2178  |    |       | 3841  |
| <b>SPLIT %</b> | 67.6% | 32.4% |    |     | 37.8% | <b>SPLIT %</b> | 43.3% | 56.7% |    |       | 62.2% |

| DAILY TOTALS |  |  |  |  |  | NB    | SB    | EB | WB | Total |
|--------------|--|--|--|--|--|-------|-------|----|----|-------|
|              |  |  |  |  |  | 3,241 | 2,936 | 0  | 0  | 6,177 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    | 07:45 | 07:45 |       |       | 07:45 | PM Peak Hour    | 12:45 | 16:45 |       |       | 16:45 |
| AM Pk Volume    | 508   | 217   |       |       | 725   | PM Pk Volume    | 236   | 368   |       |       | 590   |
| Pk Hr Factor    | 0.847 | 0.743 |       |       | 0.944 | Pk Hr Factor    | 0.648 | 0.773 |       |       | 0.899 |
| 7 - 9 Volume    | 865   | 327   | 0     | 0     | 1192  | 4 - 6 Volume    | 442   | 651   | 0     | 0     | 1093  |
| 7 - 9 Peak Hour | 07:45 | 07:45 |       |       | 07:45 | 4 - 6 Peak Hour | 16:30 | 16:45 |       |       | 16:45 |
| 7 - 9 Pk Volume | 508   | 217   | 0     | 0     | 725   | 4 - 6 Pk Volume | 233   | 368   | 0     | 0     | 590   |
| Pk Hr Factor    | 0.847 | 0.743 | 0.000 | 0.000 | 0.944 | Pk Hr Factor    | 0.798 | 0.773 | 0.000 | 0.000 | 0.899 |

**VOLUME**

Prospect Ave Bet. Aviation Blvd &amp; 2nd St

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_012

| DAILY TOTALS   |       |       |    |     | NB    | SB             | EB    | WB    | Total  |     |       |
|----------------|-------|-------|----|-----|-------|----------------|-------|-------|--------|-----|-------|
|                |       |       |    |     | 6,026 | 5,898          | 0     | 0     | 11,924 |     |       |
| AM Period      | NB    | SB    | EB | WB  | TOTAL | PM Period      | NB    | SB    | EB     | WB  | TOTAL |
| 00:00          | 4     | 7     |    |     | 11    | 12:00          | 64    | 76    |        |     | 140   |
| 00:15          | 2     | 6     |    |     | 8     | 12:15          | 60    | 76    |        |     | 136   |
| 00:30          | 3     | 2     |    |     | 5     | 12:30          | 83    | 85    |        |     | 168   |
| 00:45          | 9     | 18    | 2  | 17  | 11    | 12:45          | 84    | 291   | 73     | 310 | 157   |
| 01:00          | 2     | 1     |    |     | 3     | 13:00          | 100   | 92    |        |     | 192   |
| 01:15          | 2     | 3     |    |     | 5     | 13:15          | 79    | 94    |        |     | 173   |
| 01:30          | 1     | 3     |    |     | 4     | 13:30          | 82    | 82    |        |     | 164   |
| 01:45          | 1     | 6     | 0  | 7   | 1     | 13:45          | 70    | 331   | 96     | 364 | 166   |
| 02:00          | 0     | 0     |    |     | 0     | 14:00          | 93    | 87    |        |     | 180   |
| 02:15          | 2     | 1     |    |     | 3     | 14:15          | 83    | 99    |        |     | 182   |
| 02:30          | 0     | 2     |    |     | 2     | 14:30          | 87    | 108   |        |     | 195   |
| 02:45          | 1     | 3     | 0  | 3   | 1     | 14:45          | 87    | 350   | 117    | 411 | 204   |
| 03:00          | 1     | 1     |    |     | 2     | 15:00          | 129   | 115   |        |     | 244   |
| 03:15          | 2     | 3     |    |     | 5     | 15:15          | 85    | 126   |        |     | 211   |
| 03:30          | 5     | 2     |    |     | 7     | 15:30          | 87    | 126   |        |     | 213   |
| 03:45          | 1     | 9     | 1  | 7   | 2     | 15:45          | 92    | 393   | 122    | 489 | 214   |
| 04:00          | 4     | 0     |    |     | 4     | 16:00          | 94    | 147   |        |     | 241   |
| 04:15          | 5     | 3     |    |     | 8     | 16:15          | 99    | 143   |        |     | 242   |
| 04:30          | 8     | 3     |    |     | 11    | 16:30          | 117   | 158   |        |     | 275   |
| 04:45          | 10    | 27    | 1  | 7   | 11    | 16:45          | 99    | 409   | 152    | 600 | 251   |
| 05:00          | 13    | 4     |    |     | 17    | 17:00          | 113   | 187   |        |     | 300   |
| 05:15          | 26    | 4     |    |     | 30    | 17:15          | 114   | 178   |        |     | 292   |
| 05:30          | 37    | 4     |    |     | 41    | 17:30          | 123   | 181   |        |     | 304   |
| 05:45          | 26    | 102   | 8  | 20  | 34    | 17:45          | 115   | 465   | 156    | 702 | 271   |
| 06:00          | 39    | 9     |    |     | 48    | 18:00          | 101   | 146   |        |     | 247   |
| 06:15          | 52    | 16    |    |     | 68    | 18:15          | 97    | 144   |        |     | 241   |
| 06:30          | 72    | 38    |    |     | 110   | 18:30          | 82    | 158   |        |     | 240   |
| 06:45          | 99    | 262   | 41 | 104 | 140   | 18:45          | 75    | 355   | 126    | 574 | 201   |
| 07:00          | 117   | 41    |    |     | 158   | 19:00          | 76    | 153   |        |     | 229   |
| 07:15          | 116   | 102   |    |     | 218   | 19:15          | 68    | 106   |        |     | 174   |
| 07:30          | 169   | 63    |    |     | 232   | 19:30          | 42    | 96    |        |     | 138   |
| 07:45          | 188   | 590   | 71 | 277 | 259   | 19:45          | 47    | 233   | 76     | 431 | 123   |
| 08:00          | 187   | 66    |    |     | 253   | 20:00          | 46    | 78    |        |     | 124   |
| 08:15          | 202   | 89    |    |     | 291   | 20:15          | 43    | 47    |        |     | 90    |
| 08:30          | 199   | 93    |    |     | 292   | 20:30          | 35    | 60    |        |     | 95    |
| 08:45          | 199   | 787   | 67 | 315 | 266   | 20:45          | 33    | 157   | 64     | 249 | 97    |
| 09:00          | 152   | 53    |    |     | 205   | 21:00          | 33    | 40    |        |     | 73    |
| 09:15          | 87    | 52    |    |     | 139   | 21:15          | 19    | 30    |        |     | 49    |
| 09:30          | 86    | 60    |    |     | 146   | 21:30          | 17    | 29    |        |     | 46    |
| 09:45          | 85    | 410   | 72 | 237 | 157   | 21:45          | 18    | 87    | 26     | 125 | 44    |
| 10:00          | 75    | 57    |    |     | 132   | 22:00          | 25    | 25    |        |     | 50    |
| 10:15          | 92    | 60    |    |     | 152   | 22:15          | 18    | 20    |        |     | 38    |
| 10:30          | 90    | 54    |    |     | 144   | 22:30          | 7     | 22    |        |     | 29    |
| 10:45          | 74    | 331   | 68 | 239 | 142   | 22:45          | 14    | 64    | 14     | 81  | 28    |
| 11:00          | 85    | 74    |    |     | 159   | 23:00          | 6     | 16    |        |     | 22    |
| 11:15          | 82    | 70    |    |     | 152   | 23:15          | 6     | 14    |        |     | 20    |
| 11:30          | 90    | 66    |    |     | 156   | 23:30          | 4     | 7     |        |     | 11    |
| 11:45          | 70    | 327   | 79 | 289 | 149   | 23:45          | 3     | 19    | 3      | 40  | 6     |
| <b>TOTALS</b>  | 2872  | 1522  |    |     | 4394  | <b>TOTALS</b>  | 3154  | 4376  |        |     | 7530  |
| <b>SPLIT %</b> | 65.4% | 34.6% |    |     | 36.9% | <b>SPLIT %</b> | 41.9% | 58.1% |        |     | 63.1% |

| DAILY TOTALS |  |  |  |  | NB    | SB    | EB | WB | Total  |
|--------------|--|--|--|--|-------|-------|----|----|--------|
|              |  |  |  |  | 6,026 | 5,898 | 0  | 0  | 11,924 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    | 08:00 | 07:45 |       |       | 08:00 | PM Peak Hour    | 17:00 | 17:00 |       |       | 17:00 |
| AM Pk Volume    | 787   | 319   |       |       | 1102  | PM Pk Volume    | 465   | 702   |       |       | 1167  |
| Pk Hr Factor    | 0.974 | 0.858 |       |       | 0.943 | Pk Hr Factor    | 0.945 | 0.939 |       |       | 0.960 |
| 7 - 9 Volume    | 1377  | 592   | 0     | 0     | 1969  | 4 - 6 Volume    | 874   | 1302  | 0     | 0     | 2176  |
| 7 - 9 Peak Hour | 08:00 | 07:45 |       |       | 08:00 | 4 - 6 Peak Hour | 17:00 | 17:00 |       |       | 17:00 |
| 7 - 9 Pk Volume | 787   | 319   | 0     | 0     | 1102  | 4 - 6 Pk Volume | 465   | 702   | 0     | 0     | 1167  |
| Pk Hr Factor    | 0.974 | 0.858 | 0.000 | 0.000 | 0.943 | Pk Hr Factor    | 0.945 | 0.939 | 0.000 | 0.000 | 0.960 |

**VOLUME**

Artesia Blvd Bet. Pacific Coast Hwy &amp; Prospect Ave

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_013

| DAILY TOTALS   |    |    |       |       | NB           | SB             | EB     |        | WB     | Total |              |     |
|----------------|----|----|-------|-------|--------------|----------------|--------|--------|--------|-------|--------------|-----|
|                |    |    |       |       | 0            | 0              | 12,948 | 13,406 | 26,354 |       |              |     |
| AM Period      | NB | SB | EB    | WB    | TOTAL        | PM Period      | NB     | SB     | EB     | WB    | TOTAL        |     |
| 00:00          |    |    | 32    | 14    | 46           | 12:00          |        |        | 218    | 198   | 416          |     |
| 00:15          |    |    | 30    | 13    | 43           | 12:15          |        |        | 176    | 234   | 410          |     |
| 00:30          |    |    | 22    | 7     | 29           | 12:30          |        |        | 213    | 195   | 408          |     |
| 00:45          |    |    | 16    | 100   | 8            | 12:45          |        |        | 202    | 809   | 239          | 866 |
| 01:00          |    |    | 18    | 19    | 37           | 13:00          |        |        | 202    | 210   | 412          |     |
| 01:15          |    |    | 9     | 5     | 14           | 13:15          |        |        | 190    | 210   | 400          |     |
| 01:30          |    |    | 7     | 11    | 18           | 13:30          |        |        | 212    | 217   | 429          |     |
| 01:45          |    |    | 8     | 42    | 8            | 13:45          |        |        | 219    | 823   | 288          | 925 |
| 02:00          |    |    | 13    | 6     | 19           | 14:00          |        |        | 240    | 205   | 445          |     |
| 02:15          |    |    | 11    | 7     | 18           | 14:15          |        |        | 219    | 192   | 411          |     |
| 02:30          |    |    | 7     | 4     | 11           | 14:30          |        |        | 232    | 169   | 401          |     |
| 02:45          |    |    | 5     | 36    | 9            | 14:45          |        |        | 256    | 947   | 261          | 827 |
| 03:00          |    |    | 3     | 1     | 4            | 15:00          |        |        | 228    | 248   | 476          |     |
| 03:15          |    |    | 4     | 8     | 12           | 15:15          |        |        | 210    | 221   | 431          |     |
| 03:30          |    |    | 8     | 11    | 19           | 15:30          |        |        | 212    | 227   | 439          |     |
| 03:45          |    |    | 2     | 17    | 7            | 15:45          |        |        | 270    | 920   | 210          | 906 |
| 04:00          |    |    | 6     | 8     | 14           | 16:00          |        |        | 264    | 221   | 485          |     |
| 04:15          |    |    | 14    | 10    | 24           | 16:15          |        |        | 259    | 248   | 507          |     |
| 04:30          |    |    | 10    | 18    | 28           | 16:30          |        |        | 275    | 228   | 503          |     |
| 04:45          |    |    | 17    | 47    | 28           | 16:45          |        |        | 283    | 1081  | 228          | 925 |
| 05:00          |    |    | 19    | 24    | 43           | 17:00          |        |        | 289    | 234   | 523          |     |
| 05:15          |    |    | 17    | 44    | 61           | 17:15          |        |        | 309    | 206   | 515          |     |
| 05:30          |    |    | 37    | 65    | 102          | 17:30          |        |        | 247    | 230   | 477          |     |
| 05:45          |    |    | 46    | 119   | 54           | 17:45          |        |        | 265    | 1110  | 181          | 851 |
| 06:00          |    |    | 42    | 82    | 124          | 18:00          |        |        | 261    | 204   | 465          |     |
| 06:15          |    |    | 71    | 101   | 172          | 18:15          |        |        | 257    | 161   | 418          |     |
| 06:30          |    |    | 175   | 159   | 334          | 18:30          |        |        | 227    | 198   | 425          |     |
| 06:45          |    |    | 125   | 413   | 206          | 18:45          |        |        | 230    | 975   | 215          | 778 |
| 07:00          |    |    | 116   | 183   | 299          | 19:00          |        |        | 227    | 207   | 434          |     |
| 07:15          |    |    | 161   | 205   | 366          | 19:15          |        |        | 206    | 176   | 382          |     |
| 07:30          |    |    | 227   | 272   | 499          | 19:30          |        |        | 195    | 147   | 342          |     |
| 07:45          |    |    | 184   | 688   | 272          | 19:45          |        |        | 196    | 824   | 159          | 689 |
| 08:00          |    |    | 158   | 258   | 416          | 20:00          |        |        | 186    | 152   | 338          |     |
| 08:15          |    |    | 158   | 309   | 467          | 20:15          |        |        | 165    | 137   | 302          |     |
| 08:30          |    |    | 156   | 296   | 452          | 20:30          |        |        | 128    | 132   | 260          |     |
| 08:45          |    |    | 180   | 652   | 308          | 20:45          |        |        | 130    | 609   | 99           | 520 |
| 09:00          |    |    | 135   | 260   | 395          | 21:00          |        |        | 119    | 106   | 225          |     |
| 09:15          |    |    | 168   | 224   | 392          | 21:15          |        |        | 119    | 78    | 197          |     |
| 09:30          |    |    | 164   | 207   | 371          | 21:30          |        |        | 94     | 74    | 168          |     |
| 09:45          |    |    | 138   | 605   | 196          | 21:45          |        |        | 83     | 415   | 66           | 324 |
| 10:00          |    |    | 154   | 184   | 338          | 22:00          |        |        | 65     | 80    | 145          |     |
| 10:15          |    |    | 141   | 165   | 306          | 22:15          |        |        | 75     | 53    | 128          |     |
| 10:30          |    |    | 136   | 180   | 316          | 22:30          |        |        | 54     | 53    | 107          |     |
| 10:45          |    |    | 164   | 595   | 187          | 22:45          |        |        | 57     | 251   | 37           | 223 |
| 11:00          |    |    | 183   | 182   | 365          | 23:00          |        |        | 49     | 34    | 83           |     |
| 11:15          |    |    | 147   | 224   | 371          | 23:15          |        |        | 37     | 25    | 62           |     |
| 11:30          |    |    | 171   | 194   | 365          | 23:30          |        |        | 38     | 33    | 71           |     |
| 11:45          |    |    | 208   | 709   | 216          | 23:45          |        |        | 37     | 161   | 21           | 113 |
| <b>TOTALS</b>  |    |    | 4023  | 5459  | <b>9482</b>  | <b>TOTALS</b>  |        |        | 8925   | 7947  | <b>16872</b> |     |
| <b>SPLIT %</b> |    |    | 42.4% | 57.6% | <b>36.0%</b> | <b>SPLIT %</b> |        |        | 52.9%  | 47.1% | <b>64.0%</b> |     |

| DAILY TOTALS |  |  |  |  | NB | SB | EB     |        | WB     | Total |
|--------------|--|--|--|--|----|----|--------|--------|--------|-------|
|              |  |  |  |  | 0  | 0  | 12,948 | 13,406 | 26,354 |       |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    |       |       | 11:45 | 08:15 | 07:30 | PM Peak Hour    |       |       | 16:30 | 14:45 | 16:30 |
| AM Pk Volume    |       |       | 815   | 1173  | 1838  | PM Pk Volume    |       |       | 1156  | 957   | 2052  |
| Pk Hr Factor    |       |       | 0.935 | 0.949 | 0.921 | Pk Hr Factor    |       |       | 0.935 | 0.917 | 0.981 |
| 7 - 9 Volume    | 0     | 0     | 1340  | 2103  | 3443  | 4 - 6 Volume    | 0     | 0     | 2191  | 1776  | 3967  |
| 7 - 9 Peak Hour |       |       | 07:15 | 08:00 | 07:30 | 4 - 6 Peak Hour |       |       | 16:30 | 16:15 | 16:30 |
| 7 - 9 Pk Volume | 0     | 0     | 730   | 1171  | 1838  | 4 - 6 Pk Volume | 0     | 0     | 1156  | 938   | 2052  |
| Pk Hr Factor    | 0.000 | 0.000 | 0.804 | 0.947 | 0.921 | Pk Hr Factor    | 0.000 | 0.000 | 0.935 | 0.946 | 0.981 |

**VOLUME**

Aviation Blvd Bet. Pacific Coast Hwy &amp; Prospect Ave

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_014

| DAILY TOTALS   |    |    |       |     | NB    | SB             | EB     |        | WB    |       | Total        |     |
|----------------|----|----|-------|-----|-------|----------------|--------|--------|-------|-------|--------------|-----|
|                |    |    |       |     | 0     | 0              | 12,846 | 12,875 |       |       | 25,721       |     |
| AM Period      | NB | SB | EB    | WB  | TOTAL | PM Period      | NB     | SB     | EB    | WB    | TOTAL        |     |
| 00:00          |    |    | 38    | 24  | 62    | 12:00          |        |        | 168   | 184   | 352          |     |
| 00:15          |    |    | 30    | 30  | 60    | 12:15          |        |        | 190   | 167   | 357          |     |
| 00:30          |    |    | 21    | 20  | 41    | 12:30          |        |        | 178   | 189   | 367          |     |
| 00:45          |    |    | 12    | 101 | 18    | 12:45          |        |        | 169   | 705   | 168          | 708 |
| 01:00          |    |    | 14    |     | 11    | 13:00          |        |        | 195   | 165   | 360          |     |
| 01:15          |    |    | 16    |     | 12    | 13:15          |        |        | 163   | 192   | 355          |     |
| 01:30          |    |    | 8     |     | 16    | 13:30          |        |        | 184   | 221   | 405          |     |
| 01:45          |    |    | 14    | 52  | 7     | 13:45          |        |        | 178   | 720   | 160          | 738 |
| 02:00          |    |    | 8     |     | 5     | 14:00          |        |        | 189   | 185   | 374          |     |
| 02:15          |    |    | 10    |     | 5     | 14:15          |        |        | 183   | 195   | 378          |     |
| 02:30          |    |    | 7     |     | 6     | 14:30          |        |        | 171   | 194   | 365          |     |
| 02:45          |    |    | 8     | 33  | 3     | 14:45          |        |        | 183   | 726   | 190          | 764 |
| 03:00          |    |    | 7     |     | 10    | 15:00          |        |        | 222   | 203   | 425          |     |
| 03:15          |    |    | 10    |     | 6     | 15:15          |        |        | 207   | 234   | 441          |     |
| 03:30          |    |    | 11    |     | 16    | 15:30          |        |        | 182   | 199   | 381          |     |
| 03:45          |    |    | 11    | 39  | 11    | 15:45          |        |        | 201   | 812   | 192          | 828 |
| 04:00          |    |    | 10    |     | 13    | 16:00          |        |        | 201   | 231   | 432          |     |
| 04:15          |    |    | 21    |     | 20    | 16:15          |        |        | 176   | 225   | 401          |     |
| 04:30          |    |    | 39    |     | 31    | 16:30          |        |        | 173   | 225   | 398          |     |
| 04:45          |    |    | 42    | 112 | 19    | 16:45          |        |        | 212   | 762   | 275          | 956 |
| 05:00          |    |    | 61    |     | 32    | 17:00          |        |        | 214   | 277   | 491          |     |
| 05:15          |    |    | 91    |     | 34    | 17:15          |        |        | 209   | 220   | 429          |     |
| 05:30          |    |    | 101   |     | 54    | 17:30          |        |        | 172   | 246   | 418          |     |
| 05:45          |    |    | 144   | 397 | 70    | 17:45          |        |        | 181   | 776   | 220          | 963 |
| 06:00          |    |    | 152   |     | 77    | 18:00          |        |        | 184   | 259   | 443          |     |
| 06:15          |    |    | 133   |     | 70    | 18:15          |        |        | 170   | 241   | 411          |     |
| 06:30          |    |    | 200   |     | 120   | 18:30          |        |        | 174   | 252   | 426          |     |
| 06:45          |    |    | 187   | 672 | 132   | 18:45          |        |        | 182   | 710   | 188          | 940 |
| 07:00          |    |    | 192   |     | 162   | 19:00          |        |        | 201   | 221   | 422          |     |
| 07:15          |    |    | 207   |     | 185   | 19:15          |        |        | 200   | 229   | 429          |     |
| 07:30          |    |    | 200   |     | 209   | 19:30          |        |        | 175   | 208   | 383          |     |
| 07:45          |    |    | 209   | 808 | 219   | 19:45          |        |        | 167   | 743   | 187          | 845 |
| 08:00          |    |    | 220   |     | 188   | 20:00          |        |        | 160   | 186   | 346          |     |
| 08:15          |    |    | 212   |     | 232   | 20:15          |        |        | 173   | 174   | 347          |     |
| 08:30          |    |    | 194   |     | 238   | 20:30          |        |        | 159   | 148   | 307          |     |
| 08:45          |    |    | 219   | 845 | 205   | 20:45          |        |        | 127   | 619   | 135          | 643 |
| 09:00          |    |    | 202   |     | 190   | 21:00          |        |        | 157   | 142   | 299          |     |
| 09:15          |    |    | 191   |     | 149   | 21:15          |        |        | 127   | 101   | 228          |     |
| 09:30          |    |    | 147   |     | 208   | 21:30          |        |        | 112   | 125   | 237          |     |
| 09:45          |    |    | 197   | 737 | 176   | 21:45          |        |        | 126   | 522   | 89           | 457 |
| 10:00          |    |    | 174   |     | 152   | 22:00          |        |        | 102   | 89    | 191          |     |
| 10:15          |    |    | 165   |     | 175   | 22:15          |        |        | 88    | 60    | 148          |     |
| 10:30          |    |    | 183   |     | 152   | 22:30          |        |        | 61    | 79    | 140          |     |
| 10:45          |    |    | 209   | 731 | 148   | 22:45          |        |        | 64    | 315   | 62           | 290 |
| 11:00          |    |    | 177   |     | 182   | 23:00          |        |        | 51    | 44    | 95           |     |
| 11:15          |    |    | 168   |     | 171   | 23:15          |        |        | 59    | 52    | 111          |     |
| 11:30          |    |    | 172   |     | 188   | 23:30          |        |        | 58    | 39    | 97           |     |
| 11:45          |    |    | 177   | 694 | 177   | 23:45          |        |        | 47    | 215   | 30           | 165 |
| <b>TOTALS</b>  |    |    | 5221  |     | 4578  | <b>TOTALS</b>  |        |        | 7625  | 8297  | <b>15922</b> |     |
| <b>SPLIT %</b> |    |    | 53.3% |     | 46.7% | <b>SPLIT %</b> |        |        | 47.9% | 52.1% | <b>61.9%</b> |     |

| DAILY TOTALS    |       |       |       |       | NB    | SB              | EB     |        | WB    |       | Total  |
|-----------------|-------|-------|-------|-------|-------|-----------------|--------|--------|-------|-------|--------|
|                 |       |       |       |       | 0     | 0               | 12,846 | 12,875 |       |       | 25,721 |
| AM Peak Hour    |       |       | 08:00 | 07:45 | 07:45 | PM Peak Hour    |        |        | 15:00 | 16:45 | 16:45  |
| AM Pk Volume    |       |       | 845   | 877   | 1712  | PM Pk Volume    |        |        | 812   | 1018  | 1825   |
| Pk Hr Factor    |       |       | 0.960 | 0.921 | 0.964 | Pk Hr Factor    |        |        | 0.914 | 0.919 | 0.929  |
| 7 - 9 Volume    | 0     | 0     | 1653  | 1638  | 3291  | 4 - 6 Volume    | 0      | 0      | 1538  | 1919  | 3457   |
| 7 - 9 Peak Hour |       |       | 08:00 | 07:45 | 07:45 | 4 - 6 Peak Hour |        |        | 16:30 | 16:45 | 16:45  |
| 7 - 9 Pk Volume | 0     | 0     | 845   | 877   | 1712  | 4 - 6 Pk Volume | 0      | 0      | 808   | 1018  | 1825   |
| Pk Hr Factor    | 0.000 | 0.000 | 0.960 | 0.921 | 0.964 | Pk Hr Factor    | 0.000  | 0.000  | 0.944 | 0.919 | 0.929  |



**VOLUME**

Pier Ave Bet. Hermosa Ave &amp; Valley Dr

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_015

| DAILY TOTALS   |    |    |       |       |       |                |       |    |       |       | NB          |     | SB  |     | EB    |  | WB    |  | Total  |  |
|----------------|----|----|-------|-------|-------|----------------|-------|----|-------|-------|-------------|-----|-----|-----|-------|--|-------|--|--------|--|
|                |    |    |       |       |       |                |       |    |       |       | 0           |     | 0   |     | 6,542 |  | 6,810 |  | 13,352 |  |
| AM Period      | NB | SB | EB    | WB    | TOTAL | PM Period      | NB    | SB | EB    | WB    | TOTAL       |     |     |     |       |  |       |  |        |  |
| 00:00          |    |    | 25    | 7     | 32    | 12:00          |       |    | 112   | 118   | 230         |     |     |     |       |  |       |  |        |  |
| 00:15          |    |    | 18    | 8     | 26    | 12:15          |       |    | 86    | 85    | 171         |     |     |     |       |  |       |  |        |  |
| 00:30          |    |    | 11    | 15    | 26    | 12:30          |       |    | 93    | 117   | 210         |     |     |     |       |  |       |  |        |  |
| 00:45          |    |    | 12    | 66    | 15    | 45             | 12:45 |    | 96    | 387   | 111         | 431 | 207 | 818 |       |  |       |  |        |  |
| 01:00          |    |    | 12    | 5     | 17    | 13:00          |       |    | 106   | 101   | 207         |     |     |     |       |  |       |  |        |  |
| 01:15          |    |    | 24    | 9     | 33    | 13:15          |       |    | 85    | 102   | 187         |     |     |     |       |  |       |  |        |  |
| 01:30          |    |    | 14    | 12    | 26    | 13:30          |       |    | 96    | 122   | 218         |     |     |     |       |  |       |  |        |  |
| 01:45          |    |    | 6     | 56    | 1     | 27             | 13:45 |    | 91    | 378   | 125         | 450 | 216 | 828 |       |  |       |  |        |  |
| 02:00          |    |    | 6     | 2     | 8     | 14:00          |       |    | 92    | 112   | 204         |     |     |     |       |  |       |  |        |  |
| 02:15          |    |    | 7     | 2     | 9     | 14:15          |       |    | 89    | 109   | 198         |     |     |     |       |  |       |  |        |  |
| 02:30          |    |    | 6     | 1     | 7     | 14:30          |       |    | 111   | 112   | 223         |     |     |     |       |  |       |  |        |  |
| 02:45          |    |    | 4     | 23    | 5     | 10             | 14:45 |    | 93    | 385   | 88          | 421 | 181 | 806 |       |  |       |  |        |  |
| 03:00          |    |    | 3     | 1     | 4     | 15:00          |       |    | 95    | 110   | 205         |     |     |     |       |  |       |  |        |  |
| 03:15          |    |    | 1     | 2     | 3     | 15:15          |       |    | 87    | 85    | 172         |     |     |     |       |  |       |  |        |  |
| 03:30          |    |    | 6     | 3     | 9     | 15:30          |       |    | 96    | 109   | 205         |     |     |     |       |  |       |  |        |  |
| 03:45          |    |    | 5     | 15    | 4     | 10             | 15:45 |    | 105   | 383   | 131         | 435 | 236 | 818 |       |  |       |  |        |  |
| 04:00          |    |    | 3     | 2     | 5     | 16:00          |       |    | 95    | 123   | 218         |     |     |     |       |  |       |  |        |  |
| 04:15          |    |    | 6     | 4     | 10    | 16:15          |       |    | 103   | 122   | 225         |     |     |     |       |  |       |  |        |  |
| 04:30          |    |    | 11    | 15    | 26    | 16:30          |       |    | 89    | 102   | 191         |     |     |     |       |  |       |  |        |  |
| 04:45          |    |    | 8     | 28    | 10    | 31             | 16:45 |    | 104   | 391   | 112         | 459 | 216 | 850 |       |  |       |  |        |  |
| 05:00          |    |    | 18    | 12    | 30    | 17:00          |       |    | 80    | 119   | 199         |     |     |     |       |  |       |  |        |  |
| 05:15          |    |    | 22    | 19    | 41    | 17:15          |       |    | 115   | 119   | 234         |     |     |     |       |  |       |  |        |  |
| 05:30          |    |    | 25    | 37    | 62    | 17:30          |       |    | 110   | 139   | 249         |     |     |     |       |  |       |  |        |  |
| 05:45          |    |    | 33    | 98    | 32    | 100            | 17:45 |    | 109   | 414   | 138         | 515 | 247 | 929 |       |  |       |  |        |  |
| 06:00          |    |    | 38    | 25    | 63    | 18:00          |       |    | 108   | 139   | 247         |     |     |     |       |  |       |  |        |  |
| 06:15          |    |    | 48    | 30    | 78    | 18:15          |       |    | 98    | 129   | 227         |     |     |     |       |  |       |  |        |  |
| 06:30          |    |    | 61    | 32    | 93    | 18:30          |       |    | 101   | 120   | 221         |     |     |     |       |  |       |  |        |  |
| 06:45          |    |    | 76    | 223   | 45    | 132            | 18:45 |    | 107   | 414   | 108         | 496 | 215 | 910 |       |  |       |  |        |  |
| 07:00          |    |    | 81    | 43    | 124   | 19:00          |       |    | 111   | 126   | 237         |     |     |     |       |  |       |  |        |  |
| 07:15          |    |    | 96    | 49    | 145   | 19:15          |       |    | 104   | 125   | 229         |     |     |     |       |  |       |  |        |  |
| 07:30          |    |    | 102   | 55    | 157   | 19:30          |       |    | 111   | 110   | 221         |     |     |     |       |  |       |  |        |  |
| 07:45          |    |    | 103   | 382   | 75    | 222            | 19:45 |    | 101   | 427   | 140         | 501 | 241 | 928 |       |  |       |  |        |  |
| 08:00          |    |    | 84    | 101   | 185   | 20:00          |       |    | 101   | 111   | 212         |     |     |     |       |  |       |  |        |  |
| 08:15          |    |    | 85    | 95    | 180   | 20:15          |       |    | 112   | 80    | 192         |     |     |     |       |  |       |  |        |  |
| 08:30          |    |    | 113   | 122   | 235   | 20:30          |       |    | 72    | 85    | 157         |     |     |     |       |  |       |  |        |  |
| 08:45          |    |    | 101   | 383   | 119   | 437            | 20:45 |    | 82    | 367   | 86          | 362 | 168 | 729 |       |  |       |  |        |  |
| 09:00          |    |    | 104   | 114   | 218   | 21:00          |       |    | 78    | 62    | 140         |     |     |     |       |  |       |  |        |  |
| 09:15          |    |    | 86    | 87    | 173   | 21:15          |       |    | 69    | 56    | 125         |     |     |     |       |  |       |  |        |  |
| 09:30          |    |    | 100   | 98    | 198   | 21:30          |       |    | 65    | 57    | 122         |     |     |     |       |  |       |  |        |  |
| 09:45          |    |    | 102   | 392   | 98    | 397            | 21:45 |    | 95    | 307   | 51          | 226 | 146 | 533 |       |  |       |  |        |  |
| 10:00          |    |    | 85    | 77    | 162   | 22:00          |       |    | 66    | 53    | 119         |     |     |     |       |  |       |  |        |  |
| 10:15          |    |    | 99    | 97    | 196   | 22:15          |       |    | 49    | 51    | 100         |     |     |     |       |  |       |  |        |  |
| 10:30          |    |    | 76    | 110   | 186   | 22:30          |       |    | 48    | 37    | 85          |     |     |     |       |  |       |  |        |  |
| 10:45          |    |    | 84    | 344   | 102   | 386            | 22:45 |    | 31    | 194   | 30          | 171 | 61  | 365 |       |  |       |  |        |  |
| 11:00          |    |    | 86    | 97    | 183   | 23:00          |       |    | 27    | 35    | 62          |     |     |     |       |  |       |  |        |  |
| 11:15          |    |    | 86    | 102   | 188   | 23:15          |       |    | 27    | 27    | 54          |     |     |     |       |  |       |  |        |  |
| 11:30          |    |    | 98    | 108   | 206   | 23:30          |       |    | 32    | 25    | 57          |     |     |     |       |  |       |  |        |  |
| 11:45          |    |    | 99    | 369   | 133   | 440            | 23:45 |    | 30    | 116   | 19          | 106 | 49  | 222 |       |  |       |  |        |  |
| <b>TOTALS</b>  |    |    | 2379  | 2237  | 4616  | <b>TOTALS</b>  |       |    | 4163  | 4573  | <b>8736</b> |     |     |     |       |  |       |  |        |  |
| <b>SPLIT %</b> |    |    | 51.5% | 48.5% | 34.6% | <b>SPLIT %</b> |       |    | 47.7% | 52.3% | 65.4%       |     |     |     |       |  |       |  |        |  |

| DAILY TOTALS    |       |       |       |       |       |                 |       |       |       |       | NB    |  | SB |  | EB    |  | WB    |  | Total  |  |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|--|----|--|-------|--|-------|--|--------|--|
|                 |       |       |       |       |       |                 |       |       |       |       | 0     |  | 0  |  | 6,542 |  | 6,810 |  | 13,352 |  |
| AM Peak Hour    |       |       | 08:30 | 11:15 | 11:15 | PM Peak Hour    |       |       | 17:15 | 17:30 | 17:15 |  |    |  |       |  |       |  |        |  |
| AM Pk Volume    |       |       | 404   | 461   | 856   | PM Pk Volume    |       |       | 442   | 545   | 977   |  |    |  |       |  |       |  |        |  |
| Pk Hr Factor    |       |       | 0.894 | 0.867 | 0.922 | Pk Hr Factor    |       |       | 0.961 | 0.980 | 0.981 |  |    |  |       |  |       |  |        |  |
| 7 - 9 Volume    | 0     | 0     | 765   | 659   | 1424  | 4 - 6 Volume    | 0     | 0     | 805   | 974   | 1779  |  |    |  |       |  |       |  |        |  |
| 7 - 9 Peak Hour |       |       | 07:15 | 08:00 | 08:00 | 4 - 6 Peak Hour |       |       | 17:00 | 17:00 | 17:00 |  |    |  |       |  |       |  |        |  |
| 7 - 9 Pk Volume | 0     | 0     | 385   | 437   | 820   | 4 - 6 Pk Volume | 0     | 0     | 414   | 515   | 929   |  |    |  |       |  |       |  |        |  |
| Pk Hr Factor    | 0.000 | 0.000 | 0.934 | 0.895 | 0.872 | Pk Hr Factor    | 0.000 | 0.000 | 0.900 | 0.926 | 0.933 |  |    |  |       |  |       |  |        |  |

**VOLUME**

Pier Ave Bet. Ardmere Ave &amp; Pacific Coast Hwy

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_016

| DAILY TOTALS   |    |    |       |       |       | NB             | SB    | EB    | WB    | Total  |       |     |
|----------------|----|----|-------|-------|-------|----------------|-------|-------|-------|--------|-------|-----|
|                |    |    |       |       |       | 0              | 0     | 7,655 | 6,659 | 14,314 |       |     |
| AM Period      | NB | SB | EB    | WB    | TOTAL | PM Period      | NB    | SB    | EB    | WB     | TOTAL |     |
| 00:00          |    |    | 30    | 17    | 47    | 12:00          |       |       | 131   | 103    | 234   |     |
| 00:15          |    |    | 23    | 20    | 43    | 12:15          |       |       | 107   | 113    | 220   |     |
| 00:30          |    |    | 12    | 25    | 37    | 12:30          |       |       | 105   | 105    | 210   |     |
| 00:45          |    |    | 12    | 77    | 22    | 84             | 12:45 |       | 120   | 463    | 137   | 458 |
| 01:00          |    |    | 15    | 16    | 31    | 13:00          |       |       | 122   | 119    | 241   |     |
| 01:15          |    |    | 24    | 14    | 38    | 13:15          |       |       | 111   | 118    | 229   |     |
| 01:30          |    |    | 17    | 12    | 29    | 13:30          |       |       | 122   | 113    | 235   |     |
| 01:45          |    |    | 8     | 64    | 12    | 54             | 13:45 |       | 123   | 478    | 104   | 454 |
| 02:00          |    |    | 7     | 8     | 15    | 14:00          |       |       | 151   | 113    | 264   |     |
| 02:15          |    |    | 12    | 6     | 18    | 14:15          |       |       | 109   | 109    | 218   |     |
| 02:30          |    |    | 8     | 2     | 10    | 14:30          |       |       | 133   | 112    | 245   |     |
| 02:45          |    |    | 4     | 31    | 6     | 22             | 14:45 |       | 122   | 515    | 128   | 462 |
| 03:00          |    |    | 5     | 6     | 11    | 15:00          |       |       | 113   | 114    | 227   |     |
| 03:15          |    |    | 4     | 6     | 10    | 15:15          |       |       | 100   | 94     | 194   |     |
| 03:30          |    |    | 6     | 3     | 9     | 15:30          |       |       | 100   | 106    | 206   |     |
| 03:45          |    |    | 4     | 19    | 3     | 18             | 15:45 |       | 129   | 442    | 99    | 413 |
| 04:00          |    |    | 1     | 7     | 8     | 16:00          |       |       | 106   | 126    | 232   |     |
| 04:15          |    |    | 5     | 5     | 10    | 16:15          |       |       | 115   | 103    | 218   |     |
| 04:30          |    |    | 11    | 7     | 18    | 16:30          |       |       | 127   | 110    | 237   |     |
| 04:45          |    |    | 15    | 32    | 12    | 31             | 16:45 |       | 124   | 472    | 107   | 446 |
| 05:00          |    |    | 21    | 6     | 27    | 17:00          |       |       | 110   | 128    | 238   |     |
| 05:15          |    |    | 18    | 9     | 27    | 17:15          |       |       | 130   | 103    | 233   |     |
| 05:30          |    |    | 30    | 9     | 39    | 17:30          |       |       | 109   | 127    | 236   |     |
| 05:45          |    |    | 31    | 100   | 16    | 40             | 17:45 |       | 128   | 477    | 106   | 464 |
| 06:00          |    |    | 51    | 14    | 65    | 18:00          |       |       | 127   | 112    | 239   |     |
| 06:15          |    |    | 55    | 20    | 75    | 18:15          |       |       | 100   | 123    | 223   |     |
| 06:30          |    |    | 63    | 43    | 106   | 18:30          |       |       | 115   | 113    | 228   |     |
| 06:45          |    |    | 84    | 253   | 44    | 121            | 18:45 |       | 110   | 452    | 110   | 458 |
| 07:00          |    |    | 91    | 49    | 140   | 19:00          |       |       | 145   | 106    | 251   |     |
| 07:15          |    |    | 86    | 55    | 141   | 19:15          |       |       | 129   | 104    | 233   |     |
| 07:30          |    |    | 117   | 57    | 174   | 19:30          |       |       | 124   | 95     | 219   |     |
| 07:45          |    |    | 117   | 411   | 73    | 234            | 19:45 |       | 122   | 520    | 118   | 423 |
| 08:00          |    |    | 149   | 96    | 245   | 20:00          |       |       | 111   | 77     | 188   |     |
| 08:15          |    |    | 124   | 91    | 215   | 20:15          |       |       | 139   | 114    | 253   |     |
| 08:30          |    |    | 100   | 85    | 185   | 20:30          |       |       | 90    | 84     | 174   |     |
| 08:45          |    |    | 112   | 485   | 126   | 398            | 20:45 |       | 92    | 432    | 89    | 364 |
| 09:00          |    |    | 104   | 105   | 209   | 21:00          |       |       | 98    | 69     | 167   |     |
| 09:15          |    |    | 79    | 93    | 172   | 21:15          |       |       | 80    | 64     | 144   |     |
| 09:30          |    |    | 102   | 89    | 191   | 21:30          |       |       | 75    | 53     | 128   |     |
| 09:45          |    |    | 98    | 383   | 100   | 387            | 21:45 |       | 100   | 353    | 64    | 250 |
| 10:00          |    |    | 94    | 82    | 176   | 22:00          |       |       | 77    | 49     | 126   |     |
| 10:15          |    |    | 111   | 94    | 205   | 22:15          |       |       | 55    | 63     | 118   |     |
| 10:30          |    |    | 96    | 88    | 184   | 22:30          |       |       | 45    | 47     | 92    |     |
| 10:45          |    |    | 105   | 406   | 98    | 362            | 22:45 |       | 39    | 216    | 39    | 198 |
| 11:00          |    |    | 109   | 86    | 195   | 23:00          |       |       | 32    | 36     | 68    |     |
| 11:15          |    |    | 99    | 108   | 207   | 23:15          |       |       | 39    | 31     | 70    |     |
| 11:30          |    |    | 123   | 107   | 230   | 23:30          |       |       | 37    | 27     | 64    |     |
| 11:45          |    |    | 106   | 437   | 96    | 397            | 23:45 |       | 29    | 137    | 27    | 121 |
| <b>TOTALS</b>  |    |    | 2698  | 2148  | 4846  | <b>TOTALS</b>  |       |       | 4957  | 4511   | 9468  |     |
| <b>SPLIT %</b> |    |    | 55.7% | 44.3% | 33.9% | <b>SPLIT %</b> |       |       | 52.4% | 47.6%  | 66.1% |     |

| DAILY TOTALS    |       |       |       |       |       | NB              | SB    | EB    | WB    | Total  |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|--------|-------|
|                 |       |       |       |       |       | 0               | 0     | 7,655 | 6,659 | 14,314 |       |
| AM Peak Hour    |       |       | 07:30 | 11:30 | 11:30 | PM Peak Hour    |       |       | 19:00 | 12:45  | 14:00 |
| AM Pk Volume    |       |       | 507   | 419   | 886   | PM Pk Volume    |       |       | 520   | 487    | 977   |
| Pk Hr Factor    |       |       | 0.851 | 0.927 | 0.947 | Pk Hr Factor    |       |       | 0.897 | 0.889  | 0.925 |
| 7 - 9 Volume    | 0     | 0     | 896   | 632   | 1528  | 4 - 6 Volume    | 0     | 0     | 949   | 910    | 1859  |
| 7 - 9 Peak Hour |       |       | 07:30 | 08:00 | 08:00 | 4 - 6 Peak Hour |       |       | 16:30 | 16:45  | 17:00 |
| 7 - 9 Pk Volume | 0     | 0     | 507   | 398   | 883   | 4 - 6 Pk Volume | 0     | 0     | 491   | 465    | 941   |
| Pk Hr Factor    | 0.000 | 0.000 | 0.851 | 0.790 | 0.901 | Pk Hr Factor    | 0.000 | 0.000 | 0.944 | 0.908  | 0.988 |

**VOLUME**

Gould Ave Bet. Ardmore Ave &amp; Pacific Coast Hwy

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_017

| DAILY TOTALS   |    |    |       |       |       | NB             | SB | EB    | WB    | Total  |       |     |
|----------------|----|----|-------|-------|-------|----------------|----|-------|-------|--------|-------|-----|
|                |    |    |       |       |       | 0              | 0  | 6,549 | 6,707 | 13,256 |       |     |
| AM Period      | NB | SB | EB    | WB    | TOTAL | PM Period      | NB | SB    | EB    | WB     | TOTAL |     |
| 00:00          |    |    | 6     | 7     | 13    | 12:00          |    |       | 97    | 89     | 186   |     |
| 00:15          |    |    | 8     | 11    | 19    | 12:15          |    |       | 103   | 106    | 209   |     |
| 00:30          |    |    | 4     | 1     | 5     | 12:30          |    |       | 105   | 91     | 196   |     |
| 00:45          |    |    | 7     | 25    | 1     | 12:45          |    |       | 105   | 410    | 99    | 385 |
| 01:00          |    |    | 6     | 4     | 10    | 13:00          |    |       | 109   | 96     | 205   |     |
| 01:15          |    |    | 3     | 2     | 5     | 13:15          |    |       | 94    | 113    | 207   |     |
| 01:30          |    |    | 6     | 7     | 13    | 13:30          |    |       | 94    | 99     | 193   |     |
| 01:45          |    |    | 2     | 17    | 2     | 13:45          |    |       | 127   | 424    | 126   | 434 |
| 02:00          |    |    | 4     | 5     | 9     | 14:00          |    |       | 132   | 92     | 224   |     |
| 02:15          |    |    | 2     | 5     | 7     | 14:15          |    |       | 105   | 102    | 207   |     |
| 02:30          |    |    | 1     | 2     | 3     | 14:30          |    |       | 120   | 74     | 194   |     |
| 02:45          |    |    | 0     | 7     | 0     | 14:45          |    |       | 109   | 466    | 110   | 378 |
| 03:00          |    |    | 4     | 0     | 4     | 15:00          |    |       | 102   | 117    | 219   |     |
| 03:15          |    |    | 3     | 5     | 8     | 15:15          |    |       | 97    | 123    | 220   |     |
| 03:30          |    |    | 4     | 2     | 6     | 15:30          |    |       | 109   | 102    | 211   |     |
| 03:45          |    |    | 3     | 14    | 0     | 15:45          |    |       | 127   | 435    | 110   | 452 |
| 04:00          |    |    | 4     | 4     | 8     | 16:00          |    |       | 118   | 102    | 220   |     |
| 04:15          |    |    | 9     | 1     | 10    | 16:15          |    |       | 119   | 119    | 238   |     |
| 04:30          |    |    | 8     | 4     | 12    | 16:30          |    |       | 116   | 120    | 236   |     |
| 04:45          |    |    | 15    | 36    | 3     | 16:45          |    |       | 100   | 453    | 145   | 486 |
| 05:00          |    |    | 13    | 5     | 18    | 17:00          |    |       | 146   | 101    | 247   |     |
| 05:15          |    |    | 19    | 7     | 26    | 17:15          |    |       | 126   | 138    | 264   |     |
| 05:30          |    |    | 34    | 17    | 51    | 17:30          |    |       | 124   | 117    | 241   |     |
| 05:45          |    |    | 35    | 101   | 16    | 17:45          |    |       | 104   | 500    | 122   | 478 |
| 06:00          |    |    | 31    | 23    | 54    | 18:00          |    |       | 103   | 124    | 227   |     |
| 06:15          |    |    | 42    | 34    | 76    | 18:15          |    |       | 98    | 102    | 200   |     |
| 06:30          |    |    | 106   | 53    | 159   | 18:30          |    |       | 96    | 100    | 196   |     |
| 06:45          |    |    | 62    | 241   | 117   | 18:45          |    |       | 100   | 397    | 128   | 454 |
| 07:00          |    |    | 78    | 100   | 178   | 19:00          |    |       | 122   | 124    | 246   |     |
| 07:15          |    |    | 120   | 108   | 228   | 19:15          |    |       | 81    | 114    | 195   |     |
| 07:30          |    |    | 157   | 179   | 336   | 19:30          |    |       | 77    | 106    | 183   |     |
| 07:45          |    |    | 121   | 476   | 186   | 19:45          |    |       | 65    | 345    | 103   | 447 |
| 08:00          |    |    | 120   | 160   | 280   | 20:00          |    |       | 70    | 64     | 134   |     |
| 08:15          |    |    | 132   | 127   | 259   | 20:15          |    |       | 76    | 93     | 169   |     |
| 08:30          |    |    | 114   | 138   | 252   | 20:30          |    |       | 39    | 79     | 118   |     |
| 08:45          |    |    | 111   | 477   | 146   | 20:45          |    |       | 43    | 228    | 60    | 296 |
| 09:00          |    |    | 105   | 85    | 190   | 21:00          |    |       | 53    | 68     | 121   |     |
| 09:15          |    |    | 86    | 95    | 181   | 21:15          |    |       | 54    | 50     | 104   |     |
| 09:30          |    |    | 97    | 75    | 172   | 21:30          |    |       | 39    | 29     | 68    |     |
| 09:45          |    |    | 112   | 400   | 89    | 21:45          |    |       | 35    | 181    | 49    | 196 |
| 10:00          |    |    | 88    | 65    | 153   | 22:00          |    |       | 36    | 49     | 85    |     |
| 10:15          |    |    | 95    | 70    | 165   | 22:15          |    |       | 26    | 39     | 65    |     |
| 10:30          |    |    | 74    | 79    | 153   | 22:30          |    |       | 24    | 25     | 49    |     |
| 10:45          |    |    | 103   | 360   | 72    | 22:45          |    |       | 26    | 112    | 28    | 141 |
| 11:00          |    |    | 91    | 92    | 183   | 23:00          |    |       | 20    | 21     | 41    |     |
| 11:15          |    |    | 86    | 107   | 193   | 23:15          |    |       | 10    | 12     | 22    |     |
| 11:30          |    |    | 92    | 102   | 194   | 23:30          |    |       | 15    | 16     | 31    |     |
| 11:45          |    |    | 118   | 387   | 88    | 23:45          |    |       | 12    | 57     | 10    | 59  |
| <b>TOTALS</b>  |    |    | 2541  | 2501  | 5042  | <b>TOTALS</b>  |    |       | 4008  | 4206   | 8214  |     |
| <b>SPLIT %</b> |    |    | 50.4% | 49.6% | 38.0% | <b>SPLIT %</b> |    |       | 48.8% | 51.2%  | 62.0% |     |

| DAILY TOTALS |  |  |  |  |  | NB | SB | EB    | WB    | Total  |
|--------------|--|--|--|--|--|----|----|-------|-------|--------|
|              |  |  |  |  |  | 0  | 0  | 6,549 | 6,707 | 13,256 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    |       |       | 07:30 | 07:30 | 07:30 | PM Peak Hour    |       |       | 17:00 | 16:30 | 16:45 |
| AM Pk Volume    |       |       | 530   | 652   | 1182  | PM Pk Volume    |       |       | 500   | 504   | 997   |
| Pk Hr Factor    |       |       | 0.844 | 0.876 | 0.879 | Pk Hr Factor    |       |       | 0.856 | 0.869 | 0.944 |
| 7 - 9 Volume    | 0     | 0     | 953   | 1144  | 2097  | 4 - 6 Volume    | 0     | 0     | 953   | 964   | 1917  |
| 7 - 9 Peak Hour |       |       | 07:30 | 07:30 | 07:30 | 4 - 6 Peak Hour |       |       | 17:00 | 16:30 | 16:45 |
| 7 - 9 Pk Volume | 0     | 0     | 530   | 652   | 1182  | 4 - 6 Pk Volume | 0     | 0     | 500   | 504   | 997   |
| Pk Hr Factor    | 0.000 | 0.000 | 0.844 | 0.876 | 0.879 | Pk Hr Factor    | 0.000 | 0.000 | 0.856 | 0.869 | 0.944 |

**VOLUME**

8th St Bet. Hermosa Ave &amp; Valley Dr

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_018

| DAILY TOTALS   |    |    |       |       | NB    | SB             | EB    |       | WB    |       | Total |     |    |     |
|----------------|----|----|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-----|----|-----|
|                |    |    |       |       | 0     | 0              | 1,352 | 1,264 |       |       | 2,616 |     |    |     |
| AM Period      | NB | SB | EB    | WB    | TOTAL | PM Period      | NB    | SB    | EB    | WB    | TOTAL |     |    |     |
| 00:00          |    |    | 2     | 1     | 3     | 12:00          |       |       | 13    | 17    | 30    |     |    |     |
| 00:15          |    |    | 2     | 3     | 5     | 12:15          |       |       | 23    | 18    | 41    |     |    |     |
| 00:30          |    |    | 5     | 1     | 6     | 12:30          |       |       | 14    | 18    | 32    |     |    |     |
| 00:45          |    |    | 1     | 10    | 2     | 7              | 12:45 |       | 16    | 66    | 21    | 74  | 37 | 140 |
| 01:00          |    |    | 0     | 0     | 0     | 13:00          |       |       | 18    | 14    | 32    |     |    |     |
| 01:15          |    |    | 1     | 1     | 2     | 13:15          |       |       | 28    | 22    | 50    |     |    |     |
| 01:30          |    |    | 3     | 2     | 5     | 13:30          |       |       | 16    | 26    | 42    |     |    |     |
| 01:45          |    |    | 3     | 7     | 0     | 3              | 13:45 |       | 16    | 78    | 17    | 79  | 33 | 157 |
| 02:00          |    |    | 0     | 0     | 0     | 14:00          |       |       | 17    | 25    | 42    |     |    |     |
| 02:15          |    |    | 1     | 0     | 1     | 14:15          |       |       | 15    | 10    | 25    |     |    |     |
| 02:30          |    |    | 2     | 1     | 3     | 14:30          |       |       | 12    | 14    | 26    |     |    |     |
| 02:45          |    |    | 3     | 6     | 2     | 3              | 14:45 |       | 19    | 63    | 19    | 68  | 38 | 131 |
| 03:00          |    |    | 0     | 0     | 0     | 15:00          |       |       | 19    | 24    | 43    |     |    |     |
| 03:15          |    |    | 3     | 0     | 3     | 15:15          |       |       | 24    | 21    | 45    |     |    |     |
| 03:30          |    |    | 0     | 0     | 0     | 15:30          |       |       | 15    | 19    | 34    |     |    |     |
| 03:45          |    |    | 0     | 3     | 0     | 3              | 15:45 |       | 14    | 72    | 26    | 90  | 40 | 162 |
| 04:00          |    |    | 1     | 0     | 1     | 16:00          |       |       | 16    | 16    | 32    |     |    |     |
| 04:15          |    |    | 1     | 2     | 3     | 16:15          |       |       | 15    | 28    | 43    |     |    |     |
| 04:30          |    |    | 0     | 0     | 0     | 16:30          |       |       | 15    | 17    | 32    |     |    |     |
| 04:45          |    |    | 1     | 3     | 1     | 3              | 16:45 |       | 20    | 66    | 32    | 93  | 52 | 159 |
| 05:00          |    |    | 5     | 0     | 5     | 17:00          |       |       | 22    | 27    | 49    |     |    |     |
| 05:15          |    |    | 5     | 2     | 7     | 17:15          |       |       | 26    | 33    | 59    |     |    |     |
| 05:30          |    |    | 4     | 2     | 6     | 17:30          |       |       | 12    | 25    | 37    |     |    |     |
| 05:45          |    |    | 9     | 23    | 2     | 6              | 17:45 |       | 18    | 78    | 30    | 115 | 48 | 193 |
| 06:00          |    |    | 7     | 2     | 9     | 18:00          |       |       | 18    | 22    | 40    |     |    |     |
| 06:15          |    |    | 14    | 1     | 15    | 18:15          |       |       | 14    | 17    | 31    |     |    |     |
| 06:30          |    |    | 24    | 2     | 26    | 18:30          |       |       | 12    | 23    | 35    |     |    |     |
| 06:45          |    |    | 19    | 64    | 10    | 15             | 18:45 |       | 15    | 59    | 30    | 92  | 45 | 151 |
| 07:00          |    |    | 16    | 6     | 22    | 19:00          |       |       | 27    | 17    | 44    |     |    |     |
| 07:15          |    |    | 45    | 14    | 59    | 19:15          |       |       | 21    | 18    | 39    |     |    |     |
| 07:30          |    |    | 50    | 11    | 61    | 19:30          |       |       | 29    | 16    | 45    |     |    |     |
| 07:45          |    |    | 37    | 148   | 22    | 53             | 19:45 |       | 11    | 88    | 16    | 67  | 27 | 155 |
| 08:00          |    |    | 45    | 24    | 69    | 20:00          |       |       | 25    | 13    | 38    |     |    |     |
| 08:15          |    |    | 41    | 19    | 60    | 20:15          |       |       | 22    | 16    | 38    |     |    |     |
| 08:30          |    |    | 23    | 31    | 54    | 20:30          |       |       | 16    | 13    | 29    |     |    |     |
| 08:45          |    |    | 31    | 140   | 22    | 96             | 20:45 |       | 17    | 80    | 12    | 54  | 29 | 134 |
| 09:00          |    |    | 29    | 15    | 44    | 21:00          |       |       | 15    | 16    | 31    |     |    |     |
| 09:15          |    |    | 26    | 20    | 46    | 21:15          |       |       | 6     | 8     | 14    |     |    |     |
| 09:30          |    |    | 16    | 27    | 43    | 21:30          |       |       | 8     | 9     | 17    |     |    |     |
| 09:45          |    |    | 23    | 94    | 30    | 92             | 21:45 |       | 8     | 37    | 19    | 52  | 27 | 89  |
| 10:00          |    |    | 18    | 23    | 41    | 22:00          |       |       | 6     | 10    | 16    |     |    |     |
| 10:15          |    |    | 24    | 13    | 37    | 22:15          |       |       | 10    | 6     | 16    |     |    |     |
| 10:30          |    |    | 9     | 19    | 28    | 22:30          |       |       | 3     | 6     | 9     |     |    |     |
| 10:45          |    |    | 15    | 66    | 27    | 82             | 22:45 |       | 7     | 26    | 15    | 37  | 22 | 63  |
| 11:00          |    |    | 18    | 18    | 36    | 23:00          |       |       | 7     | 6     | 13    |     |    |     |
| 11:15          |    |    | 18    | 10    | 28    | 23:15          |       |       | 7     | 4     | 11    |     |    |     |
| 11:30          |    |    | 16    | 17    | 33    | 23:30          |       |       | 5     | 6     | 11    |     |    |     |
| 11:45          |    |    | 2     | 54    | 19    | 64             | 23:45 |       | 2     | 21    | 3     | 19  | 5  | 40  |
| <b>TOTALS</b>  |    |    | 618   | 424   | 1042  | <b>TOTALS</b>  |       |       | 734   | 840   | 1574  |     |    |     |
| <b>SPLIT %</b> |    |    | 59.3% | 40.7% | 39.8% | <b>SPLIT %</b> |       |       | 46.6% | 53.4% | 60.2% |     |    |     |

| DAILY TOTALS |  |  |  |  | NB | SB | EB    |       | WB |  | Total |
|--------------|--|--|--|--|----|----|-------|-------|----|--|-------|
|              |  |  |  |  | 0  | 0  | 1,352 | 1,264 |    |  | 2,616 |

|                 |       |       |       |       |       |                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| AM Peak Hour    |       |       | 07:15 | 09:15 | 07:30 | PM Peak Hour    |       |       | 18:45 | 16:45 | 16:45 |
| AM Pk Volume    |       |       | 177   | 100   | 249   | PM Pk Volume    |       |       | 92    | 117   | 197   |
| Pk Hr Factor    |       |       | 0.885 | 0.833 | 0.902 | Pk Hr Factor    |       |       | 0.793 | 0.886 | 0.835 |
| 7 - 9 Volume    | 0     | 0     | 288   | 149   | 437   | 4 - 6 Volume    | 0     | 0     | 144   | 208   | 352   |
| 7 - 9 Peak Hour |       |       | 07:15 | 07:45 | 07:30 | 4 - 6 Peak Hour |       |       | 16:30 | 16:45 | 16:45 |
| 7 - 9 Pk Volume | 0     | 0     | 177   | 96    | 249   | 4 - 6 Pk Volume | 0     | 0     | 83    | 117   | 197   |
| Pk Hr Factor    | 0.000 | 0.000 | 0.885 | 0.774 | 0.902 | Pk Hr Factor    | 0.000 | 0.000 | 0.798 | 0.886 | 0.835 |

**VOLUME**

8th St Bet. Pacific Coast Hwy &amp; Prospect Ave

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_019

| DAILY TOTALS   |    |    |    |        | NB    | SB             | EB | WB  | Total |        |       |
|----------------|----|----|----|--------|-------|----------------|----|-----|-------|--------|-------|
|                |    |    |    |        | 0     | 0              | 0  | 350 | 350   |        |       |
| AM Period      | NB | SB | EB | WB     | TOTAL | PM Period      | NB | SB  | EB    | WB     | TOTAL |
| 00:00          |    |    | 0  | 2      | 2     | 12:00          |    |     | 0     | 9      | 9     |
| 00:15          |    |    | 0  | 1      | 1     | 12:15          |    |     | 0     | 5      | 5     |
| 00:30          |    |    | 0  | 0      | 0     | 12:30          |    |     | 0     | 5      | 5     |
| 00:45          |    |    | 0  | 0      | 0     | 12:45          |    |     | 0     | 5      | 5     |
| 01:00          |    |    | 0  | 0      | 0     | 13:00          |    |     | 0     | 5      | 5     |
| 01:15          |    |    | 0  | 0      | 0     | 13:15          |    |     | 0     | 8      | 8     |
| 01:30          |    |    | 0  | 1      | 1     | 13:30          |    |     | 0     | 7      | 7     |
| 01:45          |    |    | 0  | 0      | 0     | 13:45          |    |     | 0     | 6      | 6     |
| 02:00          |    |    | 0  | 0      | 0     | 14:00          |    |     | 0     | 7      | 7     |
| 02:15          |    |    | 0  | 0      | 0     | 14:15          |    |     | 0     | 9      | 9     |
| 02:30          |    |    | 0  | 0      | 0     | 14:30          |    |     | 0     | 4      | 4     |
| 02:45          |    |    | 0  | 1      | 1     | 14:45          |    |     | 0     | 4      | 4     |
| 03:00          |    |    | 0  | 0      | 0     | 15:00          |    |     | 0     | 8      | 8     |
| 03:15          |    |    | 0  | 0      | 0     | 15:15          |    |     | 0     | 3      | 3     |
| 03:30          |    |    | 0  | 2      | 2     | 15:30          |    |     | 0     | 4      | 4     |
| 03:45          |    |    | 0  | 0      | 0     | 15:45          |    |     | 0     | 8      | 8     |
| 04:00          |    |    | 0  | 0      | 0     | 16:00          |    |     | 0     | 5      | 5     |
| 04:15          |    |    | 0  | 0      | 0     | 16:15          |    |     | 0     | 3      | 3     |
| 04:30          |    |    | 0  | 2      | 2     | 16:30          |    |     | 0     | 6      | 6     |
| 04:45          |    |    | 0  | 1      | 1     | 16:45          |    |     | 0     | 6      | 6     |
| 05:00          |    |    | 0  | 1      | 1     | 17:00          |    |     | 0     | 3      | 3     |
| 05:15          |    |    | 0  | 0      | 0     | 17:15          |    |     | 0     | 1      | 1     |
| 05:30          |    |    | 0  | 0      | 0     | 17:30          |    |     | 0     | 5      | 5     |
| 05:45          |    |    | 0  | 1      | 1     | 17:45          |    |     | 0     | 9      | 9     |
| 06:00          |    |    | 0  | 2      | 2     | 18:00          |    |     | 0     | 8      | 8     |
| 06:15          |    |    | 0  | 1      | 1     | 18:15          |    |     | 0     | 3      | 3     |
| 06:30          |    |    | 0  | 1      | 1     | 18:30          |    |     | 0     | 8      | 8     |
| 06:45          |    |    | 0  | 5      | 5     | 18:45          |    |     | 0     | 7      | 7     |
| 07:00          |    |    | 0  | 2      | 2     | 19:00          |    |     | 0     | 4      | 4     |
| 07:15          |    |    | 0  | 4      | 4     | 19:15          |    |     | 0     | 6      | 6     |
| 07:30          |    |    | 0  | 10     | 10    | 19:30          |    |     | 0     | 3      | 3     |
| 07:45          |    |    | 0  | 19     | 19    | 19:45          |    |     | 0     | 2      | 2     |
| 08:00          |    |    | 0  | 15     | 15    | 20:00          |    |     | 0     | 3      | 3     |
| 08:15          |    |    | 0  | 9      | 9     | 20:15          |    |     | 0     | 1      | 1     |
| 08:30          |    |    | 0  | 8      | 8     | 20:30          |    |     | 0     | 6      | 6     |
| 08:45          |    |    | 0  | 5      | 5     | 20:45          |    |     | 0     | 0      | 0     |
| 09:00          |    |    | 0  | 4      | 4     | 21:00          |    |     | 0     | 3      | 3     |
| 09:15          |    |    | 0  | 2      | 2     | 21:15          |    |     | 0     | 2      | 2     |
| 09:30          |    |    | 0  | 5      | 5     | 21:30          |    |     | 0     | 4      | 4     |
| 09:45          |    |    | 0  | 9      | 9     | 21:45          |    |     | 0     | 0      | 0     |
| 10:00          |    |    | 0  | 4      | 4     | 22:00          |    |     | 0     | 2      | 2     |
| 10:15          |    |    | 0  | 4      | 4     | 22:15          |    |     | 0     | 2      | 2     |
| 10:30          |    |    | 0  | 10     | 10    | 22:30          |    |     | 0     | 0      | 0     |
| 10:45          |    |    | 0  | 6      | 6     | 22:45          |    |     | 0     | 1      | 1     |
| 11:00          |    |    | 0  | 2      | 2     | 23:00          |    |     | 0     | 0      | 0     |
| 11:15          |    |    | 0  | 3      | 3     | 23:15          |    |     | 0     | 0      | 0     |
| 11:30          |    |    | 0  | 3      | 3     | 23:30          |    |     | 0     | 0      | 0     |
| 11:45          |    |    | 0  | 5      | 5     | 23:45          |    |     | 0     | 0      | 0     |
| <b>TOTALS</b>  |    |    |    | 150    | 150   | <b>TOTALS</b>  |    |     |       | 200    | 200   |
| <b>SPLIT %</b> |    |    |    | 100.0% | 42.9% | <b>SPLIT %</b> |    |     |       | 100.0% | 57.1% |

| DAILY TOTALS    |       |       |       |       | NB              | SB           | EB    | WB    | Total |    |    |
|-----------------|-------|-------|-------|-------|-----------------|--------------|-------|-------|-------|----|----|
|                 |       |       |       |       | 0               | 0            | 0     | 350   | 350   |    |    |
| AM Peak Hour    |       |       | 07:30 | 07:30 | PM Peak Hour    |              |       | 13:30 | 13:30 |    |    |
| AM Pk Volume    |       |       | 53    | 53    | PM Pk Volume    |              |       | 29    | 29    |    |    |
| Pk Hr Factor    |       |       | 0.697 | 0.697 | Pk Hr Factor    |              |       | 0.806 | 0.806 |    |    |
| 7 - 9 Volume    | 0     | 0     | 0     | 72    | 72              | 4 - 6 Volume | 0     | 0     | 0     | 38 | 38 |
| 7 - 9 Peak Hour |       |       | 07:30 | 07:30 | 4 - 6 Peak Hour |              |       | 16:00 | 16:00 |    |    |
| 7 - 9 Pk Volume | 0     | 0     | 53    | 53    | 4 - 6 Pk Volume | 0            | 0     | 20    | 20    |    |    |
| Pk Hr Factor    | 0.000 | 0.000 | 0.697 | 0.697 | Pk Hr Factor    | 0.000        | 0.000 | 0.833 | 0.833 |    |    |

**VOLUME**

Herando St Bet. Hermosa Ave &amp; Valley Dr

Day: Wednesday  
Date: 9/10/2014City: Hermosa Beach  
Project #: CA14\_5525\_020

| DAILY TOTALS   |    |    |     |       |       |              |                |    |     | NB    |       | SB           |     | EB    |  | WB    |  | Total  |  |  |
|----------------|----|----|-----|-------|-------|--------------|----------------|----|-----|-------|-------|--------------|-----|-------|--|-------|--|--------|--|--|
|                |    |    |     |       |       |              |                |    |     | 0     |       | 0            |     | 6,747 |  | 4,516 |  | 11,263 |  |  |
| AM Period      | NB | SB | EB  | WB    | TOTAL | PM Period    | NB             | SB | EB  | WB    | TOTAL |              |     |       |  |       |  |        |  |  |
| 00:00          |    |    | 9   | 21    | 30    | 12:00        |                |    | 115 | 65    | 180   |              |     |       |  |       |  |        |  |  |
| 00:15          |    |    | 10  | 9     | 19    | 12:15        |                |    | 112 | 52    | 164   |              |     |       |  |       |  |        |  |  |
| 00:30          |    |    | 12  | 17    | 29    | 12:30        |                |    | 105 | 64    | 169   |              |     |       |  |       |  |        |  |  |
| 00:45          |    |    | 11  | 42    | 13    | 60           | 12:45          |    | 93  | 425   | 61    | 242          | 154 | 667   |  |       |  |        |  |  |
| 01:00          |    |    | 9   | 7     | 16    | 13:00        |                |    | 87  | 75    | 162   |              |     |       |  |       |  |        |  |  |
| 01:15          |    |    | 5   | 9     | 14    | 13:15        |                |    | 107 | 74    | 181   |              |     |       |  |       |  |        |  |  |
| 01:30          |    |    | 1   | 7     | 8     | 13:30        |                |    | 106 | 64    | 170   |              |     |       |  |       |  |        |  |  |
| 01:45          |    |    | 4   | 19    | 6     | 29           | 13:45          |    | 92  | 392   | 74    | 287          | 166 | 679   |  |       |  |        |  |  |
| 02:00          |    |    | 5   | 11    | 16    | 14:00        |                |    | 88  | 64    | 152   |              |     |       |  |       |  |        |  |  |
| 02:15          |    |    | 9   | 6     | 15    | 14:15        |                |    | 115 | 80    | 195   |              |     |       |  |       |  |        |  |  |
| 02:30          |    |    | 5   | 2     | 7     | 14:30        |                |    | 102 | 65    | 167   |              |     |       |  |       |  |        |  |  |
| 02:45          |    |    | 4   | 23    | 4     | 23           | 14:45          |    | 93  | 398   | 71    | 280          | 164 | 678   |  |       |  |        |  |  |
| 03:00          |    |    | 4   | 5     | 9     | 15:00        |                |    | 102 | 66    | 168   |              |     |       |  |       |  |        |  |  |
| 03:15          |    |    | 2   | 4     | 6     | 15:15        |                |    | 111 | 61    | 172   |              |     |       |  |       |  |        |  |  |
| 03:30          |    |    | 0   | 5     | 5     | 15:30        |                |    | 119 | 67    | 186   |              |     |       |  |       |  |        |  |  |
| 03:45          |    |    | 3   | 9     | 1     | 15           | 15:45          |    | 123 | 455   | 87    | 281          | 210 | 736   |  |       |  |        |  |  |
| 04:00          |    |    | 4   | 7     | 11    | 16:00        |                |    | 123 | 68    | 191   |              |     |       |  |       |  |        |  |  |
| 04:15          |    |    | 4   | 3     | 7     | 16:15        |                |    | 141 | 80    | 221   |              |     |       |  |       |  |        |  |  |
| 04:30          |    |    | 5   | 2     | 7     | 16:30        |                |    | 125 | 64    | 189   |              |     |       |  |       |  |        |  |  |
| 04:45          |    |    | 7   | 20    | 9     | 21           | 16:45          |    | 149 | 538   | 74    | 286          | 223 | 824   |  |       |  |        |  |  |
| 05:00          |    |    | 8   | 8     | 16    | 17:00        |                |    | 150 | 79    | 229   |              |     |       |  |       |  |        |  |  |
| 05:15          |    |    | 27  | 17    | 44    | 17:15        |                |    | 155 | 81    | 236   |              |     |       |  |       |  |        |  |  |
| 05:30          |    |    | 20  | 15    | 35    | 17:30        |                |    | 159 | 77    | 236   |              |     |       |  |       |  |        |  |  |
| 05:45          |    |    | 28  | 83    | 25    | 65           | 17:45          |    | 139 | 603   | 78    | 315          | 217 | 918   |  |       |  |        |  |  |
| 06:00          |    |    | 32  | 32    | 64    | 18:00        |                |    | 152 | 84    | 236   |              |     |       |  |       |  |        |  |  |
| 06:15          |    |    | 23  | 30    | 53    | 18:15        |                |    | 142 | 65    | 207   |              |     |       |  |       |  |        |  |  |
| 06:30          |    |    | 40  | 45    | 85    | 18:30        |                |    | 126 | 79    | 205   |              |     |       |  |       |  |        |  |  |
| 06:45          |    |    | 50  | 145   | 40    | 147          | 18:45          |    | 107 | 527   | 68    | 296          | 175 | 823   |  |       |  |        |  |  |
| 07:00          |    |    | 50  | 41    | 91    | 19:00        |                |    | 113 | 102   | 215   |              |     |       |  |       |  |        |  |  |
| 07:15          |    |    | 73  | 67    | 140   | 19:15        |                |    | 111 | 86    | 197   |              |     |       |  |       |  |        |  |  |
| 07:30          |    |    | 92  | 67    | 159   | 19:30        |                |    | 96  | 70    | 166   |              |     |       |  |       |  |        |  |  |
| 07:45          |    |    | 114 | 329   | 63    | 238          | 19:45          |    | 81  | 401   | 62    | 320          | 143 | 721   |  |       |  |        |  |  |
| 08:00          |    |    | 122 | 71    | 193   | 20:00        |                |    | 85  | 64    | 149   |              |     |       |  |       |  |        |  |  |
| 08:15          |    |    | 111 | 67    | 178   | 20:15        |                |    | 105 | 71    | 176   |              |     |       |  |       |  |        |  |  |
| 08:30          |    |    | 88  | 69    | 157   | 20:30        |                |    | 62  | 71    | 133   |              |     |       |  |       |  |        |  |  |
| 08:45          |    |    | 116 | 437   | 63    | 270          | 20:45          |    | 63  | 315   | 49    | 255          | 112 | 570   |  |       |  |        |  |  |
| 09:00          |    |    | 91  | 58    | 149   | 21:00        |                |    | 72  | 49    | 121   |              |     |       |  |       |  |        |  |  |
| 09:15          |    |    | 99  | 47    | 146   | 21:15        |                |    | 60  | 46    | 106   |              |     |       |  |       |  |        |  |  |
| 09:30          |    |    | 96  | 58    | 154   | 21:30        |                |    | 47  | 49    | 96    |              |     |       |  |       |  |        |  |  |
| 09:45          |    |    | 102 | 388   | 38    | 201          | 21:45          |    | 49  | 228   | 55    | 199          | 104 | 427   |  |       |  |        |  |  |
| 10:00          |    |    | 86  | 58    | 144   | 22:00        |                |    | 42  | 34    | 76    |              |     |       |  |       |  |        |  |  |
| 10:15          |    |    | 80  | 61    | 141   | 22:15        |                |    | 33  | 18    | 51    |              |     |       |  |       |  |        |  |  |
| 10:30          |    |    | 103 | 62    | 165   | 22:30        |                |    | 37  | 33    | 70    |              |     |       |  |       |  |        |  |  |
| 10:45          |    |    | 101 | 370   | 61    | 242          | 22:45          |    | 27  | 139   | 18    | 103          | 45  | 242   |  |       |  |        |  |  |
| 11:00          |    |    | 95  | 58    | 153   | 23:00        |                |    | 24  | 27    | 51    |              |     |       |  |       |  |        |  |  |
| 11:15          |    |    | 86  | 61    | 147   | 23:15        |                |    | 22  | 23    | 45    |              |     |       |  |       |  |        |  |  |
| 11:30          |    |    | 92  | 65    | 157   | 23:30        |                |    | 16  | 22    | 38    |              |     |       |  |       |  |        |  |  |
| 11:45          |    |    | 111 | 384   | 68    | 252          | 23:45          |    | 15  | 77    | 17    | 89           | 32  | 166   |  |       |  |        |  |  |
| <b>TOTALS</b>  |    |    |     | 2249  | 1563  | <b>3812</b>  | <b>TOTALS</b>  |    |     | 4498  | 2953  | <b>7451</b>  |     |       |  |       |  |        |  |  |
| <b>SPLIT %</b> |    |    |     | 59.0% | 41.0% | <b>33.8%</b> | <b>SPLIT %</b> |    |     | 60.4% | 39.6% | <b>66.2%</b> |     |       |  |       |  |        |  |  |

| DAILY TOTALS |  |  |  |  |  |  |  |  |  | NB |  | SB |  | EB    |  | WB    |  | Total  |  |
|--------------|--|--|--|--|--|--|--|--|--|----|--|----|--|-------|--|-------|--|--------|--|
|              |  |  |  |  |  |  |  |  |  | 0  |  | 0  |  | 6,747 |  | 4,516 |  | 11,263 |  |

|                 |       |       |       |       |       |                 |       |       |       |       |       |  |  |  |  |  |  |  |  |  |
|-----------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|--|--|--|--|--|--|--|--|--|
| AM Peak Hour    |       |       | 11:45 | 07:45 | 07:30 | PM Peak Hour    |       |       | 16:45 | 18:30 | 17:15 |  |  |  |  |  |  |  |  |  |
| AM Pk Volume    |       |       | 443   | 270   | 707   | PM Pk Volume    |       |       | 613   | 335   | 925   |  |  |  |  |  |  |  |  |  |
| Pk Hr Factor    |       |       | 0.963 | 0.951 | 0.916 | Pk Hr Factor    |       |       | 0.964 | 0.821 | 0.980 |  |  |  |  |  |  |  |  |  |
| 7 - 9 Volume    | 0     | 0     | 766   | 508   | 1274  | 4 - 6 Volume    | 0     | 0     | 1141  | 601   | 1742  |  |  |  |  |  |  |  |  |  |
| 7 - 9 Peak Hour |       |       | 07:30 | 07:45 | 07:30 | 4 - 6 Peak Hour |       |       | 16:45 | 17:00 | 16:45 |  |  |  |  |  |  |  |  |  |
| 7 - 9 Pk Volume | 0     | 0     | 439   | 270   | 707   | 4 - 6 Pk Volume | 0     | 0     | 613   | 315   | 924   |  |  |  |  |  |  |  |  |  |
| Pk Hr Factor    | 0.000 | 0.000 | 0.900 | 0.951 | 0.916 | Pk Hr Factor    | 0.000 | 0.000 | 0.964 | 0.972 | 0.979 |  |  |  |  |  |  |  |  |  |

**G-3: PEAK HOUR TURNING MOVEMENT  
TRAFFIC VOLUMES**





**TABLE C-1  
EXISTING  
INTERSECTION TURNING MOVEMENTS**

| Int # | N/S St                | E/W St                       | AM  |      |     |     |      |     |     |      |     |     |     | PM  |     |      |     |     |     |     |     |      |     |     |      |     |
|-------|-----------------------|------------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|------|-----|-----|------|-----|
|       |                       |                              | SBR | SBT  | SBL | WBR | WBT  | WBL | NBR | NBT  | NBL | EBR | EBT | EBL | SBR | SBT  | SBL | WBR | WBT | WBL | NBR | NBT  | NBL | EBR | EBT  | EBL |
| 1     | Hermosa Avenue        | 13th Street                  | 22  | 218  | 0   | 0   | 0    | 0   | 0   | 600  | 44  | 12  | 0   | 11  | 13  | 388  | 0   | 0   | 0   | 0   | 0   | 269  | 84  | 67  | 0    | 24  |
| 2     | Hermosa Avenue        | Pier Avenue                  | 0   | 179  | 61  | 84  | 0    | 39  | 120 | 563  | 0   | 0   | 0   | 0   | 0   | 393  | 86  | 121 | 0   | 108 | 90  | 237  | 0   | 0   | 0    | 0   |
| 3     | Pacific Coast Highway | Artesia Boulevard            | 77  | 704  | 172 | 455 | 539  | 218 | 160 | 1338 | 37  | 67  | 320 | 108 | 95  | 1875 | 457 | 311 | 366 | 246 | 227 | 879  | 35  | 65  | 415  | 48  |
| 4     | Pacific Coast Highway | Aviation Boulevard           | 0   | 656  | 139 | 155 | 3    | 511 | 661 | 1972 | 9   | 2   | 0   | 0   | 0   | 1812 | 222 | 218 | 10  | 728 | 511 | 1123 | 13  | 2   | 0    | 0   |
| 5     | Pacific Coast Highway | Pier Avenue                  | 62  | 643  | 0   | 7   | 0    | 0   | 3   | 1822 | 183 | 167 | 0   | 233 | 147 | 1804 | 6   | 12  | 0   | 1   | 6   | 1064 | 320 | 244 | 0    | 231 |
| 6     | Pacific Coast Highway | 2nd Street                   | 34  | 1057 | 0   | 20  | 2    | 11  | 2   | 2356 | 10  | 17  | 0   | 89  | 71  | 2174 | 1   | 12  | 4   | 14  | 3   | 1512 | 41  | 42  | 0    | 90  |
| 7     | Pacific Coast Highway | 16th Street                  | 146 | 869  | 15  | 24  | 0    | 26  | 47  | 1576 | 79  | 62  | 0   | 76  | 203 | 1876 | 3   | 3   | 0   | 16  | 24  | 1134 | 102 | 85  | 0    | 111 |
| 8     | Pacific Coast Highway | 21st Street                  | 32  | 929  | 29  | 35  | 75   | 55  | 38  | 1517 | 59  | 20  | 91  | 72  | 83  | 2171 | 78  | 22  | 47  | 21  | 17  | 1182 | 50  | 17  | 39   | 18  |
| 9     | Prospect Avenue       | Artesia Boulevard            | 43  | 33   | 30  | 103 | 1091 | 123 | 320 | 135  | 160 | 79  | 641 | 52  | 38  | 89   | 60  | 26  | 801 | 161 | 143 | 36   | 123 | 115 | 1018 | 37  |
| 10    | Prospect Avenue       | Aviation Boulevard           | 73  | 125  | 62  | 56  | 748  | 155 | 430 | 293  | 100 | 34  | 752 | 80  | 62  | 325  | 116 | 38  | 889 | 329 | 203 | 184  | 58  | 67  | 699  | 34  |
| 11    | Prospect Avenue       | Anita Street                 | 35  | 299  | 54  | 86  | 727  | 144 | 222 | 478  | 244 | 78  | 527 | 64  | 50  | 535  | 86  | 101 | 700 | 90  | 94  | 355  | 145 | 83  | 551  | 31  |
| 12    | Manhattan Avenue      | Greenwich Avenue/27th Street | 92  | 96   | 66  | 71  | 106  | 39  | 89  | 294  | 5   | 6   | 134 | 305 | 236 | 198  | 64  | 76  | 127 | 63  | 46  | 92   | 4   | 5   | 83   | 114 |
| 13    | Valley Drive          | Gould Avenue                 | 35  | 140  | 77  | 85  | 254  | 142 | 120 | 180  | 19  | 38  | 235 | 50  | 40  | 316  | 83  | 52  | 271 | 116 | 79  | 77   | 18  | 31  | 236  | 24  |

**TABLE C-2  
FUTURE WITHOUT PROJECT  
INTERSECTION TURNING MOVEMENTS**

| Int # | N/S St                | E/W St                       | AM  |     |     |     |      |     |     |      |     |     |     | PM  |     |      |     |     |     |     |     |      |     |     |      |     |
|-------|-----------------------|------------------------------|-----|-----|-----|-----|------|-----|-----|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|------|-----|-----|------|-----|
|       |                       |                              | SBR | SBT | SBL | WBR | WBT  | WBL | NBR | NBT  | NBL | EBR | EBT | EBL | SBR | SBT  | SBL | WBR | WBT | WBL | NBR | NBT  | NBL | EBR | EBT  | EBL |
| 1     | Hermosa Avenue        | 13th Street                  | 30  | 250 | 0   | 0   | 0    | 0   | 0   | 750  | 50  | 10  | 0   | 10  | 20  | 480  | 0   | 0   | 0   | 0   | 390 | 100  | 80  | 0   | 30   |     |
| 2     | Hermosa Avenue        | Pier Avenue                  | 0   | 210 | 70  | 100 | 0    | 50  | 140 | 730  | 0   | 0   | 0   | 0   | 500 | 100  | 150 | 0   | 130 | 110 | 360 | 0    | 0   | 0   | 0    |     |
| 3     | Pacific Coast Highway | Artesia Boulevard            | 90  | 720 | 170 | 630 | 570  | 220 | 160 | 1290 | 10  | 60  | 330 | 50  | 140 | 1710 | 650 | 340 | 470 | 250 | 200 | 910  | 20  | 20  | 590  | 20  |
| 4     | Pacific Coast Highway | Aviation Boulevard           | 0   | 570 | 310 | 150 | 10   | 440 | 450 | 1700 | 10  | 10  | 0   | 0   | 0   | 1500 | 220 | 330 | 10  | 490 | 390 | 910  | 20  | 10  | 0    | 0   |
| 5     | Pacific Coast Highway | Pier Avenue                  | 70  | 640 | 10  | 10  | 0    | 0   | 10  | 1560 | 180 | 260 | 0   | 220 | 160 | 1480 | 10  | 20  | 0   | 0   | 10  | 950  | 360 | 240 | 0    | 250 |
| 6     | Pacific Coast Highway | 2nd Street                   | 30  | 920 | 10  | 20  | 10   | 10  | 10  | 2090 | 80  | 30  | 10  | 20  | 40  | 1750 | 10  | 20  | 10  | 20  | 10  | 1210 | 60  | 30  | 10   | 80  |
| 7     | Pacific Coast Highway | 16th Street                  | 150 | 870 | 20  | 30  | 0    | 30  | 50  | 1300 | 80  | 70  | 0   | 80  | 210 | 1560 | 10  | 10  | 0   | 20  | 30  | 1040 | 110 | 90  | 0    | 120 |
| 8     | Pacific Coast Highway | 21st Street                  | 40  | 930 | 30  | 40  | 80   | 60  | 40  | 1240 | 60  | 20  | 100 | 80  | 90  | 1860 | 80  | 30  | 50  | 30  | 20  | 1090 | 50  | 20  | 40   | 20  |
| 9     | Prospect Avenue       | Artesia Boulevard            | 40  | 40  | 30  | 110 | 1110 | 140 | 350 | 150  | 340 | 90  | 650 | 60  | 40  | 100  | 70  | 30  | 880 | 180 | 160 | 40   | 170 | 130 | 1170 | 40  |
| 10    | Prospect Avenue       | Aviation Boulevard           | 80  | 120 | 60  | 50  | 680  | 200 | 370 | 480  | 100 | 40  | 710 | 80  | 70  | 520  | 120 | 60  | 810 | 310 | 220 | 260  | 60  | 70  | 580  | 40  |
| 11    | Prospect Avenue       | Anita Street                 | 40  | 350 | 50  | 160 | 620  | 90  | 190 | 550  | 200 | 80  | 540 | 80  | 60  | 590  | 170 | 130 | 670 | 110 | 90  | 430  | 100 | 90  | 390  | 40  |
| 12    | Manhattan Avenue      | Greenwich Avenue/27th Street | 140 | 100 | 80  | 90  | 130  | 40  | 90  | 300  | 10  | 10  | 160 | 450 | 320 | 200  | 80  | 90  | 150 | 70  | 50  | 100  | 10  | 10  | 100  | 240 |
| 13    | Valley Drive          | Gould Avenue                 | 40  | 150 | 80  | 90  | 280  | 160 | 130 | 200  | 20  | 40  | 260 | 60  | 40  | 350  | 90  | 60  | 300 | 130 | 90  | 80   | 20  | 30  | 260  | 30  |

**TABLE C-3  
PLAN HERMOSA  
INTERSECTION TURNING MOVEMENTS**

| Int # | N/S St                | E/W St                       | AM  |     |     |     |      |     |     |      |     |     |     | PM  |     |      |     |     |     |     |     |      |     |     |      |     |
|-------|-----------------------|------------------------------|-----|-----|-----|-----|------|-----|-----|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|------|-----|-----|------|-----|
|       |                       |                              | SBR | SBT | SBL | WBR | WBT  | WBL | NBR | NBT  | NBL | EBR | EBT | EBL | SBR | SBT  | SBL | WBR | WBT | WBL | NBR | NBT  | NBL | EBR | EBT  | EBL |
| 1     | Hermosa Avenue        | 13th Street                  | 30  | 240 | 0   | 0   | 0    | 0   | 0   | 690  | 50  | 10  | 0   | 10  | 20  | 440  | 0   | 0   | 0   | 0   | 360 | 90   | 70  | 0   | 30   |     |
| 2     | Hermosa Avenue        | Pier Avenue                  | 0   | 200 | 60  | 90  | 0    | 50  | 130 | 670  | 0   | 0   | 0   | 0   | 0   | 450  | 90  | 140 | 0   | 120 | 100 | 340  | 0   | 0   | 0    |     |
| 3     | Pacific Coast Highway | Artesia Boulevard            | 80  | 660 | 160 | 560 | 510  | 200 | 150 | 1190 | 10  | 50  | 300 | 50  | 130 | 1560 | 570 | 300 | 430 | 230 | 180 | 830  | 20  | 20  | 510  | 30  |
| 4     | Pacific Coast Highway | Aviation Boulevard           | 0   | 530 | 270 | 140 | 10   | 400 | 410 | 1560 | 10  | 10  | 0   | 0   | 0   | 1380 | 200 | 300 | 10  | 440 | 360 | 850  | 20  | 10  | 0    | 0   |
| 5     | Pacific Coast Highway | Pier Avenue                  | 60  | 590 | 10  | 10  | 0    | 0   | 10  | 1410 | 160 | 230 | 0   | 210 | 160 | 1330 | 10  | 20  | 0   | 0   | 10  | 870  | 330 | 220 | 0    | 230 |
| 6     | Pacific Coast Highway | 2nd Street                   | 30  | 850 | 10  | 20  | 10   | 10  | 10  | 1900 | 100 | 30  | 10  | 30  | 40  | 1600 | 10  | 20  | 10  | 20  | 10  | 1110 | 70  | 30  | 10   | 70  |
| 7     | Pacific Coast Highway | 16th Street                  | 140 | 800 | 20  | 30  | 0    | 30  | 50  | 1190 | 70  | 60  | 0   | 70  | 190 | 1420 | 10  | 10  | 0   | 20  | 30  | 950  | 100 | 80  | 0    | 110 |
| 8     | Pacific Coast Highway | 21st Street                  | 40  | 860 | 30  | 40  | 70   | 50  | 40  | 1130 | 50  | 20  | 90  | 70  | 80  | 1690 | 70  | 30  | 50  | 30  | 20  | 990  | 50  | 20  | 40   | 20  |
| 9     | Prospect Avenue       | Artesia Boulevard            | 40  | 40  | 30  | 100 | 1010 | 130 | 320 | 140  | 290 | 80  | 590 | 50  | 40  | 90   | 60  | 30  | 800 | 160 | 150 | 40   | 160 | 120 | 1040 | 40  |
| 10    | Prospect Avenue       | Aviation Boulevard           | 70  | 120 | 60  | 50  | 620  | 180 | 350 | 430  | 90  | 40  | 640 | 70  | 60  | 470  | 120 | 60  | 730 | 280 | 190 | 250  | 50  | 60  | 520  | 40  |
| 11    | Prospect Avenue       | Anita Street                 | 40  | 320 | 50  | 140 | 570  | 90  | 180 | 510  | 190 | 70  | 480 | 70  | 50  | 540  | 160 | 130 | 620 | 100 | 90  | 380  | 100 | 80  | 350  | 40  |
| 12    | Manhattan Avenue      | Greenwich Avenue/27th Street | 130 | 90  | 70  | 80  | 120  | 40  | 80  | 270  | 10  | 10  | 150 | 420 | 290 | 180  | 70  | 80  | 140 | 60  | 50  | 90   | 10  | 10  | 90   | 230 |
| 13    | Valley Drive          | Gould Avenue                 | 40  | 140 | 70  | 80  | 260  | 150 | 120 | 180  | 20  | 40  | 240 | 50  | 40  | 320  | 80  | 50  | 270 | 120 | 80  | 70   | 20  | 30  | 240  | 30  |



## **G-4: LOS WORKSHEETS**



**EXISTING**

## **SIGNALIZED INTERSECTIONS**



| <b>Project Title:</b> |          | <b>City of Hermosa Beach General Plan Update</b> |        |                          |         |  |
|-----------------------|----------|--|--------|--------------------------|---------|--|
| <b>Intersection:</b>  |          | <b>1 Hermosa Avenue &amp; 13th Street</b>        |        |                          |         |  |
| <b>Description:</b>   |          | <b>Existing</b>                                  |        |                          |         |  |
| <b>Date/Time:</b>     |          | <b>AM PEAK HOUR</b>                              |        |                          |         |  |
| Thru Lane:            | 1600 vph |  |        | N-S Split Phase :        | N       |  |
| Left Lane:            | 1600 vph |  |        | E-W Split Phase :        | N       |  |
| Double Lt Penalty:    | 10 %     |  |        | Lost Time (% of cycle) : | 10      |  |
| ITS:                  | 0 %      |  |        | V/C Round Off (decs.) :  | 3       |  |
| OLA Movements :       |          |  |        |                          |         |  |
| FF Movements:         |          |  |        |                          |         |  |
| APPROACH              | MVMT     | LANES  | VOLUME | CAPACITY                 | V/C     | ICU ANALYSIS   |
| Southbound            | RT       | 0.00   | 22     | 0                        | 0.000   | N-S(1): 0.188 *<br>N-S(2): 0.103<br>E-W(1): 0.001<br>E-W(2): 0.014 * |
|                       | TH       | 2.00   | 218    | 3,200                    | 0.075   |  |
|                       | LT       | 0.00   | 0      | 0                        | 0.000 * |  |
| Westbound             | RT       | 0.00   | 0      | 0                        | 0.000   | V/C: 0.202<br>Lost Time: 0.100<br>ITS: 0.000                         |
|                       | TH       | 0.00   | 0      | 0                        | 0.000 * |  |
|                       | LT       | 0.00   | 0      | 0                        | 0.000   |  |
| Northbound            | RT       | 0.00   | 0      | 0                        | 0.000   | ICU: 0.302   |
|                       | TH       | 2.00   | 600    | 3,200                    | 0.188 * |  |
|                       | LT       | 1.00   | 44     | 1,600                    | 0.028   |  |
| Eastbound             | RT       | 0.52   | 12     | 835                      | 0.001   | LOS: A   |
|                       | TH       | 0.00   | 0      | 0                        | 0.000   |  |
|                       | LT       | 0.48   | 11     | 765                      | 0.014 * |  |
| <b>Date/Time:</b>     |          | <b>PM PEAK HOUR</b>                              |        |                          |         |  |
| APPROACH              | MVMT     | LANES  | VOLUME | CAPACITY                 | V/C     | ICU ANALYSIS   |
| Southbound            | RT       | 0.00   | 13     | 0                        | 0.000   | N-S(1): 0.084<br>N-S(2): 0.178 *<br>E-W(1): 0.031<br>E-W(2): 0.057 * |
|                       | TH       | 2.00   | 388    | 3,200                    | 0.125 * |  |
|                       | LT       | 0.00   | 0      | 0                        | 0.000   |  |
| Westbound             | RT       | 0.00   | 0      | 0                        | 0.000   | V/C: 0.235<br>Lost Time: 0.100<br>ITS: 0.000                         |
|                       | TH       | 0.00   | 0      | 0                        | 0.000 * |  |
|                       | LT       | 0.00   | 0      | 0                        | 0.000   |  |
| Northbound            | RT       | 0.00   | 0      | 0                        | 0.000   | ICU: 0.335   |
|                       | TH       | 2.00   | 269    | 3,200                    | 0.084   |  |
|                       | LT       | 1.00   | 84     | 1,600                    | 0.053 * |  |
| Eastbound             | RT       | 0.74   | 67     | 1,178                    | 0.031   | LOS: A   |
|                       | TH       | 0.00   | 0      | 0                        | 0.000   |  |
|                       | LT       | 0.26   | 24     | 422                      | 0.057 * |  |

\* - Denotes critical movement

|                       |  |                          |    |
|-----------------------|--|--------------------------|----|
| <b>Project Title:</b> | <b>City of Hermosa Beach General Plan Update</b> |                          |    |
| <b>Intersection:</b>  | <b>2 Hermosa Avenue &amp; Pier Avenue</b>        |                          |    |
| <b>Description:</b>   | <b>Existing</b>                                  |                          |    |
| <b>Date/Time:</b>     | <b>AM PEAK HOUR</b>                              |                          |    |
| Thru Lane:            | 1600 vph   | N-S Split Phase :        | N  |
| Left Lane:            | 1600 vph   | E-W Split Phase :        | N  |
| Double Lt Penalty:    | 10 %   | Lost Time (% of cycle) : | 10 |
| ITS:                  | 0 %  | V/C Round Off (decs.) :  | 3  |
| OLA Movements :       |  |                          |    |
| FF Movements:         |  |                          |    |

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.251 *<br>N-S(2): 0.056<br>E-W(1): 0.024<br>E-W(2): 0.033 * |
|            | TH   | 2.00  | 179    | 3,200    | 0.056   |  |
|            | LT   | 1.00  | 61     | 1,600    | 0.038 * |  |
| Westbound  | RT   | 1.00  | 84     | 1,600    | 0.033 * | V/C: 0.284<br>Lost Time: 0.100<br>ITS: 0.000                         |
|            | TH   | 0.00  | 0      | 0        | 0.000   |  |
|            | LT   | 1.00  | 39     | 1,600    | 0.024   |  |
| Northbound | RT   | 0.00  | 120    | 0        | 0.000   | ICU: 0.384   |
|            | TH   | 2.00  | 563    | 3,200    | 0.213 * |  |
|            | LT   | 0.00  | 0      | 0        | 0.000   |  |
| Eastbound  | RT   | 0.00  | 0      | 0        | 0.000   | LOS: A   |
|            | TH   | 0.00  | 0      | 0        | 0.000   |  |
|            | LT   | 0.00  | 0      | 0        | 0.000 * |  |

|                   |                     |  |  |
|-------------------|---------------------|--|--|
| <b>Date/Time:</b> | <b>PM PEAK HOUR</b> |  |  |
|-------------------|---------------------|--|--|

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.156 *<br>N-S(2): 0.123<br>E-W(1): 0.068 *<br>E-W(2): 0.049 |
|            | TH   | 2.00  | 393    | 3,200    | 0.123   |  |
|            | LT   | 1.00  | 86     | 1,600    | 0.054 * |  |
| Westbound  | RT   | 1.00  | 121    | 1,600    | 0.049   | V/C: 0.224<br>Lost Time: 0.100<br>ITS: 0.000                         |
|            | TH   | 0.00  | 0      | 0        | 0.000   |  |
|            | LT   | 1.00  | 108    | 1,600    | 0.068 * |  |
| Northbound | RT   | 0.00  | 90     | 0        | 0.000   | ICU: 0.324   |
|            | TH   | 2.00  | 237    | 3,200    | 0.102 * |  |
|            | LT   | 0.00  | 0      | 0        | 0.000   |  |
| Eastbound  | RT   | 0.00  | 0      | 0        | 0.000   | LOS: A   |
|            | TH   | 0.00  | 0      | 0        | 0.000 * |  |
|            | LT   | 0.00  | 0      | 0        | 0.000   |  |

\* - Denotes critical movement

| <b>Project Title:</b> |          | <b>City of Hermosa Beach General Plan Update</b>       |        |                          |         |                  |
|-----------------------|----------|--|--------|--------------------------|---------|------------------|
| <b>Intersection:</b>  |          | <b>3 Pacific Coast Highway &amp; Artesia Boulevard</b> |        |                          |         |                  |
| <b>Description:</b>   |          | <b>Existing</b>  |        |                          |         |                  |
| <b>Date/Time:</b>     |          | <b>AM PEAK HOUR</b>                                    |        |                          |         |                  |
| Thru Lane:            | 1600 vph |  |        | N-S Split Phase :        | N       |                  |
| Left Lane:            | 1600 vph |  |        | E-W Split Phase :        | N       |                  |
| Double Lt Penalty:    | 10 %     |  |        | Lost Time (% of cycle) : | 10      |                  |
| ITS:                  | 0 %      |  |        | V/C Round Off (decs.) :  | 3       |                  |
| OLA Movements :       | WBR      |  |        |                          |         |                  |
| FF Movements:         | NBR,     |  |        |                          |         |                  |
| APPROACH              | MVMT     | LANES  | VOLUME | CAPACITY                 | V/C     | ICU ANALYSIS     |
| Southbound            | RT       | 0.00   | 77     | 0                        | 0.000   | N-S(1): 0.339 *  |
|                       | TH       | 3.00   | 704    | 4,800                    | 0.163   | N-S(2): 0.186    |
|                       | LT       | 2.00   | 172    | 2,880                    | 0.060 * | E-W(1): 0.197    |
| Westbound             | RT       | 1.00   | 455    | 1,600                    | 0.225 * | E-W(2): 0.293 *  |
|                       | TH       | 2.00   | 539    | 3,200                    | 0.168   |                  |
|                       | LT       | 2.00   | 218    | 2,880                    | 0.076   | V/C: 0.632       |
| Northbound            | RT       | 1.00   | 160    | 1,600                    | 0.000   | Lost Time: 0.100 |
|                       | TH       | 3.00   | 1,338  | 4,800                    | 0.279 * | ITS: 0.000       |
|                       | LT       | 1.00   | 37     | 1,600                    | 0.023   |                  |
| Eastbound             | RT       | 0.00   | 67     | 0                        | 0.000   | ICU: 0.732       |
|                       | TH       | 2.00   | 320    | 3,200                    | 0.121   |                  |
|                       | LT       | 1.00   | 108    | 1,600                    | 0.068 * | LOS: C           |
| <b>Date/Time:</b>     |          | <b>PM PEAK HOUR</b>                                    |        |                          |         |                  |
| APPROACH              | MVMT     | LANES  | VOLUME | CAPACITY                 | V/C     | ICU ANALYSIS     |
| Southbound            | RT       | 0.00   | 95     | 0                        | 0.000   | N-S(1): 0.342    |
|                       | TH       | 3.00   | 1,875  | 4,800                    | 0.410 * | N-S(2): 0.432 *  |
|                       | LT       | 2.00   | 457    | 2,880                    | 0.159   | E-W(1): 0.235 *  |
| Westbound             | RT       | 1.00   | 311    | 1,600                    | 0.036   | E-W(2): 0.144    |
|                       | TH       | 2.00   | 366    | 3,200                    | 0.114   |                  |
|                       | LT       | 2.00   | 246    | 2,880                    | 0.085 * | V/C: 0.667       |
| Northbound            | RT       | 1.00   | 227    | 1,600                    | 0.000   | Lost Time: 0.100 |
|                       | TH       | 3.00   | 879    | 4,800                    | 0.183   | ITS: 0.000       |
|                       | LT       | 1.00   | 35     | 1,600                    | 0.022 * |                  |
| Eastbound             | RT       | 0.00   | 65     | 0                        | 0.000   | ICU: 0.767       |
|                       | TH       | 2.00   | 415    | 3,200                    | 0.150 * |                  |
|                       | LT       | 1.00   | 48     | 1,600                    | 0.030   | LOS: C           |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 4 Pacific Coast Highway &amp; Aviation Boulevard</b><br><b>Description: Existing</b> |          |       |        |          |         |                             |
|--|----------|-------|--------|----------|---------|-----------------------------|
| <b>Date/Time: AM PEAK HOUR</b>   |          |       |        |          |         |                             |
| Thru Lane:   | 1600 vph |       |        |          |         | N-S Split Phase : N         |
| Left Lane:   | 1600 vph |       |        |          |         | E-W Split Phase : N         |
| Double Lt Penalty:   | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10 |
| ITS:   | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3   |
| OLA Movements :  |          |       |        |          |         |                             |
| FF Movements:  | NBR, WBR |       |        |          |         |                             |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS                |
| Southbound   | RT       | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.498 *             |
|  | TH       | 3.00  | 656    | 4,800    | 0.137   | N-S(2): 0.143               |
|  | LT       | 1.00  | 139    | 1,600    | 0.087 * | E-W(1): 0.179 *             |
| Westbound  | RT       | 1.00  | 155    | 1,600    | 0.000   | E-W(2): 0.161               |
|  | TH       | 0.01  | 3      | 19       | 0.161   |                             |
|  | LT       | 1.99  | 511    | 2,863    | 0.178 * | V/C: 0.677                  |
| Northbound   | RT       | 1.00  | 661    | 1,600    | 0.000   | Lost Time: 0.100            |
|  | TH       | 3.00  | 1,972  | 4,800    | 0.411 * | ITS: 0.000                  |
|  | LT       | 1.00  | 9      | 1,600    | 0.006   |                             |
| Eastbound  | RT       | 1.00  | 2      | 1,600    | 0.001 * | ICU: 0.777                  |
|  | TH       | 0.00  | 0      | 0        | 0.000   |                             |
|  | LT       | 0.00  | 0      | 0        | 0.000   | LOS: C                      |
| <b>Date/Time: PM PEAK HOUR</b>   |          |       |        |          |         |                             |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS                |
| Southbound   | RT       | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.373               |
|  | TH       | 3.00  | 1,812  | 4,800    | 0.378 * | N-S(2): 0.386 *             |
|  | LT       | 1.00  | 222    | 1,600    | 0.139   | E-W(1): 0.257 *             |
| Westbound  | RT       | 1.00  | 218    | 1,600    | 0.000   | E-W(2): 0.231               |
|  | TH       | 0.03  | 10     | 43       | 0.231   |                             |
|  | LT       | 1.97  | 728    | 2,841    | 0.256 * | V/C: 0.643                  |
| Northbound   | RT       | 1.00  | 511    | 1,600    | 0.000   | Lost Time: 0.100            |
|  | TH       | 3.00  | 1,123  | 4,800    | 0.234   | ITS: 0.000                  |
|  | LT       | 1.00  | 13     | 1,600    | 0.008 * |                             |
| Eastbound  | RT       | 1.00  | 2      | 1,600    | 0.001 * | ICU: 0.743                  |
|  | TH       | 0.00  | 0      | 0        | 0.000   |                             |
|  | LT       | 0.00  | 0      | 0        | 0.000   | LOS: C                      |

\* - Denotes critical movement

| <b>Project Title:</b> |          | <b>City of Hermosa Beach General Plan Update</b> |        |          |         |                          |         |
|-----------------------|----------|--|--------|----------|---------|--------------------------|---------|
| <b>Intersection:</b>  |          | <b>5 Pacific Coast Highway &amp; Pier Avenue</b> |        |          |         |                          |         |
| <b>Description:</b>   |          | <b>Existing</b>                                  |        |          |         |                          |         |
| <b>Date/Time:</b>     |          | <b>AM PEAK HOUR</b>                              |        |          |         |                          |         |
| Thru Lane:            | 1600 vph |  |        |          |         | N-S Split Phase :        | N       |
| Left Lane:            | 1600 vph |  |        |          |         | E-W Split Phase :        | Y       |
| Double Lt Penalty:    | 10 %     |  |        |          |         | Lost Time (% of cycle) : | 10      |
| ITS:                  | 0 %      |  |        |          |         | V/C Round Off (decs.) :  | 3       |
| OLA Movements :       | EBR,     |  |        |          |         |                          |         |
| FF Movements:         |          |  |        |          |         |                          |         |
| APPROACH              | MVMT     | LANES  | VOLUME | CAPACITY | V/C     | ICU ANALYSIS             |         |
| Southbound            | RT       | 0.00   | 62     | 0        | 0.000   | N-S(1):                  | 0.380 * |
|                       | TH       | 3.00   | 643    | 4,800    | 0.147   | N-S(2):                  | 0.211   |
|                       | LT       | 1.00   | 0      | 1,600    | 0.000 * | E-W(1):                  | 0.085 * |
| Westbound             | RT       | 1.00   | 7      | 1,600    | 0.004 * | E-W(2):                  | 0.000   |
|                       | TH       | 0.00   | 0      | 0        | 0.000   | V/C:                     | 0.465   |
|                       | LT       | 0.00   | 0      | 0        | 0.000   | Lost Time:               | 0.100   |
| Northbound            | RT       | 0.00   | 3      | 0        | 0.000   | ITS:                     | 0.000   |
|                       | TH       | 3.00   | 1,822  | 4,800    | 0.380 * | ICU:                     | 0.565   |
|                       | LT       | 2.00   | 183    | 2,880    | 0.064   | LOS:                     | A       |
| Eastbound             | RT       | 1.00   | 167    | 1,600    | 0.041   |                          |         |
|                       | TH       | 0.00   | 0      | 0        | 0.000   |                          |         |
|                       | LT       | 2.00   | 233    | 2,880    | 0.081 * |                          |         |
| <b>Date/Time:</b>     |          | <b>PM PEAK HOUR</b>                              |        |          |         |                          |         |
| APPROACH              | MVMT     | LANES  | VOLUME | CAPACITY | V/C     | ICU ANALYSIS             |         |
| Southbound            | RT       | 0.00   | 147    | 0        | 0.000   | N-S(1):                  | 0.227   |
|                       | TH       | 3.00   | 1,804  | 4,800    | 0.406 * | N-S(2):                  | 0.517 * |
|                       | LT       | 1.00   | 6      | 1,600    | 0.004   | E-W(1):                  | 0.086 * |
| Westbound             | RT       | 1.00   | 12     | 1,600    | 0.006 * | E-W(2):                  | 0.000   |
|                       | TH       | 0.00   | 0      | 0        | 0.000   | V/C:                     | 0.603   |
|                       | LT       | 0.00   | 1      | 1,600    | 0.001   | Lost Time:               | 0.100   |
| Northbound            | RT       | 0.00   | 6      | 0        | 0.000   | ITS:                     | 0.000   |
|                       | TH       | 3.00   | 1,064  | 4,800    | 0.223   | ICU:                     | 0.703   |
|                       | LT       | 2.00   | 320    | 2,880    | 0.111 * | LOS:                     | C       |
| Eastbound             | RT       | 1.00   | 244    | 1,600    | 0.041   |                          |         |
|                       | TH       | 0.00   | 0      | 0        | 0.000   |                          |         |
|                       | LT       | 2.00   | 231    | 2,880    | 0.080 * |                          |         |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 6 Pacific Coast Highway &amp; 2nd Street</b><br><b>Description: Existing</b><br><br><b>Date/Time: AM PEAK HOUR</b> |          |       |        |          |         |                          |         |
|--|----------|-------|--------|----------|---------|--------------------------|---------|
| Thru Lane:   | 1600 vph |       |        |          |         | N-S Split Phase :        | N       |
| Left Lane:   | 1600 vph |       |        |          |         | E-W Split Phase :        | Y       |
| Double Lt Penalty:   | 10 %     |       |        |          |         | Lost Time (% of cycle) : | 10      |
| ITS:   | 0 %      |       |        |          |         | V/C Round Off (decs.) :  | 3       |
| OLA Movements :  |          |       |        |          |         |                          |         |
| FF Movements:  |          |       |        |          |         |                          |         |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS             |         |
| Southbound   | RT       | 0.00  | 34     | 0        | 0.000   | N-S(1):                  | 0.491 * |
|  | TH       | 3.00  | 1,057  | 4,800    | 0.227   | N-S(2):                  | 0.233   |
|  | LT       | 0.00  | 0      | 0        | 0.000 * | E-W(1):                  | 0.087 * |
| Westbound  | RT       | 0.00  | 20     | 0        | 0.000   | E-W(2):                  | 0.000   |
|  | TH       | 1.00  | 2      | 1,600    | 0.021 * | V/C:                     | 0.578   |
|  | LT       | 0.00  | 11     | 1,600    | 0.007   | Lost Time:               | 0.100   |
| Northbound   | RT       | 0.00  | 2      | 0        | 0.000   | ITS:                     | 0.000   |
|  | TH       | 3.00  | 2,356  | 4,800    | 0.491 * | ICU:                     | 0.678   |
|  | LT       | 1.00  | 10     | 1,600    | 0.006   | LOS:                     | B       |
| Eastbound  | RT       | 0.00  | 17     | 0        | 0.000   |                          |         |
|  | TH       | 1.00  | 0      | 1,600    | 0.066 * |                          |         |
|  | LT       | 0.00  | 89     | 1,600    | 0.056   |                          |         |
| <b>Date/Time: PM PEAK HOUR</b>   |          |       |        |          |         |                          |         |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS             |         |
| Southbound   | RT       | 0.00  | 71     | 0        | 0.000   | N-S(1):                  | 0.317   |
|  | TH       | 3.00  | 2,174  | 4,800    | 0.468 * | N-S(2):                  | 0.494 * |
|  | LT       | 0.00  | 1      | 1,600    | 0.001   | E-W(1):                  | 0.102 * |
| Westbound  | RT       | 0.00  | 12     | 0        | 0.000   | E-W(2):                  | 0.000   |
|  | TH       | 1.00  | 4      | 1,600    | 0.019 * | V/C:                     | 0.596   |
|  | LT       | 0.00  | 14     | 1,600    | 0.009   | Lost Time:               | 0.100   |
| Northbound   | RT       | 0.00  | 3      | 0        | 0.000   | ITS:                     | 0.000   |
|  | TH       | 3.00  | 1,512  | 4,800    | 0.316   | ICU:                     | 0.696   |
|  | LT       | 1.00  | 41     | 1,600    | 0.026 * | LOS:                     | B       |
| Eastbound  | RT       | 0.00  | 42     | 0        | 0.000   |                          |         |
|  | TH       | 1.00  | 0      | 1,600    | 0.083 * |                          |         |
|  | LT       | 0.00  | 90     | 1,600    | 0.056   |                          |         |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 7 Pacific Coast Highway &amp; 16th Street</b><br><b>Description: Existing</b> |          |       |        |          |         |  |
|---|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>  |          |       |        |          |         |  |
| Thru Lane:  | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:  | 1600 vph |       |        |          |         | E-W Split Phase : Y  |
| Double Lt Penalty:  | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:  | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :   |          |       |        |          |         |  |
| FF Movements:   |          |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 1.00  | 146    | 1,600    | 0.068   | N-S(1): 0.347 *<br>N-S(2): 0.230<br>E-W(1): 0.079 *<br>E-W(2): 0.000 |
|   | TH       | 3.00  | 869    | 4,800    | 0.181   |  |
|   | LT       | 1.00  | 15     | 1,600    | 0.009 * |  |
| Westbound   | RT       | 0.48  | 24     | 768      | 0.027   | V/C: 0.426<br>Lost Time: 0.100<br>ITS: 0.000                         |
|   | TH       | 0.00  | 0      | 0        | 0.000   |  |
|   | LT       | 0.52  | 26     | 832      | 0.031 * |  |
| Northbound  | RT       | 0.00  | 47     | 0        | 0.000   | ICU: 0.526   |
|   | TH       | 3.00  | 1,576  | 4,800    | 0.338 * |  |
|   | LT       | 1.00  | 79     | 1,600    | 0.049   |  |
| Eastbound   | RT       | 1.00  | 62     | 1,600    | 0.014   | LOS: A   |
|   | TH       | 0.00  | 0      | 0        | 0.000   |  |
|   | LT       | 1.00  | 76     | 1,600    | 0.048 * |  |
| <b>Date/Time: PM PEAK HOUR</b>  |          |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 1.00  | 203    | 1,600    | 0.092   | N-S(1): 0.243<br>N-S(2): 0.455 *<br>E-W(1): 0.081 *<br>E-W(2): 0.000 |
|   | TH       | 3.00  | 1,876  | 4,800    | 0.391 * |  |
|   | LT       | 1.00  | 3      | 1,600    | 0.002   |  |
| Westbound   | RT       | 0.16  | 3      | 253      | 0.011   | V/C: 0.536<br>Lost Time: 0.100<br>ITS: 0.000                         |
|   | TH       | 0.00  | 0      | 0        | 0.000   |  |
|   | LT       | 0.84  | 16     | 1,347    | 0.012 * |  |
| Northbound  | RT       | 0.00  | 24     | 0        | 0.000   | ICU: 0.636   |
|   | TH       | 3.00  | 1,134  | 4,800    | 0.241   |  |
|   | LT       | 1.00  | 102    | 1,600    | 0.064 * |  |
| Eastbound   | RT       | 1.00  | 85     | 1,600    | 0.021   | LOS: B   |
|   | TH       | 0.00  | 0      | 0        | 0.000   |  |
|   | LT       | 1.00  | 111    | 1,600    | 0.069 * |  |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 8 Pacific Coast Highway &amp; 21st Street</b><br><b>Description: Existing</b><br><br><b>Date/Time: AM PEAK HOUR</b> |          |       |        |          |         |                          |         |
|---|----------|-------|--------|----------|---------|--------------------------|---------|
| Thru Lane:  | 1600 vph |       |        |          |         | N-S Split Phase :        | N       |
| Left Lane:  | 1600 vph |       |        |          |         | E-W Split Phase :        | N       |
| Double Lt Penalty:  | 10 %     |       |        |          |         | Lost Time (% of cycle) : | 10      |
| ITS:  | 0 %      |       |        |          |         | V/C Round Off (decs.) :  | 3       |
| OLA Movements :   |          |       |        |          |         |                          |         |
| FF Movements:   |          |       |        |          |         |                          |         |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS             |         |
| Southbound  | RT       | 0.00  | 32     | 0        | 0.000   | N-S(1):                  | 0.342 * |
|   | TH       | 3.00  | 929    | 4,800    | 0.200   | N-S(2):                  | 0.237   |
|   | LT       | 1.00  | 29     | 1,600    | 0.018 * | E-W(1):                  | 0.148 * |
| Westbound   | RT       | 0.00  | 35     | 0        | 0.000   | E-W(2):                  | 0.148 * |
|   | TH       | 1.00  | 75     | 1,600    | 0.103   | V/C:                     | 0.490   |
|   | LT       | 0.00  | 55     | 1,600    | 0.034 * | Lost Time:               | 0.100   |
| Northbound  | RT       | 0.00  | 38     | 0        | 0.000   | ITS:                     | 0.000   |
|   | TH       | 3.00  | 1,517  | 4,800    | 0.324 * | ICU:                     | 0.590   |
|   | LT       | 1.00  | 59     | 1,600    | 0.037   | LOS:                     | A       |
| Eastbound   | RT       | 0.00  | 20     | 0        | 0.000   |                          |         |
|   | TH       | 1.00  | 91     | 1,600    | 0.114 * |                          |         |
|   | LT       | 0.00  | 72     | 1,600    | 0.045   |                          |         |
| <b>Date/Time: PM PEAK HOUR</b>  |          |       |        |          |         |                          |         |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS             |         |
| Southbound  | RT       | 0.00  | 83     | 0        | 0.000   | N-S(1):                  | 0.299   |
|   | TH       | 3.00  | 2,171  | 4,800    | 0.470 * | N-S(2):                  | 0.501 * |
|   | LT       | 1.00  | 78     | 1,600    | 0.049   | E-W(1):                  | 0.059   |
| Westbound   | RT       | 0.00  | 22     | 0        | 0.000   | E-W(2):                  | 0.067 * |
|   | TH       | 1.00  | 47     | 1,600    | 0.056 * | V/C:                     | 0.568   |
|   | LT       | 0.00  | 21     | 1,600    | 0.013   | Lost Time:               | 0.100   |
| Northbound  | RT       | 0.00  | 17     | 0        | 0.000   | ITS:                     | 0.000   |
|   | TH       | 3.00  | 1,182  | 4,800    | 0.250   | ICU:                     | 0.668   |
|   | LT       | 1.00  | 50     | 1,600    | 0.031 * | LOS:                     | B       |
| Eastbound   | RT       | 0.00  | 17     | 0        | 0.000   |                          |         |
|   | TH       | 1.00  | 39     | 1,600    | 0.046   |                          |         |
|   | LT       | 0.00  | 18     | 1,600    | 0.011 * |                          |         |

\* - Denotes critical movement



| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 9 Prospect Avenue &amp; Artesia Boulevard</b><br><b>Description: Existing</b><br><br><b>Date/Time: AM PEAK HOUR</b> |          |       |        |          |         |  |
|---|----------|-------|--------|----------|---------|--|
| Thru Lane:  | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:  | 1600 vph |       |        |          |         | E-W Split Phase : N  |
| Double Lt Penalty:  | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:  | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :   |          |       |        |          |         |  |
| FF Movements:   |          |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 0.00  | 43     | 0        | 0.000   | N-S(1): 0.203 *<br>N-S(2): 0.166<br>E-W(1): 0.302<br>E-W(2): 0.406 * |
|   | TH       | 1.00  | 33     | 1,600    | 0.066   |  |
|   | LT       | 0.00  | 30     | 1,600    | 0.019 * |  |
| Westbound   | RT       | 0.00  | 103    | 0        | 0.000   | V/C: 0.609<br>Lost Time: 0.100<br>ITS: 0.000                         |
|   | TH       | 2.00  | 1,091  | 3,200    | 0.373 * |  |
|   | LT       | 1.00  | 123    | 1,600    | 0.077   |  |
| Northbound  | RT       | 1.00  | 320    | 1,600    | 0.162   | ICU: 0.709   |
|   | TH       | 1.00  | 135    | 1,600    | 0.184 * |  |
|   | LT       | 0.00  | 160    | 1,600    | 0.100   |  |
| Eastbound   | RT       | 0.00  | 79     | 0        | 0.000   | LOS: C   |
|   | TH       | 2.00  | 641    | 3,200    | 0.225   |  |
|   | LT       | 1.00  | 52     | 1,600    | 0.033 * |  |
| <b>Date/Time: PM PEAK HOUR</b>  |          |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 0.00  | 38     | 0        | 0.000   | N-S(1): 0.137<br>N-S(2): 0.194 *<br>E-W(1): 0.455 *<br>E-W(2): 0.281 |
|   | TH       | 1.00  | 89     | 1,600    | 0.117 * |  |
|   | LT       | 0.00  | 60     | 1,600    | 0.038   |  |
| Westbound   | RT       | 0.00  | 26     | 0        | 0.000   | V/C: 0.649<br>Lost Time: 0.100<br>ITS: 0.000                         |
|   | TH       | 2.00  | 801    | 3,200    | 0.258   |  |
|   | LT       | 1.00  | 161    | 1,600    | 0.101 * |  |
| Northbound  | RT       | 1.00  | 143    | 1,600    | 0.039   | ICU: 0.749   |
|   | TH       | 1.00  | 36     | 1,600    | 0.099   |  |
|   | LT       | 0.00  | 123    | 1,600    | 0.077 * |  |
| Eastbound   | RT       | 0.00  | 115    | 0        | 0.000   | LOS: C   |
|   | TH       | 2.00  | 1,018  | 3,200    | 0.354 * |  |
|   | LT       | 1.00  | 37     | 1,600    | 0.023   |  |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 10 Prospect Avenue &amp; Aviation Boulevard</b><br><b>Description: Existing</b> |          |       |        |          |         |  |
|---|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>  |          |       |        |          |         |  |
| Thru Lane:  | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:  | 1600 vph |       |        |          |         | E-W Split Phase : N  |
| Double Lt Penalty:  | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:  | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :   |          |       |        |          |         |  |
| FF Movements:   | EBR,     |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 1.00  | 73     | 1,600    | 0.021   | N-S(1): 0.259 *<br>N-S(2): 0.141<br>E-W(1): 0.332 *<br>E-W(2): 0.301 |
|   | TH       | 1.00  | 125    | 1,600    | 0.078   |  |
|   | LT       | 1.00  | 62     | 1,600    | 0.039 * |  |
| Westbound   | RT       | 0.00  | 56     | 0        | 0.000   | V/C: 0.591<br>Lost Time: 0.100<br>ITS: 0.000                         |
|   | TH       | 2.00  | 748    | 3,200    | 0.251   |  |
|   | LT       | 1.00  | 155    | 1,600    | 0.097 * |  |
| Northbound  | RT       | 1.00  | 430    | 1,600    | 0.220 * | ICU: 0.691   |
|   | TH       | 1.00  | 293    | 1,600    | 0.183   |  |
|   | LT       | 1.00  | 100    | 1,600    | 0.063   |  |
| Eastbound   | RT       | 1.00  | 34     | 1,600    | 0.000   | LOS: B   |
|   | TH       | 2.00  | 752    | 3,200    | 0.235 * |  |
|   | LT       | 1.00  | 80     | 1,600    | 0.050   |  |
| <b>Date/Time: PM PEAK HOUR</b>  |          |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 1.00  | 62     | 1,600    | 0.028   | N-S(1): 0.188<br>N-S(2): 0.239 *<br>E-W(1): 0.424 *<br>E-W(2): 0.311 |
|   | TH       | 1.00  | 325    | 1,600    | 0.203 * |  |
|   | LT       | 1.00  | 116    | 1,600    | 0.073   |  |
| Westbound   | RT       | 0.00  | 38     | 0        | 0.000   | V/C: 0.663<br>Lost Time: 0.100<br>ITS: 0.000                         |
|   | TH       | 2.00  | 889    | 3,200    | 0.290   |  |
|   | LT       | 1.00  | 329    | 1,600    | 0.206 * |  |
| Northbound  | RT       | 1.00  | 203    | 1,600    | 0.024   | ICU: 0.763   |
|   | TH       | 1.00  | 184    | 1,600    | 0.115   |  |
|   | LT       | 1.00  | 58     | 1,600    | 0.036 * |  |
| Eastbound   | RT       | 1.00  | 67     | 1,600    | 0.000   | LOS: C   |
|   | TH       | 2.00  | 699    | 3,200    | 0.218 * |  |
|   | LT       | 1.00  | 34     | 1,600    | 0.021   |  |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 11 Prospect Avenue &amp; Anita Street</b><br><b>Description: Existing</b><br><br><b>Date/Time: AM PEAK HOUR</b> |          |       |        |          |         |                          |         |
|---|----------|-------|--------|----------|---------|--------------------------|---------|
| Thru Lane:  | 1600 vph |       |        |          |         | N-S Split Phase :        | N       |
| Left Lane:  | 1600 vph |       |        |          |         | E-W Split Phase :        | N       |
| Double Lt Penalty:  | 10 %     |       |        |          |         | Lost Time (% of cycle) : | 10      |
| ITS:  | 0 %      |       |        |          |         | V/C Round Off (decs.) :  | 3       |
| OLA Movements :   |          |       |        |          |         |                          |         |
| FF Movements:   |          |       |        |          |         |                          |         |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS             |         |
| Southbound  | RT       | 0.00  | 35     | 0        | 0.000   | N-S(1):                  | 0.333 * |
|   | TH       | 2.00  | 299    | 3,200    | 0.104   | N-S(2):                  | 0.257   |
|   | LT       | 1.00  | 54     | 1,600    | 0.034 * | E-W(1):                  | 0.279   |
| Westbound   | RT       | 0.00  | 86     | 0        | 0.000   | E-W(2):                  | 0.294 * |
|   | TH       | 2.00  | 727    | 3,200    | 0.254 * | V/C:                     | 0.627   |
|   | LT       | 1.00  | 144    | 1,600    | 0.090   | Lost Time:               | 0.100   |
| Northbound  | RT       | 1.00  | 222    | 1,600    | 0.094   | ITS:                     | 0.000   |
|   | TH       | 1.00  | 478    | 1,600    | 0.299 * | ICU:                     | 0.727   |
|   | LT       | 1.00  | 244    | 1,600    | 0.153   | LOS:                     | C       |
| Eastbound   | RT       | 0.00  | 78     | 0        | 0.000   |                          |         |
|   | TH       | 2.00  | 527    | 3,200    | 0.189   |                          |         |
|   | LT       | 1.00  | 64     | 1,600    | 0.040 * |                          |         |
| <b>Date/Time: PM PEAK HOUR</b>  |          |       |        |          |         |                          |         |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS             |         |
| Southbound  | RT       | 0.00  | 50     | 0        | 0.000   | N-S(1):                  | 0.276 * |
|   | TH       | 2.00  | 535    | 3,200    | 0.183   | N-S(2):                  | 0.274   |
|   | LT       | 1.00  | 86     | 1,600    | 0.054 * | E-W(1):                  | 0.254   |
| Westbound   | RT       | 0.00  | 101    | 0        | 0.000   | E-W(2):                  | 0.269 * |
|   | TH       | 2.00  | 700    | 3,200    | 0.250 * | V/C:                     | 0.545   |
|   | LT       | 1.00  | 90     | 1,600    | 0.056   | Lost Time:               | 0.100   |
| Northbound  | RT       | 1.00  | 94     | 1,600    | 0.031   | ITS:                     | 0.000   |
|   | TH       | 1.00  | 355    | 1,600    | 0.222 * | ICU:                     | 0.645   |
|   | LT       | 1.00  | 145    | 1,600    | 0.091   | LOS:                     | B       |
| Eastbound   | RT       | 0.00  | 83     | 0        | 0.000   |                          |         |
|   | TH       | 2.00  | 551    | 3,200    | 0.198   |                          |         |
|   | LT       | 1.00  | 31     | 1,600    | 0.019 * |                          |         |

\* - Denotes critical movement

## **UNSIGNALIZED INTERSECTIONS**

| Intersection              |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Intersection Delay, s/veh | 16.1 |      |      |      |      |      |      |      |      |      |      |      |
| Intersection LOS          | C    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                  | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
| Vol, veh/h                | 0    | 114  | 83   | 5    | 0    | 63   | 127  | 76   | 0    | 4    | 92   | 46   |
| Peak Hour Factor          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                 | 0    | 114  | 83   | 5    | 0    | 63   | 127  | 76   | 0    | 4    | 92   | 46   |
| Number of Lanes           | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   |
|----------------------------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   |
| Opposing Lanes             | 1    | 1    | 2    |
| Conflicting Approach Left  | SB   | NB   | EB   |
| Conflicting Lanes Left     | 2    | 1    | 1    |
| Conflicting Approach Right | NB   | SB   | WB   |
| Conflicting Lanes Right    | 1    | 2    | 1    |
| HCM Control Delay          | 13.1 | 13.9 | 11.4 |
| HCM LOS                    | B    | B    | B    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|
| Vol Left, %            | 3%    | 56%   | 24%   | 100%  | 0%    |
| Vol Thru, %            | 65%   | 41%   | 48%   | 0%    | 46%   |
| Vol Right, %           | 32%   | 2%    | 29%   | 0%    | 54%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 142   | 202   | 266   | 64    | 434   |
| LT Vol                 | 92    | 83    | 127   | 0     | 198   |
| Through Vol            | 46    | 5     | 76    | 0     | 236   |
| RT Vol                 | 4     | 114   | 63    | 64    | 0     |
| Lane Flow Rate         | 142   | 202   | 266   | 64    | 434   |
| Geometry Grp           | 5     | 2     | 2     | 7     | 7     |
| Degree of Util (X)     | 0.248 | 0.363 | 0.445 | 0.119 | 0.702 |
| Departure Headway (Hd) | 6.299 | 6.464 | 6.125 | 6.717 | 5.822 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 572   | 560   | 591   | 529   | 616   |
| Service Time           | 4.313 | 4.471 | 4.125 | 4.511 | 3.615 |
| HCM Lane V/C Ratio     | 0.248 | 0.361 | 0.45  | 0.121 | 0.705 |
| HCM Control Delay      | 11.4  | 13.1  | 13.9  | 10.4  | 21.3  |
| HCM Lane LOS           | B     | B     | B     | B     | C     |
| HCM 95th-tile Q        | 1     | 1.6   | 2.3   | 0.4   | 5.7   |

**Intersection**

Intersection Delay, s/veh  
 Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 64   | 198  | 236  |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 64   | 198  | 236  |
| Number of Lanes   | 0    | 1    | 1    | 0    |

**Approach**

| Approach                   | SB   |
|----------------------------|------|
| Opposing Approach          | NB   |
| Opposing Lanes             | 1    |
| Conflicting Approach Left  | WB   |
| Conflicting Lanes Left     | 1    |
| Conflicting Approach Right | EB   |
| Conflicting Lanes Right    | 1    |
| HCM Control Delay          | 19.9 |
| HCM LOS                    | C    |

**Lane**

| Intersection              |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Intersection Delay, s/veh | 16.1 |      |      |      |      |      |      |      |      |      |      |      |
| Intersection LOS          | C    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                  | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
| Vol, veh/h                | 0    | 114  | 83   | 5    | 0    | 63   | 127  | 76   | 0    | 4    | 92   | 46   |
| Peak Hour Factor          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                 | 0    | 114  | 83   | 5    | 0    | 63   | 127  | 76   | 0    | 4    | 92   | 46   |
| Number of Lanes           | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   |
|----------------------------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   |
| Opposing Lanes             | 1    | 1    | 2    |
| Conflicting Approach Left  | SB   | NB   | EB   |
| Conflicting Lanes Left     | 2    | 1    | 1    |
| Conflicting Approach Right | NB   | SB   | WB   |
| Conflicting Lanes Right    | 1    | 2    | 1    |
| HCM Control Delay          | 13.1 | 13.9 | 11.4 |
| HCM LOS                    | B    | B    | B    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|
| Vol Left, %            | 3%    | 56%   | 24%   | 100%  | 0%    |
| Vol Thru, %            | 65%   | 41%   | 48%   | 0%    | 46%   |
| Vol Right, %           | 32%   | 2%    | 29%   | 0%    | 54%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 142   | 202   | 266   | 64    | 434   |
| LT Vol                 | 92    | 83    | 127   | 0     | 198   |
| Through Vol            | 46    | 5     | 76    | 0     | 236   |
| RT Vol                 | 4     | 114   | 63    | 64    | 0     |
| Lane Flow Rate         | 142   | 202   | 266   | 64    | 434   |
| Geometry Grp           | 5     | 2     | 2     | 7     | 7     |
| Degree of Util (X)     | 0.248 | 0.363 | 0.445 | 0.119 | 0.702 |
| Departure Headway (Hd) | 6.299 | 6.464 | 6.125 | 6.717 | 5.822 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 572   | 560   | 591   | 529   | 616   |
| Service Time           | 4.313 | 4.471 | 4.125 | 4.511 | 3.615 |
| HCM Lane V/C Ratio     | 0.248 | 0.361 | 0.45  | 0.121 | 0.705 |
| HCM Control Delay      | 11.4  | 13.1  | 13.9  | 10.4  | 21.3  |
| HCM Lane LOS           | B     | B     | B     | B     | C     |
| HCM 95th-tile Q        | 1     | 1.6   | 2.3   | 0.4   | 5.7   |

**Intersection**

Intersection Delay, s/veh  
 Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 64   | 198  | 236  |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 64   | 198  | 236  |
| Number of Lanes   | 0    | 1    | 1    | 0    |

**Approach**

|                            | SB   |
|----------------------------|------|
| Opposing Approach          | NB   |
| Opposing Lanes             | 1    |
| Conflicting Approach Left  | WB   |
| Conflicting Lanes Left     | 1    |
| Conflicting Approach Right | EB   |
| Conflicting Lanes Right    | 1    |
| HCM Control Delay          | 19.9 |
| HCM LOS                    | C    |

**Lane**



| Intersection              |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Intersection Delay, s/veh | 24.2 |      |      |      |      |      |      |      |      |      |      |      |
| Intersection LOS          | C    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                  | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
| Vol, veh/h                | 0    | 24   | 236  | 31   | 0    | 116  | 271  | 52   | 0    | 18   | 77   | 79   |
| Peak Hour Factor          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                 | 0    | 24   | 236  | 31   | 0    | 116  | 271  | 52   | 0    | 18   | 77   | 79   |
| Number of Lanes           | 0    | 0    | 1    | 1    | 0    | 1    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   |
|----------------------------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   |
| Opposing Lanes             | 2    | 2    | 1    |
| Conflicting Approach Left  | SB   | NB   | EB   |
| Conflicting Lanes Left     | 1    | 1    | 2    |
| Conflicting Approach Right | NB   | SB   | WB   |
| Conflicting Lanes Right    | 1    | 1    | 2    |
| HCM Control Delay          | 19.3 | 20.8 | 14.7 |
| HCM LOS                    | C    | C    | B    |

| Lane                   | NBLn1 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 10%   | 9%    | 0%    | 100%  | 0%    | 19%   |
| Vol Thru, %            | 44%   | 91%   | 0%    | 0%    | 84%   | 72%   |
| Vol Right, %           | 45%   | 0%    | 100%  | 0%    | 16%   | 9%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 174   | 260   | 31    | 116   | 323   | 439   |
| LT Vol                 | 77    | 236   | 0     | 0     | 271   | 316   |
| Through Vol            | 79    | 0     | 31    | 0     | 52    | 40    |
| RT Vol                 | 18    | 24    | 0     | 116   | 0     | 83    |
| Lane Flow Rate         | 174   | 260   | 31    | 116   | 323   | 439   |
| Geometry Grp           | 2     | 7     | 7     | 7     | 7     | 2     |
| Degree of Util (X)     | 0.362 | 0.568 | 0.061 | 0.257 | 0.658 | 0.826 |
| Departure Headway (Hd) | 7.492 | 7.859 | 7.087 | 8.083 | 7.451 | 6.886 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 482   | 460   | 507   | 447   | 488   | 531   |
| Service Time           | 5.511 | 5.571 | 4.799 | 5.783 | 5.151 | 4.886 |
| HCM Lane V/C Ratio     | 0.361 | 0.565 | 0.061 | 0.26  | 0.662 | 0.827 |
| HCM Control Delay      | 14.7  | 20.4  | 10.3  | 13.6  | 23.4  | 34.7  |
| HCM Lane LOS           | B     | C     | B     | B     | C     | D     |
| HCM 95th-tile Q        | 1.6   | 3.5   | 0.2   | 1     | 4.7   | 8.3   |

**Intersection**

Intersection Delay, s/veh

Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 83   | 316  | 40   |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 83   | 316  | 40   |
| Number of Lanes   | 0    | 0    | 1    | 0    |

**Approach SB**

|                            |      |
|----------------------------|------|
| Opposing Approach          | NB   |
| Opposing Lanes             | 1    |
| Conflicting Approach Left  | WB   |
| Conflicting Lanes Left     | 2    |
| Conflicting Approach Right | EB   |
| Conflicting Lanes Right    | 2    |
| HCM Control Delay          | 34.7 |
| HCM LOS                    | D    |

**Lane**

| Intersection              |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Intersection Delay, s/veh | 24.2 |      |      |      |      |      |      |      |      |      |      |      |
| Intersection LOS          | C    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                  | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
| Vol, veh/h                | 0    | 24   | 236  | 31   | 0    | 116  | 271  | 52   | 0    | 18   | 77   | 79   |
| Peak Hour Factor          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                 | 0    | 24   | 236  | 31   | 0    | 116  | 271  | 52   | 0    | 18   | 77   | 79   |
| Number of Lanes           | 0    | 0    | 1    | 1    | 0    | 1    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   |
|----------------------------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   |
| Opposing Lanes             | 2    | 2    | 1    |
| Conflicting Approach Left  | SB   | NB   | EB   |
| Conflicting Lanes Left     | 1    | 1    | 2    |
| Conflicting Approach Right | NB   | SB   | WB   |
| Conflicting Lanes Right    | 1    | 1    | 2    |
| HCM Control Delay          | 19.3 | 20.8 | 14.7 |
| HCM LOS                    | C    | C    | B    |

| Lane                   | NBLn1 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 10%   | 9%    | 0%    | 100%  | 0%    | 19%   |
| Vol Thru, %            | 44%   | 91%   | 0%    | 0%    | 84%   | 72%   |
| Vol Right, %           | 45%   | 0%    | 100%  | 0%    | 16%   | 9%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 174   | 260   | 31    | 116   | 323   | 439   |
| LT Vol                 | 77    | 236   | 0     | 0     | 271   | 316   |
| Through Vol            | 79    | 0     | 31    | 0     | 52    | 40    |
| RT Vol                 | 18    | 24    | 0     | 116   | 0     | 83    |
| Lane Flow Rate         | 174   | 260   | 31    | 116   | 323   | 439   |
| Geometry Grp           | 2     | 7     | 7     | 7     | 7     | 2     |
| Degree of Util (X)     | 0.362 | 0.568 | 0.061 | 0.257 | 0.658 | 0.826 |
| Departure Headway (Hd) | 7.492 | 7.859 | 7.087 | 8.083 | 7.451 | 6.886 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 482   | 460   | 507   | 447   | 488   | 531   |
| Service Time           | 5.511 | 5.571 | 4.799 | 5.783 | 5.151 | 4.886 |
| HCM Lane V/C Ratio     | 0.361 | 0.565 | 0.061 | 0.26  | 0.662 | 0.827 |
| HCM Control Delay      | 14.7  | 20.4  | 10.3  | 13.6  | 23.4  | 34.7  |
| HCM Lane LOS           | B     | C     | B     | B     | C     | D     |
| HCM 95th-tile Q        | 1.6   | 3.5   | 0.2   | 1     | 4.7   | 8.3   |

**Intersection**

Intersection Delay, s/veh

Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 83   | 316  | 40   |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 83   | 316  | 40   |
| Number of Lanes   | 0    | 0    | 1    | 0    |

**Approach SB**

Opposing Approach

NB

Opposing Lanes

1

Conflicting Approach Left

WB

Conflicting Lanes Left

2

Conflicting Approach Right

EB

Conflicting Lanes Right

2

HCM Control Delay

34.7

HCM LOS

D

**Lane**

## **CALTRANS ANALYSIS**

# HCM Signalized Intersection Capacity Analysis

## 3: Pacific Coast Hwy & Artesia Blvd (AM)

10/4/2015



| Movement                          | EBL   | EBT  | EBR  | WBL  | WBT   | WBR   | NBL   | NBT   | NBR   | SBL  | SBT   | SBR  |
|-----------------------------------|-------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|
| Lane Configurations               | ↖     | ↗    |      | ↖    | ↗     | ↖     | ↖     | ↗     | ↖     | ↗    | ↗     | ↖    |
| Volume (vph)                      | 108   | 320  | 67   | 218  | 539   | 455   | 37    | 1338  | 160   | 172  | 704   | 77   |
| Ideal Flow (vphpl)                | 1900  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Total Lost time (s)               | 4.0   | 4.0  |      | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   |      |
| Lane Util. Factor                 | 1.00  | 0.95 |      | 0.97 | 0.95  | 1.00  | 1.00  | 0.91  | 1.00  | 0.97 | 0.91  |      |
| Fr <sub>t</sub>                   | 1.00  | 0.97 |      | 1.00 | 1.00  | 0.85  | 1.00  | 1.00  | 0.85  | 1.00 | 0.99  |      |
| Fl <sub>t</sub> Protected         | 0.95  | 1.00 |      | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  | 1.00  | 0.95 | 1.00  |      |
| Satd. Flow (prot)                 | 1770  | 3447 |      | 3433 | 3539  | 1583  | 1770  | 5085  | 1583  | 3433 | 5010  |      |
| Fl <sub>t</sub> Permitted         | 0.95  | 1.00 |      | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  | 1.00  | 0.95 | 1.00  |      |
| Satd. Flow (perm)                 | 1770  | 3447 |      | 3433 | 3539  | 1583  | 1770  | 5085  | 1583  | 3433 | 5010  |      |
| Peak-hour factor, PHF             | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)                   | 108   | 320  | 67   | 218  | 539   | 455   | 37    | 1338  | 160   | 172  | 704   | 77   |
| RTOR Reduction (vph)              | 0     | 8    | 0    | 0    | 0     | 39    | 0     | 0     | 64    | 0    | 6     | 0    |
| Lane Group Flow (vph)             | 108   | 379  | 0    | 218  | 539   | 416   | 37    | 1338  | 96    | 172  | 775   | 0    |
| Turn Type                         | Prot  | NA   |      | Prot | NA    | pm+ov | Prot  | NA    | Perm  | Prot | NA    |      |
| Protected Phases                  | 7     | 4    |      | 3    | 8     | 1     | 5     | 2     |       | 1    | 6     |      |
| Permitted Phases                  |       |      |      |      |       | 8     |       |       | 2     |      |       |      |
| Actuated Green, G (s)             | 15.1  | 31.3 |      | 18.0 | 34.2  | 61.0  | 7.9   | 107.9 | 107.9 | 26.8 | 126.8 |      |
| Effective Green, g (s)            | 15.1  | 31.3 |      | 18.0 | 34.2  | 61.0  | 7.9   | 107.9 | 107.9 | 26.8 | 126.8 |      |
| Actuated g/C Ratio                | 0.08  | 0.16 |      | 0.09 | 0.17  | 0.30  | 0.04  | 0.54  | 0.54  | 0.13 | 0.63  |      |
| Clearance Time (s)                | 4.0   | 4.0  |      | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   |      |
| Vehicle Extension (s)             | 3.0   | 3.0  |      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |      |
| Lane Grp Cap (vph)                | 133   | 539  |      | 308  | 605   | 482   | 69    | 2743  | 854   | 460  | 3176  |      |
| v/s Ratio Prot                    | c0.06 | 0.11 |      | 0.06 | c0.15 | c0.12 | 0.02  | c0.26 |       | 0.05 | 0.15  |      |
| v/s Ratio Perm                    |       |      |      |      |       | 0.15  |       |       | 0.06  |      |       |      |
| v/c Ratio                         | 0.81  | 0.70 |      | 0.71 | 0.89  | 0.86  | 0.54  | 0.49  | 0.11  | 0.37 | 0.24  |      |
| Uniform Delay, d <sub>1</sub>     | 91.1  | 79.9 |      | 88.4 | 81.1  | 65.6  | 94.3  | 28.8  | 22.6  | 79.0 | 15.8  |      |
| Progression Factor                | 1.00  | 1.00 |      | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  |      |
| Incremental Delay, d <sub>2</sub> | 30.0  | 4.1  |      | 7.2  | 15.3  | 14.8  | 7.8   | 0.6   | 0.3   | 0.5  | 0.2   |      |
| Delay (s)                         | 121.1 | 84.1 |      | 95.7 | 96.3  | 80.3  | 102.0 | 29.4  | 22.9  | 79.5 | 16.0  |      |
| Level of Service                  | F     | F    |      | F    | F     | F     | F     | C     | C     | E    | B     |      |
| Approach Delay (s)                |       | 92.1 |      |      | 90.2  |       |       | 30.5  |       |      | 27.5  |      |
| Approach LOS                      |       | F    |      |      | F     |       |       | C     |       |      | C     |      |

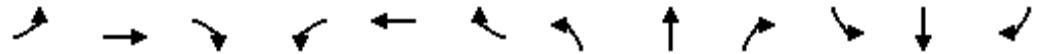
### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 54.3  | HCM 2000 Level of Service | D    |
| HCM 2000 Volume to Capacity ratio | 0.64  |                           |      |
| Actuated Cycle Length (s)         | 200.0 | Sum of lost time (s)      | 16.0 |
| Intersection Capacity Utilization | 70.0% | ICU Level of Service      | C    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Artesia Blvd   |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 3: Pacific Coast Hwy & Artesia Blvd (PM)

10/19/2015



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR  |
|------------------------|-------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations    | ↗     | ↗↘    |      | ↗↘    | ↗↘   | ↗     | ↗     | ↗↗↘   | ↗     | ↗↘    | ↗↘↘   |      |
| Volume (vph)           | 48    | 415   | 65   | 246   | 366  | 311   | 35    | 879   | 277   | 457   | 1875  | 95   |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 |
| Total Lost time (s)    | 4.0   | 4.0   |      | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |      |
| Lane Util. Factor      | 1.00  | 0.95  |      | 0.97  | 0.95 | 1.00  | 1.00  | 0.91  | 1.00  | 0.97  | 0.91  |      |
| Frt                    | 1.00  | 0.98  |      | 1.00  | 1.00 | 0.85  | 1.00  | 1.00  | 0.85  | 1.00  | 0.99  |      |
| Flt Protected          | 0.95  | 1.00  |      | 0.95  | 1.00 | 1.00  | 0.95  | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (prot)      | 1770  | 3467  |      | 3433  | 3539 | 1583  | 1770  | 5085  | 1583  | 3433  | 5049  |      |
| Flt Permitted          | 0.95  | 1.00  |      | 0.95  | 1.00 | 1.00  | 0.95  | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (perm)      | 1770  | 3467  |      | 3433  | 3539 | 1583  | 1770  | 5085  | 1583  | 3433  | 5049  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)        | 48    | 415   | 65   | 246   | 366  | 311   | 35    | 879   | 277   | 457   | 1875  | 95   |
| RTOR Reduction (vph)   | 0     | 6     | 0    | 0     | 0    | 119   | 0     | 0     | 124   | 0     | 2     | 0    |
| Lane Group Flow (vph)  | 48    | 474   | 0    | 246   | 366  | 192   | 35    | 879   | 153   | 457   | 1968  | 0    |
| Turn Type              | Prot  | NA    |      | Prot  | NA   | pm+ov | Prot  | NA    | Perm  | Prot  | NA    |      |
| Protected Phases       | 7     | 4     |      | 3     | 8    | 1     | 5     | 2     |       | 1     | 6     |      |
| Permitted Phases       |       |       |      |       |      | 8     |       |       | 2     |       |       |      |
| Actuated Green, G (s)  | 9.5   | 26.8  |      | 19.6  | 36.9 | 63.7  | 7.8   | 110.8 | 110.8 | 26.8  | 129.8 |      |
| Effective Green, g (s) | 9.5   | 26.8  |      | 19.6  | 36.9 | 63.7  | 7.8   | 110.8 | 110.8 | 26.8  | 129.8 |      |
| Actuated g/C Ratio     | 0.05  | 0.13  |      | 0.10  | 0.18 | 0.32  | 0.04  | 0.55  | 0.55  | 0.13  | 0.65  |      |
| Clearance Time (s)     | 4.0   | 4.0   |      | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |      |
| Vehicle Extension (s)  | 3.0   | 3.0   |      | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      |
| Lane Grp Cap (vph)     | 84    | 464   |      | 336   | 652  | 504   | 69    | 2817  | 876   | 460   | 3276  |      |
| v/s Ratio Prot         | 0.03  | c0.14 |      | c0.07 | 0.10 | 0.05  | c0.02 | 0.17  |       | c0.13 | c0.39 |      |
| v/s Ratio Perm         |       |       |      |       |      | 0.07  |       |       | 0.10  |       |       |      |
| v/c Ratio              | 0.57  | 1.02  |      | 0.73  | 0.56 | 0.38  | 0.51  | 0.31  | 0.18  | 0.99  | 0.60  |      |
| Uniform Delay, d1      | 93.3  | 86.6  |      | 87.6  | 74.2 | 52.9  | 94.2  | 24.0  | 22.0  | 86.5  | 20.2  |      |
| Progression Factor     | 1.00  | 1.00  |      | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |      |
| Incremental Delay, d2  | 9.1   | 47.3  |      | 8.0   | 1.1  | 0.5   | 5.8   | 0.3   | 0.4   | 40.0  | 0.8   |      |
| Delay (s)              | 102.3 | 133.9 |      | 95.6  | 75.3 | 53.4  | 100.0 | 24.3  | 22.5  | 126.6 | 21.0  |      |
| Level of Service       | F     | F     |      | F     | E    | D     | F     | C     | C     | F     | C     |      |
| Approach Delay (s)     |       | 131.0 |      |       | 73.3 |       |       | 26.1  |       |       | 40.9  |      |
| Approach LOS           |       | F     |      |       | E    |       |       | C     |       |       | D     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 52.7  | HCM 2000 Level of Service | D    |
| HCM 2000 Volume to Capacity ratio | 0.72  |                           |      |
| Actuated Cycle Length (s)         | 200.0 | Sum of lost time (s)      | 16.0 |
| Intersection Capacity Utilization | 76.4% | ICU Level of Service      | D    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Artesia Blvd   |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 4: Pacific Coast Hwy & Aviation Blvd (AM)

10/4/2015



| Movement                          | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL  | NBT   | NBR   | SBL   | SBT  | SBR  |
|-----------------------------------|------|------|------|------|------|-------|------|-------|-------|-------|------|------|
| Lane Configurations               |      |      |      | ↖    | ↗    | ↖     | ↖    | ↑↑↑   | ↖     | ↖     | ↑↑↑  |      |
| Volume (vph)                      | 0    | 0    | 0    | 511  | 3    | 155   | 9    | 1972  | 661   | 139   | 656  | 0    |
| Ideal Flow (vphpl)                | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 |
| Total Lost time (s)               |      |      |      | 4.8  | 4.8  | 4.2   | 4.2  | 4.6   | 4.0   | 4.2   | 4.6  |      |
| Lane Util. Factor                 |      |      |      | 0.95 | 0.95 | 1.00  | 1.00 | 0.91  | 1.00  | 1.00  | 0.91 |      |
| Fr <sub>t</sub>                   |      |      |      | 1.00 | 1.00 | 0.85  | 1.00 | 1.00  | 0.85  | 1.00  | 1.00 |      |
| Fl <sub>t</sub> Protected         |      |      |      | 0.95 | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00 |      |
| Satd. Flow (prot)                 |      |      |      | 1681 | 1686 | 1583  | 1770 | 5085  | 1583  | 1770  | 5085 |      |
| Fl <sub>t</sub> Permitted         |      |      |      | 0.95 | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00 |      |
| Satd. Flow (perm)                 |      |      |      | 1681 | 1686 | 1583  | 1770 | 5085  | 1583  | 1770  | 5085 |      |
| Peak-hour factor, PHF             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00 |
| Adj. Flow (vph)                   | 0    | 0    | 0    | 511  | 3    | 155   | 9    | 1972  | 661   | 139   | 656  | 0    |
| RTOR Reduction (vph)              | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0     | 0     | 0    | 0    |
| Lane Group Flow (vph)             | 0    | 0    | 0    | 255  | 259  | 155   | 9    | 1972  | 661   | 139   | 656  | 0    |
| Turn Type                         |      |      |      | Perm | NA   | pm+ov | Prot | NA    | Free  | Prot  | NA   |      |
| Protected Phases                  |      |      |      |      | 8    |       | 1    | 5     | 2     |       | 1    | 6    |
| Permitted Phases                  |      |      |      | 8    |      | 8     |      |       | Free  |       |      |      |
| Actuated Green, G (s)             |      |      |      | 25.8 | 25.8 | 39.0  | 11.8 | 97.4  | 150.0 | 13.2  | 98.8 |      |
| Effective Green, g (s)            |      |      |      | 25.8 | 25.8 | 39.0  | 11.8 | 97.4  | 150.0 | 13.2  | 98.8 |      |
| Actuated g/C Ratio                |      |      |      | 0.17 | 0.17 | 0.26  | 0.08 | 0.65  | 1.00  | 0.09  | 0.66 |      |
| Clearance Time (s)                |      |      |      | 4.8  | 4.8  | 4.2   | 4.2  | 4.6   |       | 4.2   | 4.6  |      |
| Vehicle Extension (s)             |      |      |      | 1.2  | 1.2  | 1.3   | 2.0  | 3.5   |       | 1.3   | 3.5  |      |
| Lane Grp Cap (vph)                |      |      |      | 289  | 289  | 411   | 139  | 3301  | 1583  | 155   | 3349 |      |
| v/s Ratio Prot                    |      |      |      |      |      | 0.03  | 0.01 | c0.39 |       | c0.08 | 0.13 |      |
| v/s Ratio Perm                    |      |      |      | 0.15 | 0.15 | 0.06  |      |       | 0.42  |       |      |      |
| v/c Ratio                         |      |      |      | 0.88 | 0.90 | 0.38  | 0.06 | 0.60  | 0.42  | 0.90  | 0.20 |      |
| Uniform Delay, d <sub>1</sub>     |      |      |      | 60.6 | 60.8 | 45.5  | 64.0 | 15.1  | 0.0   | 67.7  | 10.0 |      |
| Progression Factor                |      |      |      | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 |      |
| Incremental Delay, d <sub>2</sub> |      |      |      | 24.9 | 27.2 | 0.2   | 0.9  | 0.8   | 0.8   | 42.3  | 0.1  |      |
| Delay (s)                         |      |      |      | 85.5 | 88.0 | 45.7  | 64.9 | 15.9  | 0.8   | 110.1 | 10.2 |      |
| Level of Service                  |      |      |      | F    | F    | D     | E    | B     | A     | F     | B    |      |
| Approach Delay (s)                |      | 0.0  |      |      | 77.3 |       |      | 12.3  |       |       | 27.6 |      |
| Approach LOS                      |      | A    |      |      | E    |       |      | B     |       |       | C    |      |

| Intersection Summary              |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 25.8  | HCM 2000 Level of Service | C    |
| HCM 2000 Volume to Capacity ratio | 0.68  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 13.6 |
| Intersection Capacity Utilization | 71.4% | ICU Level of Service      | C    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Aviation Blvd  |       |                           |      |
| c Critical Lane Group             |       |                           |      |



# HCM Signalized Intersection Capacity Analysis

## 4: Pacific Coast Hwy & Aviation Blvd (PM)

10/19/2015



| Movement                          | EBL  | EBT  | EBR  | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR  |
|-----------------------------------|------|------|------|-------|-------|-------|------|-------|-------|-------|-------|------|
| Lane Configurations               |      |      |      | ↖     | ↗     | ↖     | ↖    | ↑↑↑   | ↖     | ↖     | ↑↑↑   |      |
| Volume (vph)                      | 0    | 0    | 0    | 728   | 10    | 218   | 13   | 1123  | 511   | 222   | 1812  | 0    |
| Ideal Flow (vphpl)                | 1900 | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 |
| Total Lost time (s)               |      |      |      | 4.8   | 4.8   | 4.2   | 4.2  | 4.6   | 4.0   | 4.2   | 4.6   |      |
| Lane Util. Factor                 |      |      |      | 0.95  | 0.95  | 1.00  | 1.00 | 0.91  | 1.00  | 1.00  | 0.91  |      |
| Fr <sub>t</sub>                   |      |      |      | 1.00  | 1.00  | 0.85  | 1.00 | 1.00  | 0.85  | 1.00  | 1.00  |      |
| Fl <sub>t</sub> Protected         |      |      |      | 0.95  | 0.95  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (prot)                 |      |      |      | 1681  | 1688  | 1583  | 1770 | 5085  | 1583  | 1770  | 5085  |      |
| Fl <sub>t</sub> Permitted         |      |      |      | 0.95  | 0.95  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (perm)                 |      |      |      | 1681  | 1688  | 1583  | 1770 | 5085  | 1583  | 1770  | 5085  |      |
| Peak-hour factor, PHF             | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)                   | 0    | 0    | 0    | 728   | 10    | 218   | 13   | 1123  | 511   | 222   | 1812  | 0    |
| RTOR Reduction (vph)              | 0    | 0    | 0    | 0     | 0     | 0     | 0    | 0     | 0     | 0     | 0     | 0    |
| Lane Group Flow (vph)             | 0    | 0    | 0    | 371   | 367   | 218   | 13   | 1123  | 511   | 222   | 1812  | 0    |
| Turn Type                         |      |      |      | Perm  | NA    | pm+ov | Prot | NA    | Free  | Prot  | NA    |      |
| Protected Phases                  |      |      |      |       | 8     |       | 5    | 2     |       | 1     | 6     |      |
| Permitted Phases                  |      |      |      | 8     |       | 8     |      |       | Free  |       |       |      |
| Actuated Green, G (s)             |      |      |      | 31.2  | 31.2  | 53.0  | 8.8  | 83.4  | 150.0 | 21.8  | 96.4  |      |
| Effective Green, g (s)            |      |      |      | 31.2  | 31.2  | 53.0  | 8.8  | 83.4  | 150.0 | 21.8  | 96.4  |      |
| Actuated g/C Ratio                |      |      |      | 0.21  | 0.21  | 0.35  | 0.06 | 0.56  | 1.00  | 0.15  | 0.64  |      |
| Clearance Time (s)                |      |      |      | 4.8   | 4.8   | 4.2   | 4.2  | 4.6   |       | 4.2   | 4.6   |      |
| Vehicle Extension (s)             |      |      |      | 1.2   | 1.2   | 1.3   | 2.0  | 3.5   |       | 1.3   | 3.5   |      |
| Lane Grp Cap (vph)                |      |      |      | 349   | 351   | 559   | 103  | 2827  | 1583  | 257   | 3267  |      |
| v/s Ratio Prot                    |      |      |      |       |       | 0.06  | 0.01 | c0.22 |       | c0.13 | c0.36 |      |
| v/s Ratio Perm                    |      |      |      | c0.22 | 0.22  | 0.08  |      |       | 0.32  |       |       |      |
| v/c Ratio                         |      |      |      | 1.06  | 1.05  | 0.39  | 0.13 | 0.40  | 0.32  | 0.86  | 0.55  |      |
| Uniform Delay, d <sub>1</sub>     |      |      |      | 59.4  | 59.4  | 36.4  | 67.0 | 19.0  | 0.0   | 62.6  | 14.9  |      |
| Progression Factor                |      |      |      | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |      |
| Incremental Delay, d <sub>2</sub> |      |      |      | 65.8  | 60.4  | 0.2   | 2.5  | 0.4   | 0.5   | 23.9  | 0.7   |      |
| Delay (s)                         |      |      |      | 125.2 | 119.8 | 36.5  | 69.5 | 19.4  | 0.5   | 86.6  | 15.6  |      |
| Level of Service                  |      |      |      | F     | F     | D     | E    | B     | A     | F     | B     |      |
| Approach Delay (s)                |      | 0.0  |      |       | 102.9 |       |      | 13.9  |       |       | 23.3  |      |
| Approach LOS                      |      | A    |      |       | F     |       |      | B     |       |       | C     |      |

| Intersection Summary              |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 36.4  | HCM 2000 Level of Service | D    |
| HCM 2000 Volume to Capacity ratio | 0.71  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 13.6 |
| Intersection Capacity Utilization | 73.4% | ICU Level of Service      | D    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Aviation Blvd  |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 5: Pacific Coast Hwy & Pier Ave (AM)

10/4/2015



| Movement               | EBL   | EBT  | EBR   | WBL  | WBT  | WBR  | NBL   | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------|-------|------|-------|------|------|------|-------|-------|------|------|-------|------|
| Lane Configurations    | ↔↔    |      | ↔     |      |      | ↔    | ↔↔    | ↑↑↑   |      | ↔    | ↑↑↑   |      |
| Volume (vph)           | 233   | 0    | 167   | 0    | 0    | 7    | 183   | 1822  | 3    | 6    | 643   | 62   |
| Ideal Flow (vphpl)     | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 |
| Total Lost time (s)    | 4.6   |      | 4.2   |      |      | 4.2  | 4.2   | 4.6   |      | 4.2  | 4.6   |      |
| Lane Util. Factor      | 0.97  |      | 1.00  |      |      | 1.00 | 0.97  | 0.91  |      | 1.00 | 0.91  |      |
| Frt                    | 1.00  |      | 0.85  |      |      | 0.86 | 1.00  | 1.00  |      | 1.00 | 0.99  |      |
| Flt Protected          | 0.95  |      | 1.00  |      |      | 1.00 | 0.95  | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (prot)      | 3433  |      | 1583  |      |      | 1611 | 3433  | 5084  |      | 1770 | 5018  |      |
| Flt Permitted          | 0.95  |      | 1.00  |      |      | 1.00 | 0.95  | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (perm)      | 3433  |      | 1583  |      |      | 1611 | 3433  | 5084  |      | 1770 | 5018  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 233   | 0    | 167   | 0    | 0    | 7    | 183   | 1822  | 3    | 6    | 643   | 62   |
| RTOR Reduction (vph)   | 0     | 0    | 0     | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 5     | 0    |
| Lane Group Flow (vph)  | 233   | 0    | 167   | 0    | 0    | 7    | 183   | 1825  | 0    | 6    | 700   | 0    |
| Turn Type              | Prot  |      | pm+ov |      |      | Over | Prot  | NA    |      | Prot | NA    |      |
| Protected Phases       | 4     |      | 5     |      |      | 1    | 5     | 2     |      | 1    | 6     |      |
| Permitted Phases       |       |      | 4     |      |      |      |       |       |      |      |       |      |
| Actuated Green, G (s)  | 14.7  |      | 27.2  |      |      | 4.3  | 12.5  | 117.6 |      | 4.3  | 109.4 |      |
| Effective Green, g (s) | 14.7  |      | 27.2  |      |      | 4.3  | 12.5  | 117.6 |      | 4.3  | 109.4 |      |
| Actuated g/C Ratio     | 0.10  |      | 0.18  |      |      | 0.03 | 0.08  | 0.78  |      | 0.03 | 0.73  |      |
| Clearance Time (s)     | 4.6   |      | 4.2   |      |      | 4.2  | 4.2   | 4.6   |      | 4.2  | 4.6   |      |
| Vehicle Extension (s)  | 2.1   |      | 2.1   |      |      | 2.1  | 2.1   | 3.5   |      | 2.1  | 3.5   |      |
| Lane Grp Cap (vph)     | 336   |      | 287   |      |      | 46   | 286   | 3985  |      | 50   | 3659  |      |
| v/s Ratio Prot         | c0.07 |      | 0.05  |      |      | 0.00 | c0.05 | c0.36 |      | 0.00 | c0.14 |      |
| v/s Ratio Perm         |       |      | 0.06  |      |      |      |       |       |      |      |       |      |
| v/c Ratio              | 0.69  |      | 0.58  |      |      | 0.15 | 0.64  | 0.46  |      | 0.12 | 0.19  |      |
| Uniform Delay, d1      | 65.5  |      | 56.2  |      |      | 71.1 | 66.6  | 5.5   |      | 71.0 | 6.4   |      |
| Progression Factor     | 1.00  |      | 1.00  |      |      | 1.00 | 1.00  | 1.00  |      | 1.00 | 1.00  |      |
| Incremental Delay, d2  | 5.1   |      | 2.0   |      |      | 0.7  | 3.6   | 0.4   |      | 0.5  | 0.1   |      |
| Delay (s)              | 70.5  |      | 58.2  |      |      | 71.7 | 70.1  | 5.8   |      | 71.5 | 6.5   |      |
| Level of Service       | E     |      | E     |      |      | E    | E     | A     |      | E    | A     |      |
| Approach Delay (s)     |       | 65.4 |       |      | 71.7 |      |       | 11.7  |      |      | 7.1   |      |
| Approach LOS           |       | E    |       |      | E    |      |       | B     |      |      | A     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 17.6  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.49  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 13.4 |
| Intersection Capacity Utilization | 58.4% | ICU Level of Service      | B    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Pier Ave       |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 5: Pacific Coast Hwy & Pier Ave (PM)

10/19/2015



| Movement               | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL   | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------|------|------|-------|------|------|------|-------|-------|------|------|-------|------|
| Lane Configurations    | ↗↘   |      | ↗     |      |      | ↗    | ↗↘    | ↗↘↘   |      | ↗    | ↗↘↘   |      |
| Volume (vph)           | 231  | 0    | 244   | 0    | 0    | 13   | 320   | 1064  | 6    | 6    | 1804  | 147  |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 |
| Total Lost time (s)    | 4.6  |      | 4.2   |      |      | 4.2  | 4.2   | 4.6   |      | 4.2  | 4.6   |      |
| Lane Util. Factor      | 0.97 |      | 1.00  |      |      | 1.00 | 0.97  | 0.91  |      | 1.00 | 0.91  |      |
| Frt                    | 1.00 |      | 0.85  |      |      | 0.86 | 1.00  | 1.00  |      | 1.00 | 0.99  |      |
| Flt Protected          | 0.95 |      | 1.00  |      |      | 1.00 | 0.95  | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (prot)      | 3433 |      | 1583  |      |      | 1611 | 3433  | 5081  |      | 1770 | 5028  |      |
| Flt Permitted          | 0.95 |      | 1.00  |      |      | 1.00 | 0.95  | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (perm)      | 3433 |      | 1583  |      |      | 1611 | 3433  | 5081  |      | 1770 | 5028  |      |
| Peak-hour factor, PHF  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 231  | 0    | 244   | 0    | 0    | 13   | 320   | 1064  | 6    | 6    | 1804  | 147  |
| RTOR Reduction (vph)   | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 4     | 0    |
| Lane Group Flow (vph)  | 231  | 0    | 244   | 0    | 0    | 13   | 320   | 1070  | 0    | 6    | 1947  | 0    |
| Turn Type              | Prot |      | pm+ov |      |      | Over | Prot  | NA    |      | Prot | NA    |      |
| Protected Phases       | 4    |      | 5     |      |      | 1    | 5     | 2     |      | 1    | 6     |      |
| Permitted Phases       |      |      | 4     |      |      |      |       |       |      |      |       |      |
| Actuated Green, G (s)  | 14.6 |      | 33.0  |      |      | 6.5  | 18.4  | 115.5 |      | 6.5  | 103.6 |      |
| Effective Green, g (s) | 14.6 |      | 33.0  |      |      | 6.5  | 18.4  | 115.5 |      | 6.5  | 103.6 |      |
| Actuated g/C Ratio     | 0.10 |      | 0.22  |      |      | 0.04 | 0.12  | 0.77  |      | 0.04 | 0.69  |      |
| Clearance Time (s)     | 4.6  |      | 4.2   |      |      | 4.2  | 4.2   | 4.6   |      | 4.2  | 4.6   |      |
| Vehicle Extension (s)  | 2.1  |      | 2.1   |      |      | 2.1  | 2.1   | 3.5   |      | 2.1  | 3.5   |      |
| Lane Grp Cap (vph)     | 334  |      | 348   |      |      | 69   | 421   | 3912  |      | 76   | 3472  |      |
| v/s Ratio Prot         | 0.07 |      | c0.09 |      |      | 0.01 | c0.09 | 0.21  |      | 0.00 | c0.39 |      |
| v/s Ratio Perm         |      |      | 0.07  |      |      |      |       |       |      |      |       |      |
| v/c Ratio              | 0.69 |      | 0.70  |      |      | 0.19 | 0.76  | 0.27  |      | 0.08 | 0.56  |      |
| Uniform Delay, d1      | 65.5 |      | 54.0  |      |      | 69.2 | 63.7  | 5.0   |      | 68.9 | 11.7  |      |
| Progression Factor     | 1.00 |      | 1.00  |      |      | 1.00 | 1.00  | 1.00  |      | 1.00 | 1.00  |      |
| Incremental Delay, d2  | 5.1  |      | 5.3   |      |      | 0.6  | 7.2   | 0.2   |      | 0.2  | 0.7   |      |
| Delay (s)              | 70.6 |      | 59.2  |      |      | 69.8 | 70.9  | 5.2   |      | 69.1 | 12.4  |      |
| Level of Service       | E    |      | E     |      |      | E    | E     | A     |      | E    | B     |      |
| Approach Delay (s)     |      | 64.8 |       |      | 69.8 |      |       | 20.3  |      |      | 12.5  |      |
| Approach LOS           |      | E    |       |      | E    |      |       | C     |      |      | B     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 22.0  | HCM 2000 Level of Service | C    |
| HCM 2000 Volume to Capacity ratio | 0.60  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 13.4 |
| Intersection Capacity Utilization | 64.5% | ICU Level of Service      | C    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Pier Ave       |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 6: Pacific Coast Hwy & 2nd St (AM)

10/4/2015



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|------|
| Lane Configurations    |       | ↕     |      |       | ↕     |      | ↕     | ↑↑↑   |      | ↕    | ↑↑↑   |      |
| Volume (vph)           | 89    | 0     | 17   | 11    | 2     | 20   | 10    | 2356  | 2    | 0    | 1057  | 34   |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 |
| Total Lost time (s)    |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      |      | 5.6   |      |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.91  |      |      | 0.91  |      |
| Frt                    |       | 0.98  |      |       | 0.92  |      | 1.00  | 1.00  |      |      | 1.00  |      |
| Flt Protected          |       | 0.96  |      |       | 0.98  |      | 0.95  | 1.00  |      |      | 1.00  |      |
| Satd. Flow (prot)      |       | 1749  |      |       | 1682  |      | 1770  | 5085  |      |      | 5062  |      |
| Flt Permitted          |       | 0.96  |      |       | 0.98  |      | 0.24  | 1.00  |      |      | 1.00  |      |
| Satd. Flow (perm)      |       | 1749  |      |       | 1682  |      | 444   | 5085  |      |      | 5062  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 89    | 0     | 17   | 11    | 2     | 20   | 10    | 2356  | 2    | 0    | 1057  | 34   |
| RTOR Reduction (vph)   | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0    | 0    | 2     | 0    |
| Lane Group Flow (vph)  | 0     | 106   | 0    | 0     | 33    | 0    | 10    | 2358  | 0    | 0    | 1089  | 0    |
| Turn Type              | Split | NA    |      | Split | NA    |      | Perm  | NA    |      | Perm | NA    |      |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      |       | 2     |      |      | 6     |      |
| Permitted Phases       |       |       |      |       |       |      | 2     |       |      | 6    |       |      |
| Actuated Green, G (s)  |       | 14.9  |      |       | 6.8   |      | 112.4 | 112.4 |      |      | 112.4 |      |
| Effective Green, g (s) |       | 14.9  |      |       | 6.8   |      | 112.4 | 112.4 |      |      | 112.4 |      |
| Actuated g/C Ratio     |       | 0.10  |      |       | 0.05  |      | 0.75  | 0.75  |      |      | 0.75  |      |
| Clearance Time (s)     |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      |      | 5.6   |      |
| Vehicle Extension (s)  |       | 3.5   |      |       | 2.1   |      | 3.5   | 3.5   |      |      | 3.5   |      |
| Lane Grp Cap (vph)     |       | 173   |      |       | 76    |      | 332   | 3810  |      |      | 3793  |      |
| v/s Ratio Prot         |       | c0.06 |      |       | c0.02 |      |       | c0.46 |      |      | 0.22  |      |
| v/s Ratio Perm         |       |       |      |       |       |      | 0.02  |       |      |      |       |      |
| v/c Ratio              |       | 0.61  |      |       | 0.43  |      | 0.03  | 0.62  |      |      | 0.29  |      |
| Uniform Delay, d1      |       | 64.8  |      |       | 69.7  |      | 4.8   | 8.8   |      |      | 6.0   |      |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00  |      |      | 1.00  |      |
| Incremental Delay, d2  |       | 6.6   |      |       | 1.7   |      | 0.2   | 0.8   |      |      | 0.2   |      |
| Delay (s)              |       | 71.4  |      |       | 71.5  |      | 5.0   | 9.6   |      |      | 6.2   |      |
| Level of Service       |       | E     |      |       | E     |      | A     | A     |      |      | A     |      |
| Approach Delay (s)     |       | 71.4  |      |       | 71.5  |      |       | 9.5   |      |      | 6.2   |      |
| Approach LOS           |       | E     |      |       | E     |      |       | A     |      |      | A     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 10.9  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.61  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 15.9 |
| Intersection Capacity Utilization | 67.5% | ICU Level of Service      | C    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & 2nd            |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 6: Pacific Coast Hwy & 2nd St (PM)

10/19/2015



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations    |       | ↕     |      |       | ↕     |      | ↕     | ↑↑↑   |      | ↕     | ↑↑↑   |      |
| Volume (vph)           | 90    | 0     | 42   | 14    | 4     | 12   | 41    | 1512  | 3    | 1     | 2174  | 71   |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Total Lost time (s)    |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      | 5.6   | 5.6   |      |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.91  |      | 1.00  | 0.91  |      |
| Frt                    |       | 0.96  |      |       | 0.95  |      | 1.00  | 1.00  |      | 1.00  | 1.00  |      |
| Flt Protected          |       | 0.97  |      |       | 0.98  |      | 0.95  | 1.00  |      | 0.95  | 1.00  |      |
| Satd. Flow (prot)      |       | 1724  |      |       | 1722  |      | 1770  | 5084  |      | 1770  | 5061  |      |
| Flt Permitted          |       | 0.97  |      |       | 0.98  |      | 0.06  | 1.00  |      | 0.14  | 1.00  |      |
| Satd. Flow (perm)      |       | 1724  |      |       | 1722  |      | 103   | 5084  |      | 267   | 5061  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)        | 90    | 0     | 42   | 14    | 4     | 12   | 41    | 1512  | 3    | 1     | 2174  | 71   |
| RTOR Reduction (vph)   | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 2     | 0    |
| Lane Group Flow (vph)  | 0     | 132   | 0    | 0     | 30    | 0    | 41    | 1515  | 0    | 1     | 2243  | 0    |
| Turn Type              | Split | NA    |      | Split | NA    |      | Perm  | NA    |      | Perm  | NA    |      |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      |       | 2     |      |       |       | 6    |
| Permitted Phases       |       |       |      |       |       |      | 2     |       |      | 6     |       |      |
| Actuated Green, G (s)  |       | 17.2  |      |       | 5.1   |      | 111.8 | 111.8 |      | 111.8 | 111.8 |      |
| Effective Green, g (s) |       | 17.2  |      |       | 5.1   |      | 111.8 | 111.8 |      | 111.8 | 111.8 |      |
| Actuated g/C Ratio     |       | 0.11  |      |       | 0.03  |      | 0.75  | 0.75  |      | 0.75  | 0.75  |      |
| Clearance Time (s)     |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      | 5.6   | 5.6   |      |
| Vehicle Extension (s)  |       | 3.5   |      |       | 2.1   |      | 3.5   | 3.5   |      | 3.5   | 3.5   |      |
| Lane Grp Cap (vph)     |       | 197   |      |       | 58    |      | 76    | 3789  |      | 199   | 3772  |      |
| v/s Ratio Prot         |       | c0.08 |      |       | c0.02 |      |       | 0.30  |      |       | c0.44 |      |
| v/s Ratio Perm         |       |       |      |       |       |      | 0.40  |       |      | 0.00  |       |      |
| v/c Ratio              |       | 0.67  |      |       | 0.52  |      | 0.54  | 0.40  |      | 0.01  | 0.59  |      |
| Uniform Delay, d1      |       | 63.7  |      |       | 71.2  |      | 8.1   | 6.9   |      | 4.9   | 8.7   |      |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00  |      | 1.00  | 1.00  |      |
| Incremental Delay, d2  |       | 9.0   |      |       | 3.7   |      | 24.8  | 0.3   |      | 0.0   | 0.7   |      |
| Delay (s)              |       | 72.6  |      |       | 75.0  |      | 32.9  | 7.2   |      | 4.9   | 9.4   |      |
| Level of Service       |       | E     |      |       | E     |      | C     | A     |      | A     | A     |      |
| Approach Delay (s)     |       | 72.6  |      |       | 75.0  |      |       | 7.9   |      |       | 9.4   |      |
| Approach LOS           |       | E     |      |       | E     |      |       | A     |      |       | A     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 11.4  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.60  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 15.9 |
| Intersection Capacity Utilization | 64.2% | ICU Level of Service      | C    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & 2nd            |       |                           |      |
| c Critical Lane Group             |       |                           |      |

HCM Signalized Intersection Capacity Analysis  
 7: Pacific Coast Hwy & 16th St (AM)

10/4/2015



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations    |       | ↔     |      |       | ↔     |      | ↗     | ↑↑↑   |      | ↖    | ↑↑↑  | ↖    |
| Volume (vph)           | 76    | 0     | 62   | 26    | 0     | 24   | 79    | 1576  | 47   | 15   | 869  | 146  |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9   |      | 4.2  | 4.9  | 4.9  |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.91  |      | 1.00 | 0.91 | 1.00 |
| Frt                    |       | 0.94  |      |       | 0.94  |      | 1.00  | 1.00  |      | 1.00 | 1.00 | 0.85 |
| Flt Protected          |       | 0.97  |      |       | 0.97  |      | 0.95  | 1.00  |      | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot)      |       | 1703  |      |       | 1698  |      | 1770  | 5063  |      | 1770 | 5085 | 1583 |
| Flt Permitted          |       | 0.97  |      |       | 0.97  |      | 0.95  | 1.00  |      | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm)      |       | 1703  |      |       | 1698  |      | 1770  | 5063  |      | 1770 | 5085 | 1583 |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph)        | 76    | 0     | 62   | 26    | 0     | 24   | 79    | 1576  | 47   | 15   | 869  | 146  |
| RTOR Reduction (vph)   | 0     | 104   | 0    | 0     | 48    | 0    | 0     | 1     | 0    | 0    | 0    | 77   |
| Lane Group Flow (vph)  | 0     | 34    | 0    | 0     | 2     | 0    | 79    | 1622  | 0    | 15   | 869  | 69   |
| Turn Type              | Split | NA    |      | Split | NA    |      | Prot  | NA    |      | Prot | NA   | Perm |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      | 5     | 2     |      | 1    | 6    |      |
| Permitted Phases       |       |       |      |       |       |      |       |       |      |      |      | 6    |
| Actuated Green, G (s)  |       | 8.9   |      |       | 6.0   |      | 9.6   | 74.8  |      | 2.6  | 67.8 | 67.8 |
| Effective Green, g (s) |       | 8.9   |      |       | 6.0   |      | 9.6   | 74.8  |      | 2.6  | 67.8 | 67.8 |
| Actuated g/C Ratio     |       | 0.06  |      |       | 0.04  |      | 0.07  | 0.52  |      | 0.02 | 0.47 | 0.47 |
| Clearance Time (s)     |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9   |      | 4.2  | 4.9  | 4.9  |
| Vehicle Extension (s)  |       | 3.1   |      |       | 5.0   |      | 1.5   | 4.0   |      | 1.5  | 4.0  | 4.0  |
| Lane Grp Cap (vph)     |       | 105   |      |       | 71    |      | 118   | 2648  |      | 32   | 2410 | 750  |
| v/s Ratio Prot         |       | c0.02 |      |       | c0.00 |      | c0.04 | c0.32 |      | 0.01 | 0.17 |      |
| v/s Ratio Perm         |       |       |      |       |       |      |       |       |      |      |      | 0.04 |
| v/c Ratio              |       | 0.32  |      |       | 0.03  |      | 0.67  | 0.61  |      | 0.47 | 0.36 | 0.09 |
| Uniform Delay, d1      |       | 64.2  |      |       | 65.7  |      | 65.2  | 23.9  |      | 69.5 | 23.9 | 20.7 |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00  |      | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2  |       | 1.9   |      |       | 0.4   |      | 10.6  | 1.1   |      | 3.9  | 0.4  | 0.2  |
| Delay (s)              |       | 66.0  |      |       | 66.1  |      | 75.8  | 25.0  |      | 73.4 | 24.3 | 20.9 |
| Level of Service       |       | E     |      |       | E     |      | E     | C     |      | E    | C    | C    |
| Approach Delay (s)     |       | 66.0  |      |       | 66.1  |      | 27.4  |       |      | 24.5 |      |      |
| Approach LOS           |       | E     |      |       | E     |      | C     |       |      | C    |      |      |

| Intersection Summary              |       |                           |
|-----------------------------------|-------|---------------------------|
| HCM 2000 Control Delay            | 28.8  | HCM 2000 Level of Service |
| HCM 2000 Volume to Capacity ratio | 0.43  | C                         |
| Actuated Cycle Length (s)         | 143.0 | Sum of lost time (s)      |
| Intersection Capacity Utilization | 56.9% | 21.7                      |
| Analysis Period (min)             | 15    | ICU Level of Service      |
| Description: PCH & 16th St        |       | B                         |
| c Critical Lane Group             |       |                           |

# HCM Signalized Intersection Capacity Analysis

## 7: Pacific Coast Hwy & 16th St (PM)

10/19/2015



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL  | SBT   | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations    |       | ↕     |      |       | ↕     |      | ↗     | ↑↑↑  |      | ↗    | ↑↑↑   | ↗    |
| Volume (vph)           | 111   | 0     | 85   | 16    | 0     | 3    | 102   | 1134 | 24   | 3    | 1876  | 203  |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 |
| Total Lost time (s)    |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9  |      | 4.2  | 4.9   | 4.9  |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.91 |      | 1.00 | 0.91  | 1.00 |
| Frt                    |       | 0.94  |      |       | 0.98  |      | 1.00  | 1.00 |      | 1.00 | 1.00  | 0.85 |
| Flt Protected          |       | 0.97  |      |       | 0.96  |      | 0.95  | 1.00 |      | 0.95 | 1.00  | 1.00 |
| Satd. Flow (prot)      |       | 1705  |      |       | 1749  |      | 1770  | 5069 |      | 1770 | 5085  | 1583 |
| Flt Permitted          |       | 0.97  |      |       | 0.96  |      | 0.95  | 1.00 |      | 0.95 | 1.00  | 1.00 |
| Satd. Flow (perm)      |       | 1705  |      |       | 1749  |      | 1770  | 5069 |      | 1770 | 5085  | 1583 |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 111   | 0     | 85   | 16    | 0     | 3    | 102   | 1134 | 24   | 3    | 1876  | 203  |
| RTOR Reduction (vph)   | 0     | 101   | 0    | 0     | 18    | 0    | 0     | 1    | 0    | 0    | 0     | 68   |
| Lane Group Flow (vph)  | 0     | 95    | 0    | 0     | 1     | 0    | 102   | 1157 | 0    | 3    | 1876  | 135  |
| Turn Type              | Split | NA    |      | Split | NA    |      | Prot  | NA   |      | Prot | NA    | Perm |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      | 5     | 2    |      | 1    | 6     |      |
| Permitted Phases       |       |       |      |       |       |      |       |      |      |      |       | 6    |
| Actuated Green, G (s)  |       | 13.1  |      |       | 4.5   |      | 10.6  | 73.7 |      | 1.0  | 64.1  | 64.1 |
| Effective Green, g (s) |       | 13.1  |      |       | 4.5   |      | 10.6  | 73.7 |      | 1.0  | 64.1  | 64.1 |
| Actuated g/C Ratio     |       | 0.09  |      |       | 0.03  |      | 0.07  | 0.52 |      | 0.01 | 0.45  | 0.45 |
| Clearance Time (s)     |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9  |      | 4.2  | 4.9   | 4.9  |
| Vehicle Extension (s)  |       | 3.1   |      |       | 5.0   |      | 1.5   | 4.0  |      | 1.5  | 4.0   | 4.0  |
| Lane Grp Cap (vph)     |       | 156   |      |       | 55    |      | 131   | 2612 |      | 12   | 2279  | 709  |
| v/s Ratio Prot         |       | c0.06 |      |       | c0.00 |      | c0.06 | 0.23 |      | 0.00 | c0.37 |      |
| v/s Ratio Perm         |       |       |      |       |       |      |       |      |      |      |       | 0.09 |
| v/c Ratio              |       | 0.61  |      |       | 0.01  |      | 0.78  | 0.44 |      | 0.25 | 0.82  | 0.19 |
| Uniform Delay, d1      |       | 62.5  |      |       | 67.1  |      | 65.0  | 21.8 |      | 70.6 | 34.5  | 23.8 |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00 |      | 1.00 | 1.00  | 1.00 |
| Incremental Delay, d2  |       | 6.9   |      |       | 0.2   |      | 22.8  | 0.5  |      | 4.0  | 3.5   | 0.6  |
| Delay (s)              |       | 69.4  |      |       | 67.3  |      | 87.9  | 22.3 |      | 74.6 | 38.0  | 24.4 |
| Level of Service       |       | E     |      |       | E     |      | F     | C    |      | E    | D     | C    |
| Approach Delay (s)     |       | 69.4  |      |       | 67.3  |      |       | 27.6 |      |      | 36.7  |      |
| Approach LOS           |       | E     |      |       | E     |      |       | C    |      |      | D     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 35.5  | HCM 2000 Level of Service | D    |
| HCM 2000 Volume to Capacity ratio | 0.57  |                           |      |
| Actuated Cycle Length (s)         | 143.0 | Sum of lost time (s)      | 21.7 |
| Intersection Capacity Utilization | 64.1% | ICU Level of Service      | C    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & 16th St        |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 8: Pacific Coast Hwy & 21st St (AM)

10/4/2015



| Movement               | EBL  | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|-------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations    |      | ↕     |      |      | ↕    |      | ↕    | ↑↑↑   |      | ↕    | ↑↑↑  |      |
| Volume (vph)           | 72   | 91    | 20   | 55   | 75   | 35   | 59   | 1517  | 38   | 29   | 929  | 32   |
| Ideal Flow (vphpl)     | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 4.0   |      |      | 4.0  |      | 4.0  | 4.0   |      | 4.0  | 4.0  |      |
| Lane Util. Factor      |      | 1.00  |      |      | 1.00 |      | 1.00 | 0.91  |      | 1.00 | 0.91 |      |
| Frt                    |      | 0.99  |      |      | 0.97 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |      |
| Flt Protected          |      | 0.98  |      |      | 0.98 |      | 0.95 | 1.00  |      | 0.95 | 1.00 |      |
| Satd. Flow (prot)      |      | 1800  |      |      | 1780 |      | 1770 | 5067  |      | 1770 | 5060 |      |
| Flt Permitted          |      | 0.70  |      |      | 0.77 |      | 0.28 | 1.00  |      | 0.14 | 1.00 |      |
| Satd. Flow (perm)      |      | 1293  |      |      | 1385 |      | 516  | 5067  |      | 257  | 5060 |      |
| Peak-hour factor, PHF  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph)        | 72   | 91    | 20   | 55   | 75   | 35   | 59   | 1517  | 38   | 29   | 929  | 32   |
| RTOR Reduction (vph)   | 0    | 4     | 0    | 0    | 8    | 0    | 0    | 2     | 0    | 0    | 3    | 0    |
| Lane Group Flow (vph)  | 0    | 179   | 0    | 0    | 157  | 0    | 59   | 1553  | 0    | 29   | 958  | 0    |
| Turn Type              | Perm | NA    |      | Perm | NA   |      | Perm | NA    |      | Perm | NA   |      |
| Protected Phases       |      | 4     |      |      | 8    |      |      | 2     |      |      | 6    |      |
| Permitted Phases       | 4    |       |      | 8    |      |      | 2    |       |      | 6    |      |      |
| Actuated Green, G (s)  |      | 20.0  |      |      | 20.0 |      | 92.0 | 92.0  |      | 92.0 | 92.0 |      |
| Effective Green, g (s) |      | 20.0  |      |      | 20.0 |      | 92.0 | 92.0  |      | 92.0 | 92.0 |      |
| Actuated g/C Ratio     |      | 0.17  |      |      | 0.17 |      | 0.77 | 0.77  |      | 0.77 | 0.77 |      |
| Clearance Time (s)     |      | 4.0   |      |      | 4.0  |      | 4.0  | 4.0   |      | 4.0  | 4.0  |      |
| Vehicle Extension (s)  |      | 3.0   |      |      | 3.0  |      | 3.0  | 3.0   |      | 3.0  | 3.0  |      |
| Lane Grp Cap (vph)     |      | 215   |      |      | 230  |      | 395  | 3884  |      | 197  | 3879 |      |
| v/s Ratio Prot         |      |       |      |      |      |      |      | c0.31 |      |      |      | 0.19 |
| v/s Ratio Perm         |      | c0.14 |      |      | 0.11 |      | 0.11 |       |      | 0.11 |      |      |
| v/c Ratio              |      | 0.83  |      |      | 0.68 |      | 0.15 | 0.40  |      | 0.15 | 0.25 |      |
| Uniform Delay, d1      |      | 48.4  |      |      | 47.0 |      | 3.7  | 4.7   |      | 3.7  | 4.0  |      |
| Progression Factor     |      | 1.00  |      |      | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |      |
| Incremental Delay, d2  |      | 23.1  |      |      | 8.0  |      | 0.8  | 0.3   |      | 1.6  | 0.2  |      |
| Delay (s)              |      | 71.5  |      |      | 55.0 |      | 4.5  | 5.0   |      | 5.3  | 4.2  |      |
| Level of Service       |      | E     |      |      | E    |      | A    | A     |      | A    | A    |      |
| Approach Delay (s)     |      | 71.5  |      |      | 55.0 |      |      | 5.0   |      |      | 4.2  |      |
| Approach LOS           |      | E     |      |      | E    |      |      | A     |      |      | A    |      |

### Intersection Summary

|                                   |       |                           |     |
|-----------------------------------|-------|---------------------------|-----|
| HCM 2000 Control Delay            | 11.7  | HCM 2000 Level of Service | B   |
| HCM 2000 Volume to Capacity ratio | 0.48  |                           |     |
| Actuated Cycle Length (s)         | 120.0 | Sum of lost time (s)      | 8.0 |
| Intersection Capacity Utilization | 60.0% | ICU Level of Service      | B   |
| Analysis Period (min)             | 15    |                           |     |
| Description: PCH & 21st St        |       |                           |     |
| c Critical Lane Group             |       |                           |     |



HCM Signalized Intersection Capacity Analysis  
 8: Pacific Coast Hwy & 21st St (PM)

10/19/2015



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|------------------------|------|------|------|------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations    |      | ↕    |      |      | ↕     |      | ↕     | ↑↑↑   |      | ↕     | ↑↑↑   |      |
| Volume (vph)           | 18   | 39   | 17   | 21   | 47    | 22   | 50    | 1182  | 17   | 78    | 2171  | 83   |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Total Lost time (s)    |      | 4.0  |      |      | 4.0   |      | 4.0   | 4.0   |      | 4.0   | 4.0   |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00  |      | 1.00  | 0.91  |      | 1.00  | 0.91  |      |
| Frt                    |      | 0.97 |      |      | 0.97  |      | 1.00  | 1.00  |      | 1.00  | 0.99  |      |
| Flt Protected          |      | 0.99 |      |      | 0.99  |      | 0.95  | 1.00  |      | 0.95  | 1.00  |      |
| Satd. Flow (prot)      |      | 1783 |      |      | 1781  |      | 1770  | 5074  |      | 1770  | 5057  |      |
| Flt Permitted          |      | 0.88 |      |      | 0.91  |      | 0.06  | 1.00  |      | 0.22  | 1.00  |      |
| Satd. Flow (perm)      |      | 1593 |      |      | 1641  |      | 118   | 5074  |      | 406   | 5057  |      |
| Peak-hour factor, PHF  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)        | 18   | 39   | 17   | 21   | 47    | 22   | 50    | 1182  | 17   | 78    | 2171  | 83   |
| RTOR Reduction (vph)   | 0    | 10   | 0    | 0    | 11    | 0    | 0     | 1     | 0    | 0     | 2     | 0    |
| Lane Group Flow (vph)  | 0    | 64   | 0    | 0    | 79    | 0    | 50    | 1198  | 0    | 78    | 2252  | 0    |
| Turn Type              | Perm | NA   |      | Perm | NA    |      | Perm  | NA    |      | Perm  | NA    |      |
| Protected Phases       |      | 4    |      |      | 8     |      |       | 2     |      |       | 6     |      |
| Permitted Phases       | 4    |      |      | 8    |       |      | 2     |       |      | 6     |       |      |
| Actuated Green, G (s)  |      | 11.1 |      |      | 11.1  |      | 100.9 | 100.9 |      | 100.9 | 100.9 |      |
| Effective Green, g (s) |      | 11.1 |      |      | 11.1  |      | 100.9 | 100.9 |      | 100.9 | 100.9 |      |
| Actuated g/C Ratio     |      | 0.09 |      |      | 0.09  |      | 0.84  | 0.84  |      | 0.84  | 0.84  |      |
| Clearance Time (s)     |      | 4.0  |      |      | 4.0   |      | 4.0   | 4.0   |      | 4.0   | 4.0   |      |
| Vehicle Extension (s)  |      | 3.0  |      |      | 3.0   |      | 3.0   | 3.0   |      | 3.0   | 3.0   |      |
| Lane Grp Cap (vph)     |      | 147  |      |      | 151   |      | 99    | 4266  |      | 341   | 4252  |      |
| v/s Ratio Prot         |      |      |      |      |       |      |       | 0.24  |      |       | c0.45 |      |
| v/s Ratio Perm         |      | 0.04 |      |      | c0.05 |      | 0.43  |       |      | 0.19  |       |      |
| v/c Ratio              |      | 0.44 |      |      | 0.52  |      | 0.51  | 0.28  |      | 0.23  | 0.53  |      |
| Uniform Delay, d1      |      | 51.5 |      |      | 51.9  |      | 2.6   | 2.0   |      | 1.9   | 2.7   |      |
| Progression Factor     |      | 1.00 |      |      | 1.00  |      | 1.00  | 1.00  |      | 1.00  | 1.00  |      |
| Incremental Delay, d2  |      | 2.1  |      |      | 3.3   |      | 17.2  | 0.2   |      | 1.6   | 0.5   |      |
| Delay (s)              |      | 53.5 |      |      | 55.2  |      | 19.9  | 2.2   |      | 3.4   | 3.2   |      |
| Level of Service       |      | D    |      |      | E     |      | B     | A     |      | A     | A     |      |
| Approach Delay (s)     |      | 53.5 |      |      | 55.2  |      |       | 2.9   |      |       | 3.2   |      |
| Approach LOS           |      | D    |      |      | E     |      |       | A     |      |       | A     |      |

| Intersection Summary              |       |                           |
|-----------------------------------|-------|---------------------------|
| HCM 2000 Control Delay            | 5.3   | HCM 2000 Level of Service |
| HCM 2000 Volume to Capacity ratio | 0.53  | A                         |
| Actuated Cycle Length (s)         | 120.0 | Sum of lost time (s)      |
| Intersection Capacity Utilization | 66.2% | 8.0                       |
| Analysis Period (min)             | 15    | ICU Level of Service      |
| Description: PCH & 21st St        |       | C                         |
| c Critical Lane Group             |       |                           |

**FUTURE WITHOUT PROJECT**

## **SIGNALIZED INTERSECTIONS**

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 1 Hermosa Avenue &amp; 13th Street</b><br><b>Description: Future (2040) No Project</b> |          |       |        |          |         |  |
|--|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>   |          |       |        |          |         |  |
| Thru Lane:   | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:   | 1600 vph |       |        |          |         | E-W Split Phase : N  |
| Double Lt Penalty:   | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:   | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :  |          |       |        |          |         |  |
| FF Movements:  |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 30     | 0        | 0.000   | N-S(1): 0.234 *<br>N-S(2): 0.119<br>E-W(1): 0.000<br>E-W(2): 0.013 * |
|  | TH       | 2.00  | 250    | 3,200    | 0.088   |  |
|  | LT       | 0.00  | 0      | 0        | 0.000 * |  |
| Westbound  | RT       | 0.00  | 0      | 0        | 0.000   | V/C: 0.247<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 0.00  | 0      | 0        | 0.000 * |  |
|  | LT       | 0.00  | 0      | 0        | 0.000   |  |
| Northbound   | RT       | 0.00  | 0      | 0        | 0.000   | ICU: 0.347   |
|  | TH       | 2.00  | 750    | 3,200    | 0.234 * |  |
|  | LT       | 1.00  | 50     | 1,600    | 0.031   |  |
| Eastbound  | RT       | 0.50  | 10     | 800      | 0.000   | LOS: A   |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 0.50  | 10     | 800      | 0.013 * |  |
| <b>Date/Time: PM PEAK HOUR</b>   |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 20     | 0        | 0.000   | N-S(1): 0.122<br>N-S(2): 0.219 *<br>E-W(1): 0.038<br>E-W(2): 0.069 * |
|  | TH       | 2.00  | 480    | 3,200    | 0.156 * |  |
|  | LT       | 0.00  | 0      | 0        | 0.000   |  |
| Westbound  | RT       | 0.00  | 0      | 0        | 0.000   | V/C: 0.288<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 0.00  | 0      | 0        | 0.000 * |  |
|  | LT       | 0.00  | 0      | 0        | 0.000   |  |
| Northbound   | RT       | 0.00  | 0      | 0        | 0.000   | ICU: 0.388   |
|  | TH       | 2.00  | 390    | 3,200    | 0.122   |  |
|  | LT       | 1.00  | 100    | 1,600    | 0.063 * |  |
| Eastbound  | RT       | 0.73  | 80     | 1,164    | 0.038   | LOS: A   |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 0.27  | 30     | 436      | 0.069 * |  |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 2 Hermosa Avenue &amp; Pier Avenue</b><br><b>Description: Future (2040) No Project</b> |          |       |        |          |         |  |
|--|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>   |          |       |        |          |         |  |
| Thru Lane:   | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:   | 1600 vph |       |        |          |         | E-W Split Phase : N  |
| Double Lt Penalty:   | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:   | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :  |          |       |        |          |         |  |
| FF Movements:  |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.316 *<br>N-S(2): 0.066<br>E-W(1): 0.031<br>E-W(2): 0.041 * |
|  | TH       | 2.00  | 210    | 3,200    | 0.066   |  |
|  | LT       | 1.00  | 70     | 1,600    | 0.044 * |  |
| Westbound  | RT       | 1.00  | 100    | 1,600    | 0.041 * | V/C: 0.357<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 1.00  | 50     | 1,600    | 0.031   |  |
| Northbound   | RT       | 0.00  | 140    | 0        | 0.000   | ICU: 0.457   |
|  | TH       | 2.00  | 730    | 3,200    | 0.272 * |  |
|  | LT       | 0.00  | 0      | 0        | 0.000   |  |
| Eastbound  | RT       | 0.00  | 0      | 0        | 0.000   | LOS: A   |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 0.00  | 0      | 0        | 0.000 * |  |
| <b>Date/Time: PM PEAK HOUR</b>   |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.210 *<br>N-S(2): 0.156<br>E-W(1): 0.081 *<br>E-W(2): 0.063 |
|  | TH       | 2.00  | 500    | 3,200    | 0.156   |  |
|  | LT       | 1.00  | 100    | 1,600    | 0.063 * |  |
| Westbound  | RT       | 1.00  | 150    | 1,600    | 0.063   | V/C: 0.291<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 1.00  | 130    | 1,600    | 0.081 * |  |
| Northbound   | RT       | 0.00  | 110    | 0        | 0.000   | ICU: 0.391   |
|  | TH       | 2.00  | 360    | 3,200    | 0.147 * |  |
|  | LT       | 0.00  | 0      | 0        | 0.000   |  |
| Eastbound  | RT       | 0.00  | 0      | 0        | 0.000   | LOS: A   |
|  | TH       | 0.00  | 0      | 0        | 0.000 * |  |
|  | LT       | 0.00  | 0      | 0        | 0.000   |  |

\* - Denotes critical movement

**Project Title:** City of Hermosa Beach General Plan Update  
**Intersection:** 3 Pacific Coast Highway & Artesia Boulevard  
**Description:** Future (2040) No Project

**Date/Time:** AM PEAK HOUR

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1600 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1600 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 10 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    | WBR      |                          |    |
| FF Movements:      | NBR,     |                          |    |

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS     |
|------------|------|-------|--------|----------|---------|------------------|
| Southbound | RT   | 0.00  | 90     | 0        | 0.000   | N-S(1): 0.462 *  |
|            | TH   | 2.00  | 720    | 3,200    | 0.253   | N-S(2): 0.259    |
|            | LT   | 2.00  | 170    | 2,880    | 0.059 * | E-W(1): 0.198    |
| Westbound  | RT   | 1.00  | 630    | 1,600    | 0.335 * | E-W(2): 0.366 *  |
|            | TH   | 2.00  | 570    | 3,200    | 0.178   |                  |
|            | LT   | 2.00  | 220    | 2,880    | 0.076   | V/C: 0.828       |
| Northbound | RT   | 1.00  | 160    | 1,600    | 0.000   | Lost Time: 0.100 |
|            | TH   | 2.00  | 1,290  | 3,200    | 0.403 * | ITS: 0.000       |
|            | LT   | 1.00  | 10     | 1,600    | 0.006   |                  |
| Eastbound  | RT   | 0.00  | 60     | 0        | 0.000   | ICU: 0.928       |
|            | TH   | 2.00  | 330    | 3,200    | 0.122   |                  |
|            | LT   | 1.00  | 50     | 1,600    | 0.031 * | LOS: E           |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS     |
|------------|------|-------|--------|----------|---------|------------------|
| Southbound | RT   | 0.00  | 140    | 0        | 0.000   | N-S(1): 0.510    |
|            | TH   | 2.00  | 1,710  | 3,200    | 0.578 * | N-S(2): 0.591 *  |
|            | LT   | 2.00  | 650    | 2,880    | 0.226   | E-W(1): 0.278 *  |
| Westbound  | RT   | 1.00  | 340    | 1,600    | 0.000   | E-W(2): 0.160    |
|            | TH   | 2.00  | 470    | 3,200    | 0.147   |                  |
|            | LT   | 2.00  | 250    | 2,880    | 0.087 * | V/C: 0.869       |
| Northbound | RT   | 1.00  | 200    | 1,600    | 0.000   | Lost Time: 0.100 |
|            | TH   | 2.00  | 910    | 3,200    | 0.284   | ITS: 0.000       |
|            | LT   | 1.00  | 20     | 1,600    | 0.013 * |                  |
| Eastbound  | RT   | 0.00  | 20     | 0        | 0.000   | ICU: 0.969       |
|            | TH   | 2.00  | 590    | 3,200    | 0.191 * |                  |
|            | LT   | 1.00  | 20     | 1,600    | 0.013   | LOS: E           |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 4 Pacific Coast Highway &amp; Aviation Boulevard</b><br><b>Description: Future (2040) No Project</b> |          |       |        |          |         |                             |
|--|----------|-------|--------|----------|---------|-----------------------------|
| <b>Date/Time: AM PEAK HOUR</b>   |          |       |        |          |         |                             |
| Thru Lane:   | 1600 vph |       |        |          |         | N-S Split Phase : N         |
| Left Lane:   | 1600 vph |       |        |          |         | E-W Split Phase : N         |
| Double Lt Penalty:   | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10 |
| ITS:   | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3   |
| OLA Movements :  |          |       |        |          |         |                             |
| FF Movements:  | NBR, WBR |       |        |          |         |                             |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS                |
| Southbound   | RT       | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.725 *             |
|  | TH       | 2.00  | 570    | 3,200    | 0.178   | N-S(2): 0.184               |
|  | LT       | 1.00  | 310    | 1,600    | 0.194 * | E-W(1): 0.162 *             |
| Westbound  | RT       | 1.00  | 150    | 1,600    | 0.000   | E-W(2): 0.141               |
|  | TH       | 0.04  | 10     | 71       | 0.141   |                             |
|  | LT       | 1.96  | 440    | 2,816    | 0.156 * | V/C: 0.887                  |
| Northbound   | RT       | 1.00  | 450    | 1,600    | 0.000   | Lost Time: 0.100            |
|  | TH       | 2.00  | 1,700  | 3,200    | 0.531 * | ITS: 0.000                  |
|  | LT       | 1.00  | 10     | 1,600    | 0.006   |                             |
| Eastbound  | RT       | 1.00  | 10     | 1,600    | 0.006 * | ICU: 0.987                  |
|  | TH       | 0.00  | 0      | 0        | 0.000   |                             |
|  | LT       | 0.00  | 0      | 0        | 0.000   | LOS: E                      |
| <b>Date/Time: PM PEAK HOUR</b>   |          |       |        |          |         |                             |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS                |
| Southbound   | RT       | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.422               |
|  | TH       | 2.00  | 1,500  | 3,200    | 0.469 * | N-S(2): 0.482 *             |
|  | LT       | 1.00  | 220    | 1,600    | 0.138   | E-W(1): 0.180 *             |
| Westbound  | RT       | 1.00  | 330    | 1,600    | 0.000   | E-W(2): 0.156               |
|  | TH       | 0.04  | 10     | 64       | 0.156   |                             |
|  | LT       | 1.96  | 490    | 2,822    | 0.174 * | V/C: 0.662                  |
| Northbound   | RT       | 1.00  | 390    | 1,600    | 0.000   | Lost Time: 0.100            |
|  | TH       | 2.00  | 910    | 3,200    | 0.284   | ITS: 0.000                  |
|  | LT       | 1.00  | 20     | 1,600    | 0.013 * |                             |
| Eastbound  | RT       | 1.00  | 10     | 1,600    | 0.006 * | ICU: 0.762                  |
|  | TH       | 0.00  | 0      | 0        | 0.000   |                             |
|  | LT       | 0.00  | 0      | 0        | 0.000   | LOS: C                      |

\* - Denotes critical movement

|                       |  |                          |    |
|-----------------------|--|--------------------------|----|
| <b>Project Title:</b> | <b>City of Hermosa Beach General Plan Update</b> |                          |    |
| <b>Intersection:</b>  | <b>5 Pacific Coast Highway &amp; Pier Avenue</b> |                          |    |
| <b>Description:</b>   | <b>Future (2040) No Project</b>                  |                          |    |
| <b>Date/Time:</b>     | <b>AM PEAK HOUR</b>                              |                          |    |
| Thru Lane:            | 1600 vph   | N-S Split Phase :        | N  |
| Left Lane:            | 1600 vph   | E-W Split Phase :        | Y  |
| Double Lt Penalty:    | 10 %   | Lost Time (% of cycle) : | 10 |
| ITS:                  | 0 %  | V/C Round Off (decs.) :  | 3  |
| OLA Movements :       | EBR,   |                          |    |
| FF Movements:         |  |                          |    |

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 0.00  | 70     | 0        | 0.000   | N-S(1): 0.497 *<br>N-S(2): 0.285<br>E-W(1): 0.106 *<br>E-W(2): 0.000 |
|            | TH   | 2.00  | 640    | 3,200    | 0.222   |  |
|            | LT   | 1.00  | 10     | 1,600    | 0.006 * |  |
| Westbound  | RT   | 1.00  | 10     | 1,600    | 0.006 * | V/C: 0.603<br>Lost Time: 0.100<br>ITS: 0.000                         |
|            | TH   | 0.00  | 0      | 0        | 0.000   |  |
|            | LT   | 0.00  | 0      | 0        | 0.000   |  |
| Northbound | RT   | 0.00  | 10     | 0        | 0.000   | ICU: 0.703   |
|            | TH   | 2.00  | 1,560  | 3,200    | 0.491 * |  |
|            | LT   | 2.00  | 180    | 2,880    | 0.063   |  |
| Eastbound  | RT   | 1.00  | 260    | 1,600    | 0.100 * | LOS: C   |
|            | TH   | 0.00  | 0      | 0        | 0.000   |  |
|            | LT   | 2.00  | 220    | 2,880    | 0.076   |  |

|                   |                     |  |  |
|-------------------|---------------------|--|--|
| <b>Date/Time:</b> | <b>PM PEAK HOUR</b> |  |  |
|-------------------|---------------------|--|--|

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 0.00  | 160    | 0        | 0.000   | N-S(1): 0.306<br>N-S(2): 0.638 *<br>E-W(1): 0.100 *<br>E-W(2): 0.000 |
|            | TH   | 2.00  | 1,480  | 3,200    | 0.513 * |  |
|            | LT   | 1.00  | 10     | 1,600    | 0.006   |  |
| Westbound  | RT   | 1.00  | 20     | 1,600    | 0.013 * | V/C: 0.738<br>Lost Time: 0.100<br>ITS: 0.000                         |
|            | TH   | 0.00  | 0      | 0        | 0.000   |  |
|            | LT   | 0.00  | 0      | 0        | 0.000   |  |
| Northbound | RT   | 0.00  | 10     | 0        | 0.000   | ICU: 0.838   |
|            | TH   | 2.00  | 950    | 3,200    | 0.300   |  |
|            | LT   | 2.00  | 360    | 2,880    | 0.125 * |  |
| Eastbound  | RT   | 1.00  | 240    | 1,600    | 0.025   | LOS: D   |
|            | TH   | 0.00  | 0      | 0        | 0.000   |  |
|            | LT   | 2.00  | 250    | 2,880    | 0.087 * |  |

\* - Denotes critical movement



**Project Title:** City of Hermosa Beach General Plan Update  
**Intersection:** 6 Pacific Coast Highway & 2nd Street  
**Description:** Future (2040) No Project

**Date/Time:** AM PEAK HOUR

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1600 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1600 vph | E-W Split Phase :        | Y  |
| Double Lt Penalty: | 10 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS     |
|------------|------|-------|--------|----------|---------|------------------|
| Southbound | RT   | 0.00  | 30     | 0        | 0.000   | N-S(1): 0.662 *  |
|            | TH   | 2.00  | 920    | 3,200    | 0.300   | N-S(2): 0.350    |
|            | LT   | 0.00  | 10     | 1,600    | 0.006 * | E-W(1): 0.063 *  |
| Westbound  | RT   | 0.00  | 20     | 0        | 0.000   | E-W(2): 0.000    |
|            | TH   | 1.00  | 10     | 1,600    | 0.025 * | V/C: 0.725       |
|            | LT   | 0.00  | 10     | 1,600    | 0.006   | Lost Time: 0.100 |
| Northbound | RT   | 0.00  | 10     | 0        | 0.000   | ITS: 0.000       |
|            | TH   | 2.00  | 2,090  | 3,200    | 0.656 * | ICU: 0.825       |
|            | LT   | 1.00  | 80     | 1,600    | 0.050   | LOS: D           |
| Eastbound  | RT   | 0.00  | 30     | 0        | 0.000   |                  |
|            | TH   | 1.00  | 10     | 1,600    | 0.038 * |                  |
|            | LT   | 0.00  | 20     | 1,600    | 0.013   |                  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS     |
|------------|------|-------|--------|----------|---------|------------------|
| Southbound | RT   | 0.00  | 40     | 0        | 0.000   | N-S(1): 0.387    |
|            | TH   | 2.00  | 1,750  | 3,200    | 0.563 * | N-S(2): 0.601 *  |
|            | LT   | 0.00  | 10     | 1,600    | 0.006   | E-W(1): 0.106 *  |
| Westbound  | RT   | 0.00  | 20     | 0        | 0.000   | E-W(2): 0.000    |
|            | TH   | 1.00  | 10     | 1,600    | 0.031 * | V/C: 0.707       |
|            | LT   | 0.00  | 20     | 1,600    | 0.013   | Lost Time: 0.100 |
| Northbound | RT   | 0.00  | 10     | 0        | 0.000   | ITS: 0.000       |
|            | TH   | 2.00  | 1,210  | 3,200    | 0.381   | ICU: 0.807       |
|            | LT   | 1.00  | 60     | 1,600    | 0.038 * | LOS: D           |
| Eastbound  | RT   | 0.00  | 30     | 0        | 0.000   |                  |
|            | TH   | 1.00  | 10     | 1,600    | 0.075 * |                  |
|            | LT   | 0.00  | 80     | 1,600    | 0.050   |                  |

\* - Denotes critical movement

|                       |  |                          |    |
|-----------------------|--|--------------------------|----|
| <b>Project Title:</b> | <b>City of Hermosa Beach General Plan Update</b> |                          |    |
| <b>Intersection:</b>  | <b>7 Pacific Coast Highway &amp; 16th Street</b> |                          |    |
| <b>Description:</b>   | <b>Future (2040) No Project</b>                  |                          |    |
| <b>Date/Time:</b>     | <b>AM PEAK HOUR</b>                              |                          |    |
| Thru Lane:            | 1600 vph   | N-S Split Phase :        | N  |
| Left Lane:            | 1600 vph   | E-W Split Phase :        | Y  |
| Double Lt Penalty:    | 10 %   | Lost Time (% of cycle) : | 10 |
| ITS:                  | 0 %  | V/C Round Off (decs.) :  | 3  |
| OLA Movements :       |  |                          |    |
| FF Movements:         |  |                          |    |

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS     |
|------------|------|-------|--------|----------|---------|------------------|
| Southbound | RT   | 1.00  | 150    | 1,600    | 0.069   | N-S(1): 0.435 *  |
|            | TH   | 2.00  | 870    | 3,200    | 0.272   | N-S(2): 0.322    |
|            | LT   | 1.00  | 20     | 1,600    | 0.013 * | E-W(1): 0.088 *  |
| Westbound  | RT   | 0.50  | 30     | 800      | 0.031   | E-W(2): 0.000    |
|            | TH   | 0.00  | 0      | 0        | 0.000   |                  |
|            | LT   | 0.50  | 30     | 800      | 0.038 * | V/C: 0.523       |
| Northbound | RT   | 0.00  | 50     | 0        | 0.000   | Lost Time: 0.100 |
|            | TH   | 2.00  | 1,300  | 3,200    | 0.422 * | ITS: 0.000       |
|            | LT   | 1.00  | 80     | 1,600    | 0.050   |                  |
| Eastbound  | RT   | 1.00  | 70     | 1,600    | 0.019   | ICU: 0.623       |
|            | TH   | 0.00  | 0      | 0        | 0.000   |                  |
|            | LT   | 1.00  | 80     | 1,600    | 0.050 * | LOS: B           |

|                   |                     |  |  |
|-------------------|---------------------|--|--|
| <b>Date/Time:</b> | <b>PM PEAK HOUR</b> |  |  |
|-------------------|---------------------|--|--|

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS     |
|------------|------|-------|--------|----------|---------|------------------|
| Southbound | RT   | 1.00  | 210    | 1,600    | 0.094   | N-S(1): 0.340    |
|            | TH   | 2.00  | 1,560  | 3,200    | 0.488 * | N-S(2): 0.557 *  |
|            | LT   | 1.00  | 10     | 1,600    | 0.006   | E-W(1): 0.094 *  |
| Westbound  | RT   | 0.33  | 10     | 533      | 0.016   | E-W(2): 0.000    |
|            | TH   | 0.00  | 0      | 0        | 0.000   |                  |
|            | LT   | 0.67  | 20     | 1,067    | 0.019 * | V/C: 0.651       |
| Northbound | RT   | 0.00  | 30     | 0        | 0.000   | Lost Time: 0.100 |
|            | TH   | 2.00  | 1,040  | 3,200    | 0.334   | ITS: 0.000       |
|            | LT   | 1.00  | 110    | 1,600    | 0.069 * |                  |
| Eastbound  | RT   | 1.00  | 90     | 1,600    | 0.022   | ICU: 0.751       |
|            | TH   | 0.00  | 0      | 0        | 0.000   |                  |
|            | LT   | 1.00  | 120    | 1,600    | 0.075 * | LOS: C           |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 8 Pacific Coast Highway &amp; 21st Street</b><br><b>Description: Future (2040) No Project</b> |          |       |        |          |         |  |
|---|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>  |          |       |        |          |         |  |
| Thru Lane:  | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:  | 1600 vph |       |        |          |         | E-W Split Phase : N  |
| Double Lt Penalty:  | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:  | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :   |          |       |        |          |         |  |
| FF Movements:   |          |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 0.00  | 40     | 0        | 0.000   | N-S(1): 0.419 *<br>N-S(2): 0.341<br>E-W(1): 0.163 *<br>E-W(2): 0.163 * |
|   | TH       | 2.00  | 930    | 3,200    | 0.303   |  |
|   | LT       | 1.00  | 30     | 1,600    | 0.019 * |  |
| Westbound   | RT       | 0.00  | 40     | 0        | 0.000   | V/C: 0.582<br>Lost Time: 0.100<br>ITS: 0.000                           |
|   | TH       | 1.00  | 80     | 1,600    | 0.113 * |  |
|   | LT       | 0.00  | 60     | 1,600    | 0.038 * |  |
| Northbound  | RT       | 0.00  | 40     | 0        | 0.000   | ICU: 0.682   |
|   | TH       | 2.00  | 1,240  | 3,200    | 0.400 * |  |
|   | LT       | 1.00  | 60     | 1,600    | 0.038   |  |
| Eastbound   | RT       | 0.00  | 20     | 0        | 0.000   | LOS: B   |
|   | TH       | 1.00  | 100    | 1,600    | 0.125 * |  |
|   | LT       | 0.00  | 80     | 1,600    | 0.050 * |  |
| <b>Date/Time: PM PEAK HOUR</b>  |          |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 0.00  | 90     | 0        | 0.000   | N-S(1): 0.397<br>N-S(2): 0.640 *<br>E-W(1): 0.069<br>E-W(2): 0.082 *   |
|   | TH       | 2.00  | 1,860  | 3,200    | 0.609 * |  |
|   | LT       | 1.00  | 80     | 1,600    | 0.050   |  |
| Westbound   | RT       | 0.00  | 30     | 0        | 0.000   | V/C: 0.722<br>Lost Time: 0.100<br>ITS: 0.000                           |
|   | TH       | 1.00  | 50     | 1,600    | 0.069 * |  |
|   | LT       | 0.00  | 30     | 1,600    | 0.019   |  |
| Northbound  | RT       | 0.00  | 20     | 0        | 0.000   | ICU: 0.822   |
|   | TH       | 2.00  | 1,090  | 3,200    | 0.347   |  |
|   | LT       | 1.00  | 50     | 1,600    | 0.031 * |  |
| Eastbound   | RT       | 0.00  | 20     | 0        | 0.000   | LOS: D   |
|   | TH       | 1.00  | 40     | 1,600    | 0.050   |  |
|   | LT       | 0.00  | 20     | 1,600    | 0.013 * |  |

\* - Denotes critical movement

**Project Title:** City of Hermosa Beach General Plan Update  
**Intersection:** 9 Prospect Avenue & Artesia Boulevard  
**Description:** Future (2040) No Project

**Date/Time:** AM PEAK HOUR

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1600 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1600 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 10 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 0.00  | 40     | 0        | 0.000   | N-S(1): 0.325 *<br>N-S(2): 0.282<br>E-W(1): 0.319<br>E-W(2): 0.419 * |
|            | TH   | 1.00  | 40     | 1,600    | 0.069   |  |
|            | LT   | 0.00  | 30     | 1,600    | 0.019 * |  |
| Westbound  | RT   | 0.00  | 110    | 0        | 0.000   | V/C: 0.744<br>Lost Time: 0.100<br>ITS: 0.000                         |
|            | TH   | 2.00  | 1,110  | 3,200    | 0.381 * |  |
|            | LT   | 1.00  | 140    | 1,600    | 0.088   |  |
| Northbound | RT   | 1.00  | 350    | 1,600    | 0.175   | ICU: 0.844   |
|            | TH   | 1.00  | 150    | 1,600    | 0.306 * |  |
|            | LT   | 0.00  | 340    | 1,600    | 0.213   |  |
| Eastbound  | RT   | 0.00  | 90     | 0        | 0.000   | LOS: D   |
|            | TH   | 2.00  | 650    | 3,200    | 0.231   |  |
|            | LT   | 1.00  | 60     | 1,600    | 0.038 * |  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 0.00  | 40     | 0        | 0.000   | N-S(1): 0.175<br>N-S(2): 0.237 *<br>E-W(1): 0.519 *<br>E-W(2): 0.309 |
|            | TH   | 1.00  | 100    | 1,600    | 0.131 * |  |
|            | LT   | 0.00  | 70     | 1,600    | 0.044   |  |
| Westbound  | RT   | 0.00  | 30     | 0        | 0.000   | V/C: 0.756<br>Lost Time: 0.100<br>ITS: 0.000                         |
|            | TH   | 2.00  | 880    | 3,200    | 0.284   |  |
|            | LT   | 1.00  | 180    | 1,600    | 0.113 * |  |
| Northbound | RT   | 1.00  | 160    | 1,600    | 0.044   | ICU: 0.856   |
|            | TH   | 1.00  | 40     | 1,600    | 0.131   |  |
|            | LT   | 0.00  | 170    | 1,600    | 0.106 * |  |
| Eastbound  | RT   | 0.00  | 130    | 0        | 0.000   | LOS: D   |
|            | TH   | 2.00  | 1,170  | 3,200    | 0.406 * |  |
|            | LT   | 1.00  | 40     | 1,600    | 0.025   |  |

\* - Denotes critical movement

|                       |  |                          |    |
|-----------------------|--|--------------------------|----|
| <b>Project Title:</b> | <b>City of Hermosa Beach General Plan Update</b>   |                          |    |
| <b>Intersection:</b>  | <b>10 Prospect Avenue &amp; Aviation Boulevard</b> |                          |    |
| <b>Description:</b>   | <b>Future (2040) No Project</b>                    |                          |    |
| <b>Date/Time:</b>     | <b>AM PEAK HOUR</b>                                |                          |    |
| Thru Lane:            | 1600 vph   | N-S Split Phase :        | N  |
| Left Lane:            | 1600 vph   | E-W Split Phase :        | N  |
| Double Lt Penalty:    | 10 %   | Lost Time (% of cycle) : | 10 |
| ITS:                  | 0 %  | V/C Round Off (decs.) :  | 3  |
| OLA Movements :       |  |                          |    |
| FF Movements:         | EBR,   |                          |    |

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 1.00  | 80     | 1,600    | 0.025   | N-S(1): 0.338 *<br>N-S(2): 0.138<br>E-W(1): 0.347 *<br>E-W(2): 0.278 |
|            | TH   | 1.00  | 120    | 1,600    | 0.075   |  |
|            | LT   | 1.00  | 60     | 1,600    | 0.038 * |  |
| Westbound  | RT   | 0.00  | 50     | 0        | 0.000   | V/C: 0.685<br>Lost Time: 0.100<br>ITS: 0.000                         |
|            | TH   | 2.00  | 680    | 3,200    | 0.228   |  |
|            | LT   | 1.00  | 200    | 1,600    | 0.125 * |  |
| Northbound | RT   | 1.00  | 370    | 1,600    | 0.169   | ICU: 0.785   |
|            | TH   | 1.00  | 480    | 1,600    | 0.300 * |  |
|            | LT   | 1.00  | 100    | 1,600    | 0.063   |  |
| Eastbound  | RT   | 1.00  | 40     | 1,600    | 0.000   | LOS: C   |
|            | TH   | 2.00  | 710    | 3,200    | 0.222 * |  |
|            | LT   | 1.00  | 80     | 1,600    | 0.050   |  |

|                   |                     |  |  |
|-------------------|---------------------|--|--|
| <b>Date/Time:</b> | <b>PM PEAK HOUR</b> |  |  |
|-------------------|---------------------|--|--|

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 1.00  | 70     | 1,600    | 0.031   | N-S(1): 0.238<br>N-S(2): 0.363 *<br>E-W(1): 0.375 *<br>E-W(2): 0.297 |
|            | TH   | 1.00  | 520    | 1,600    | 0.325 * |  |
|            | LT   | 1.00  | 120    | 1,600    | 0.075   |  |
| Westbound  | RT   | 0.00  | 60     | 0        | 0.000   | V/C: 0.738<br>Lost Time: 0.100<br>ITS: 0.000                         |
|            | TH   | 2.00  | 810    | 3,200    | 0.272   |  |
|            | LT   | 1.00  | 310    | 1,600    | 0.194 * |  |
| Northbound | RT   | 1.00  | 220    | 1,600    | 0.041   | ICU: 0.838   |
|            | TH   | 1.00  | 260    | 1,600    | 0.163   |  |
|            | LT   | 1.00  | 60     | 1,600    | 0.038 * |  |
| Eastbound  | RT   | 1.00  | 70     | 1,600    | 0.000   | LOS: D   |
|            | TH   | 2.00  | 580    | 3,200    | 0.181 * |  |
|            | LT   | 1.00  | 40     | 1,600    | 0.025   |  |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 11 Prospect Avenue &amp; Anita Street</b><br><b>Description: Future (2040) No Project</b> |          |       |        |          |         |  |
|---|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>  |          |       |        |          |         |  |
| Thru Lane:  | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:  | 1600 vph |       |        |          |         | E-W Split Phase : N  |
| Double Lt Penalty:  | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:  | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :   |          |       |        |          |         |  |
| FF Movements:   |          |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 0.00  | 40     | 0        | 0.000   | N-S(1): 0.375 *<br>N-S(2): 0.247<br>E-W(1): 0.250<br>E-W(2): 0.294 * |
|   | TH       | 2.00  | 350    | 3,200    | 0.122   |  |
|   | LT       | 1.00  | 50     | 1,600    | 0.031 * |  |
| Westbound   | RT       | 0.00  | 160    | 0        | 0.000   | V/C: 0.669<br>Lost Time: 0.100<br>ITS: 0.000                         |
|   | TH       | 2.00  | 620    | 3,200    | 0.244 * |  |
|   | LT       | 1.00  | 90     | 1,600    | 0.056   |  |
| Northbound  | RT       | 1.00  | 190    | 1,600    | 0.091   | ICU: 0.769   |
|   | TH       | 1.00  | 550    | 1,600    | 0.344 * |  |
|   | LT       | 1.00  | 200    | 1,600    | 0.125   |  |
| Eastbound   | RT       | 0.00  | 80     | 0        | 0.000   | LOS: C   |
|   | TH       | 2.00  | 540    | 3,200    | 0.194   |  |
|   | LT       | 1.00  | 80     | 1,600    | 0.050 * |  |
| <b>Date/Time: PM PEAK HOUR</b>  |          |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 0.00  | 60     | 0        | 0.000   | N-S(1): 0.375 *<br>N-S(2): 0.266<br>E-W(1): 0.219<br>E-W(2): 0.275 * |
|   | TH       | 2.00  | 590    | 3,200    | 0.203   |  |
|   | LT       | 1.00  | 170    | 1,600    | 0.106 * |  |
| Westbound   | RT       | 0.00  | 130    | 0        | 0.000   | V/C: 0.650<br>Lost Time: 0.100<br>ITS: 0.000                         |
|   | TH       | 2.00  | 670    | 3,200    | 0.250 * |  |
|   | LT       | 1.00  | 110    | 1,600    | 0.069   |  |
| Northbound  | RT       | 1.00  | 90     | 1,600    | 0.022   | ICU: 0.750   |
|   | TH       | 1.00  | 430    | 1,600    | 0.269 * |  |
|   | LT       | 1.00  | 100    | 1,600    | 0.063   |  |
| Eastbound   | RT       | 0.00  | 90     | 0        | 0.000   | LOS: C   |
|   | TH       | 2.00  | 390    | 3,200    | 0.150   |  |
|   | LT       | 1.00  | 40     | 1,600    | 0.025 * |  |

\* - Denotes critical movement

## **UNSIGNALIZED INTERSECTIONS**

| Intersection              |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Intersection Delay, s/veh | 45.1 |      |      |      |      |      |      |      |      |      |      |      |
| Intersection LOS          | E    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                  | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
| Vol, veh/h                | 0    | 450  | 160  | 10   | 0    | 40   | 130  | 90   | 0    | 10   | 300  | 90   |
| Peak Hour Factor          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                 | 0    | 450  | 160  | 10   | 0    | 40   | 130  | 90   | 0    | 10   | 300  | 90   |
| Number of Lanes           | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB | NB   |
|----------------------------|------|----|------|
| Opposing Approach          | WB   | EB | SB   |
| Opposing Lanes             | 1    | 1  | 2    |
| Conflicting Approach Left  | SB   | NB | EB   |
| Conflicting Lanes Left     | 2    | 1  | 1    |
| Conflicting Approach Right | NB   | SB | WB   |
| Conflicting Lanes Right    | 1    | 2  | 1    |
| HCM Control Delay          | 70.1 | 22 | 42.4 |
| HCM LOS                    | F    | C  | E    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|
| Vol Left, %            | 3%    | 73%   | 15%   | 100%  | 0%    |
| Vol Thru, %            | 75%   | 26%   | 50%   | 0%    | 42%   |
| Vol Right, %           | 23%   | 2%    | 35%   | 0%    | 58%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 400   | 620   | 260   | 80    | 240   |
| LT Vol                 | 300   | 160   | 130   | 0     | 100   |
| Through Vol            | 90    | 10    | 90    | 0     | 140   |
| RT Vol                 | 10    | 450   | 40    | 80    | 0     |
| Lane Flow Rate         | 400   | 620   | 260   | 80    | 240   |
| Geometry Grp           | 5     | 2     | 2     | 7     | 7     |
| Degree of Util (X)     | 0.859 | 1     | 0.585 | 0.201 | 0.544 |
| Departure Headway (Hd) | 7.735 | 7.715 | 8.098 | 9.064 | 8.156 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 468   | 471   | 445   | 396   | 442   |
| Service Time           | 5.785 | 5.801 | 6.166 | 6.821 | 5.913 |
| HCM Lane V/C Ratio     | 0.855 | 1.316 | 0.584 | 0.202 | 0.543 |
| HCM Control Delay      | 42.4  | 70.1  | 22    | 14.1  | 20.3  |
| HCM Lane LOS           | E     | F     | C     | B     | C     |
| HCM 95th-tile Q        | 8.8   | 13.2  | 3.6   | 0.7   | 3.2   |



**Intersection**

Intersection Delay, s/veh  
 Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 80   | 100  | 140  |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 80   | 100  | 140  |
| Number of Lanes   | 0    | 1    | 1    | 0    |

**Approach** SB

|                            |      |
|----------------------------|------|
| Opposing Approach          | NB   |
| Opposing Lanes             | 1    |
| Conflicting Approach Left  | WB   |
| Conflicting Lanes Left     | 1    |
| Conflicting Approach Right | EB   |
| Conflicting Lanes Right    | 1    |
| HCM Control Delay          | 18.8 |
| HCM LOS                    | C    |

**Lane**

| Intersection              |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Intersection Delay, s/veh | 38.6 |      |      |      |      |      |      |      |      |      |      |      |
| Intersection LOS          | E    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                  | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
| Vol, veh/h                | 0    | 240  | 100  | 10   | 0    | 70   | 150  | 90   | 0    | 10   | 100  | 50   |
| Peak Hour Factor          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                 | 0    | 240  | 100  | 10   | 0    | 70   | 150  | 90   | 0    | 10   | 100  | 50   |
| Number of Lanes           | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   |
|----------------------------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   |
| Opposing Lanes             | 1    | 1    | 2    |
| Conflicting Approach Left  | SB   | NB   | EB   |
| Conflicting Lanes Left     | 2    | 1    | 1    |
| Conflicting Approach Right | NB   | SB   | WB   |
| Conflicting Lanes Right    | 1    | 2    | 1    |
| HCM Control Delay          | 28.5 | 22.7 | 15.4 |
| HCM LOS                    | D    | C    | C    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|
| Vol Left, %            | 6%    | 69%   | 23%   | 100%  | 0%    |
| Vol Thru, %            | 62%   | 29%   | 48%   | 0%    | 38%   |
| Vol Right, %           | 31%   | 3%    | 29%   | 0%    | 62%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 160   | 350   | 310   | 80    | 520   |
| LT Vol                 | 100   | 100   | 150   | 0     | 200   |
| Through Vol            | 50    | 10    | 90    | 0     | 320   |
| RT Vol                 | 10    | 240   | 70    | 80    | 0     |
| Lane Flow Rate         | 160   | 350   | 310   | 80    | 520   |
| Geometry Grp           | 5     | 2     | 2     | 7     | 7     |
| Degree of Util (X)     | 0.359 | 0.735 | 0.643 | 0.177 | 1     |
| Departure Headway (Hd) | 8.072 | 7.562 | 7.468 | 7.966 | 7.009 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 453   | 487   | 493   | 450   | 515   |
| Service Time           | 5.993 | 5.475 | 5.385 | 5.722 | 4.765 |
| HCM Lane V/C Ratio     | 0.353 | 0.719 | 0.629 | 0.178 | 1.01  |
| HCM Control Delay      | 15.4  | 28.5  | 22.7  | 12.4  | 66.1  |
| HCM Lane LOS           | C     | D     | C     | B     | F     |
| HCM 95th-tile Q        | 1.6   | 6     | 4.5   | 0.6   | 13.8  |

**Intersection**

Intersection Delay, s/veh

Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 80   | 200  | 320  |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 80   | 200  | 320  |
| Number of Lanes   | 0    | 1    | 1    | 0    |

**Approach SB**

|                            |      |
|----------------------------|------|
| Opposing Approach          | NB   |
| Opposing Lanes             | 1    |
| Conflicting Approach Left  | WB   |
| Conflicting Lanes Left     | 1    |
| Conflicting Approach Right | EB   |
| Conflicting Lanes Right    | 1    |
| HCM Control Delay          | 58.9 |
| HCM LOS                    | F    |

**Lane**

| Intersection              |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Intersection Delay, s/veh | 29.9 |      |      |      |      |      |      |      |      |      |      |      |
| Intersection LOS          | D    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                  | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
| Vol, veh/h                | 0    | 60   | 260  | 40   | 0    | 160  | 280  | 90   | 0    | 20   | 200  | 130  |
| Peak Hour Factor          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                 | 0    | 60   | 260  | 40   | 0    | 160  | 280  | 90   | 0    | 20   | 200  | 130  |
| Number of Lanes           | 0    | 0    | 1    | 1    | 0    | 1    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   |
|----------------------------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   |
| Opposing Lanes             | 2    | 2    | 1    |
| Conflicting Approach Left  | SB   | NB   | EB   |
| Conflicting Lanes Left     | 1    | 1    | 2    |
| Conflicting Approach Right | NB   | SB   | WB   |
| Conflicting Lanes Right    | 1    | 1    | 2    |
| HCM Control Delay          | 30.6 | 31.5 | 31.4 |
| HCM LOS                    | D    | D    | D    |

| Lane                   | NBLn1 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 6%    | 19%   | 0%    | 100%  | 0%    | 30%   |
| Vol Thru, %            | 57%   | 81%   | 0%    | 0%    | 76%   | 56%   |
| Vol Right, %           | 37%   | 0%    | 100%  | 0%    | 24%   | 15%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 350   | 320   | 40    | 160   | 370   | 270   |
| LT Vol                 | 200   | 260   | 0     | 0     | 280   | 150   |
| Through Vol            | 130   | 0     | 40    | 0     | 90    | 40    |
| RT Vol                 | 20    | 60    | 0     | 160   | 0     | 80    |
| Lane Flow Rate         | 350   | 320   | 40    | 160   | 370   | 270   |
| Geometry Grp           | 2     | 7     | 7     | 7     | 7     | 2     |
| Degree of Util (X)     | 0.756 | 0.752 | 0.085 | 0.384 | 0.817 | 0.619 |
| Departure Headway (Hd) | 7.772 | 8.462 | 7.636 | 8.645 | 7.949 | 8.257 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 462   | 426   | 467   | 414   | 455   | 435   |
| Service Time           | 5.861 | 6.251 | 5.425 | 6.436 | 5.739 | 6.357 |
| HCM Lane V/C Ratio     | 0.758 | 0.751 | 0.086 | 0.386 | 0.813 | 0.621 |
| HCM Control Delay      | 31.4  | 33    | 11.1  | 16.8  | 37.8  | 24    |
| HCM Lane LOS           | D     | D     | B     | C     | E     | C     |
| HCM 95th-tile Q        | 6.4   | 6.2   | 0.3   | 1.8   | 7.7   | 4.1   |

**Intersection**

Intersection Delay, s/veh  
 Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 80   | 150  | 40   |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 80   | 150  | 40   |
| Number of Lanes   | 0    | 0    | 1    | 0    |

**Approach** SB

|                            |    |
|----------------------------|----|
| Opposing Approach          | NB |
| Opposing Lanes             | 1  |
| Conflicting Approach Left  | WB |
| Conflicting Lanes Left     | 2  |
| Conflicting Approach Right | EB |
| Conflicting Lanes Right    | 2  |
| HCM Control Delay          | 24 |
| HCM LOS                    | C  |

**Lane**

| Intersection              |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Intersection Delay, s/veh | 39.7 |      |      |      |      |      |      |      |      |      |      |      |
| Intersection LOS          | E    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                  | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
| Vol, veh/h                | 0    | 30   | 260  | 30   | 0    | 130  | 300  | 60   | 0    | 20   | 80   | 90   |
| Peak Hour Factor          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                 | 0    | 30   | 260  | 30   | 0    | 130  | 300  | 60   | 0    | 20   | 80   | 90   |
| Number of Lanes           | 0    | 0    | 1    | 1    | 0    | 1    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   |
|----------------------------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   |
| Opposing Lanes             | 2    | 2    | 1    |
| Conflicting Approach Left  | SB   | NB   | EB   |
| Conflicting Lanes Left     | 1    | 1    | 2    |
| Conflicting Approach Right | NB   | SB   | WB   |
| Conflicting Lanes Right    | 1    | 1    | 2    |
| HCM Control Delay          | 26.5 | 31.1 | 17.9 |
| HCM LOS                    | D    | D    | C    |

| Lane                   | NBLn1 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 11%   | 10%   | 0%    | 100%  | 0%    | 19%   |
| Vol Thru, %            | 42%   | 90%   | 0%    | 0%    | 83%   | 73%   |
| Vol Right, %           | 47%   | 0%    | 100%  | 0%    | 17%   | 8%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 190   | 290   | 30    | 130   | 360   | 480   |
| LT Vol                 | 80    | 260   | 0     | 0     | 300   | 350   |
| Through Vol            | 90    | 0     | 30    | 0     | 60    | 40    |
| RT Vol                 | 20    | 30    | 0     | 130   | 0     | 90    |
| Lane Flow Rate         | 190   | 290   | 30    | 130   | 360   | 480   |
| Geometry Grp           | 2     | 7     | 7     | 7     | 7     | 2     |
| Degree of Util (X)     | 0.444 | 0.686 | 0.064 | 0.314 | 0.805 | 0.989 |
| Departure Headway (Hd) | 8.405 | 8.514 | 7.731 | 8.688 | 8.048 | 7.418 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 431   | 423   | 461   | 412   | 446   | 485   |
| Service Time           | 6.405 | 6.31  | 5.526 | 6.482 | 5.841 | 5.502 |
| HCM Lane V/C Ratio     | 0.441 | 0.686 | 0.065 | 0.316 | 0.807 | 0.99  |
| HCM Control Delay      | 17.9  | 28.1  | 11.1  | 15.5  | 36.8  | 65.9  |
| HCM Lane LOS           | C     | D     | B     | C     | E     | F     |
| HCM 95th-tile Q        | 2.2   | 5     | 0.2   | 1.3   | 7.4   | 13    |

**Intersection**

Intersection Delay, s/veh

Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 90   | 350  | 40   |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 90   | 350  | 40   |
| Number of Lanes   | 0    | 0    | 1    | 0    |

**Approach SB**

|                            |      |
|----------------------------|------|
| Opposing Approach          | NB   |
| Opposing Lanes             | 1    |
| Conflicting Approach Left  | WB   |
| Conflicting Lanes Left     | 2    |
| Conflicting Approach Right | EB   |
| Conflicting Lanes Right    | 2    |
| HCM Control Delay          | 65.9 |
| HCM LOS                    | F    |

**Lane**

## **CALTRANS ANALYSIS**



# HCM Signalized Intersection Capacity Analysis

## 3: Pacific Coast Hwy & Artesia Blvd (AM)

10/19/2015



| Movement               | EBL   | EBT  | EBR  | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL  | SBT   | SBR  |
|------------------------|-------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|
| Lane Configurations    |       |      |      |       |       |       |       |       |       |      |       |      |
| Volume (vph)           | 50    | 330  | 60   | 220   | 570   | 630   | 10    | 1290  | 160   | 170  | 720   | 90   |
| Ideal Flow (vphpl)     | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Total Lost time (s)    | 4.0   | 4.0  |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   |      |
| Lane Util. Factor      | 1.00  | 0.95 |      | 0.97  | 0.95  | 1.00  | 1.00  | 0.95  | 1.00  | 0.97 | 0.95  |      |
| Frt                    | 1.00  | 0.98 |      | 1.00  | 1.00  | 0.85  | 1.00  | 1.00  | 0.85  | 1.00 | 0.98  |      |
| Flt Protected          | 0.95  | 1.00 |      | 0.95  | 1.00  | 1.00  | 0.95  | 1.00  | 1.00  | 0.95 | 1.00  |      |
| Satd. Flow (prot)      | 1770  | 3458 |      | 3433  | 3539  | 1583  | 1770  | 3539  | 1583  | 3433 | 3480  |      |
| Flt Permitted          | 0.95  | 1.00 |      | 0.95  | 1.00  | 1.00  | 0.95  | 1.00  | 1.00  | 0.95 | 1.00  |      |
| Satd. Flow (perm)      | 1770  | 3458 |      | 3433  | 3539  | 1583  | 1770  | 3539  | 1583  | 3433 | 3480  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 50    | 330  | 60   | 220   | 570   | 630   | 10    | 1290  | 160   | 170  | 720   | 90   |
| RTOR Reduction (vph)   | 0     | 8    | 0    | 0     | 0     | 69    | 0     | 0     | 45    | 0    | 4     | 0    |
| Lane Group Flow (vph)  | 50    | 382  | 0    | 220   | 570   | 561   | 10    | 1290  | 115   | 170  | 806   | 0    |
| Turn Type              | Prot  | NA   |      | Prot  | NA    | pm+ov | Prot  | NA    | Perm  | Prot | NA    |      |
| Protected Phases       | 7     | 4    |      | 3     | 8     | 1     | 5     | 2     |       | 1    | 6     |      |
| Permitted Phases       |       |      |      |       |       | 8     |       |       | 2     |      |       |      |
| Actuated Green, G (s)  | 9.6   | 28.1 |      | 18.1  | 36.6  | 65.1  | 3.2   | 109.3 | 109.3 | 28.5 | 134.6 |      |
| Effective Green, g (s) | 9.6   | 28.1 |      | 18.1  | 36.6  | 65.1  | 3.2   | 109.3 | 109.3 | 28.5 | 134.6 |      |
| Actuated g/C Ratio     | 0.05  | 0.14 |      | 0.09  | 0.18  | 0.33  | 0.02  | 0.55  | 0.55  | 0.14 | 0.67  |      |
| Clearance Time (s)     | 4.0   | 4.0  |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   |      |
| Vehicle Extension (s)  | 3.0   | 3.0  |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |      |
| Lane Grp Cap (vph)     | 84    | 485  |      | 310   | 647   | 515   | 28    | 1934  | 865   | 489  | 2342  |      |
| v/s Ratio Prot         | 0.03  | 0.11 |      | c0.06 | 0.16  | c0.16 | 0.01  | c0.36 |       | 0.05 | 0.23  |      |
| v/s Ratio Perm         |       |      |      |       |       | 0.20  |       |       | 0.07  |      |       |      |
| v/c Ratio              | 0.60  | 0.79 |      | 0.71  | 0.88  | 1.09  | 0.36  | 0.67  | 0.13  | 0.35 | 0.34  |      |
| Uniform Delay, d1      | 93.3  | 83.1 |      | 88.4  | 79.6  | 67.5  | 97.4  | 32.4  | 22.2  | 77.4 | 13.9  |      |
| Progression Factor     | 1.00  | 1.00 |      | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  |      |
| Incremental Delay, d2  | 10.8  | 8.3  |      | 7.3   | 13.3  | 66.2  | 7.7   | 1.8   | 0.3   | 0.4  | 0.4   |      |
| Delay (s)              | 104.1 | 91.4 |      | 95.7  | 92.9  | 133.7 | 105.0 | 34.2  | 22.5  | 77.8 | 14.3  |      |
| Level of Service       | F     | F    |      | F     | F     | F     | F     | C     | C     | E    | B     |      |
| Approach Delay (s)     |       | 92.8 |      |       | 111.4 |       |       | 33.4  |       |      | 25.3  |      |
| Approach LOS           |       | F    |      |       | F     |       |       | C     |       |      | C     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 63.4  | HCM 2000 Level of Service | E    |
| HCM 2000 Volume to Capacity ratio | 0.82  |                           |      |
| Actuated Cycle Length (s)         | 200.0 | Sum of lost time (s)      | 16.0 |
| Intersection Capacity Utilization | 88.8% | ICU Level of Service      | E    |
| Analysis Period (min)             | 15    |                           |      |

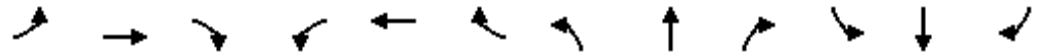
Description: PCH & Artesia Blvd

c Critical Lane Group

# HCM Signalized Intersection Capacity Analysis

## 3: Pacific Coast Hwy & Artesia Blvd (PM)

10/6/2015



| Movement                          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR  |
|-----------------------------------|-------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations               |       |       |      |       |      |       |       |       |       |       |       |      |
| Volume (vph)                      | 20    | 590   | 20   | 250   | 470  | 340   | 20    | 910   | 200   | 650   | 1710  | 140  |
| Ideal Flow (vphpl)                | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 |
| Total Lost time (s)               | 4.0   | 4.0   |      | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |      |
| Lane Util. Factor                 | 1.00  | 0.95  |      | 0.97  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  | 0.97  | 0.95  |      |
| Fr <sub>t</sub>                   | 1.00  | 1.00  |      | 1.00  | 1.00 | 0.85  | 1.00  | 1.00  | 0.85  | 1.00  | 0.99  |      |
| Fl <sub>t</sub> Protected         | 0.95  | 1.00  |      | 0.95  | 1.00 | 1.00  | 0.95  | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (prot)                 | 1770  | 3522  |      | 3433  | 3539 | 1583  | 1770  | 3539  | 1583  | 3433  | 3499  |      |
| Fl <sub>t</sub> Permitted         | 0.95  | 1.00  |      | 0.95  | 1.00 | 1.00  | 0.95  | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (perm)                 | 1770  | 3522  |      | 3433  | 3539 | 1583  | 1770  | 3539  | 1583  | 3433  | 3499  |      |
| Peak-hour factor, PHF             | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)                   | 20    | 590   | 20   | 250   | 470  | 340   | 20    | 910   | 200   | 650   | 1710  | 140  |
| RTOR Reduction (vph)              | 0     | 1     | 0    | 0     | 0    | 134   | 0     | 0     | 80    | 0     | 3     | 0    |
| Lane Group Flow (vph)             | 20    | 609   | 0    | 250   | 470  | 206   | 20    | 910   | 120   | 650   | 1847  | 0    |
| Turn Type                         | Prot  | NA    |      | Prot  | NA   | pm+ov | Prot  | NA    | Perm  | Prot  | NA    |      |
| Protected Phases                  | 7     | 4     |      | 3     | 8    | 1     | 5     | 2     |       | 1     | 6     |      |
| Permitted Phases                  |       |       |      |       |      | 8     |       |       | 2     |       |       |      |
| Actuated Green, G (s)             | 5.4   | 27.6  |      | 19.8  | 42.0 | 69.6  | 5.4   | 109.0 | 109.0 | 27.6  | 131.2 |      |
| Effective Green, g (s)            | 5.4   | 27.6  |      | 19.8  | 42.0 | 69.6  | 5.4   | 109.0 | 109.0 | 27.6  | 131.2 |      |
| Actuated g/C Ratio                | 0.03  | 0.14  |      | 0.10  | 0.21 | 0.35  | 0.03  | 0.54  | 0.54  | 0.14  | 0.66  |      |
| Clearance Time (s)                | 4.0   | 4.0   |      | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |      |
| Vehicle Extension (s)             | 3.0   | 3.0   |      | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      |
| Lane Grp Cap (vph)                | 47    | 486   |      | 339   | 743  | 550   | 47    | 1928  | 862   | 473   | 2295  |      |
| v/s Ratio Prot                    | 0.01  | c0.17 |      | c0.07 | 0.13 | 0.05  | 0.01  | c0.26 |       | c0.19 | c0.53 |      |
| v/s Ratio Perm                    |       |       |      |       |      | 0.08  |       |       | 0.08  |       |       |      |
| v/c Ratio                         | 0.43  | 1.25  |      | 0.74  | 0.63 | 0.38  | 0.43  | 0.47  | 0.14  | 1.37  | 0.80  |      |
| Uniform Delay, d <sub>1</sub>     | 95.8  | 86.2  |      | 87.6  | 72.0 | 48.9  | 95.8  | 27.9  | 22.4  | 86.2  | 25.1  |      |
| Progression Factor                | 1.00  | 1.00  |      | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |      |
| Incremental Delay, d <sub>2</sub> | 6.1   | 130.1 |      | 8.1   | 1.8  | 0.4   | 6.1   | 0.8   | 0.3   | 181.4 | 3.1   |      |
| Delay (s)                         | 101.9 | 216.3 |      | 95.7  | 73.7 | 49.3  | 101.9 | 28.7  | 22.7  | 267.6 | 28.2  |      |
| Level of Service                  | F     | F     |      | F     | E    | D     | F     | C     | C     | F     | C     |      |
| Approach Delay (s)                |       | 212.6 |      |       | 71.1 |       |       | 28.9  |       |       | 90.4  |      |
| Approach LOS                      |       | F     |      |       | E    |       |       | C     |       |       | F     |      |

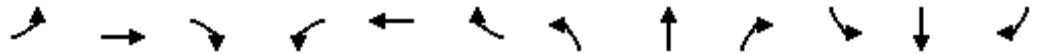
### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 88.0  | HCM 2000 Level of Service | F    |
| HCM 2000 Volume to Capacity ratio | 0.93  |                           |      |
| Actuated Cycle Length (s)         | 200.0 | Sum of lost time (s)      | 16.0 |
| Intersection Capacity Utilization | 93.3% | ICU Level of Service      | F    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Artesia Blvd   |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 4: Pacific Coast Hwy & Aviation Blvd (AM)

10/19/2015



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR  |
|------------------------|------|------|------|------|------|-------|------|-------|-------|-------|-------|------|
| Lane Configurations    |      |      |      | ↖    | ↖    | ↖     | ↖    | ↑↑    | ↖     | ↖     | ↑↑    |      |
| Volume (vph)           | 0    | 0    | 0    | 440  | 10   | 150   | 10   | 1700  | 450   | 310   | 570   | 0    |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 |
| Total Lost time (s)    |      |      |      | 4.8  | 4.8  | 4.2   | 4.2  | 4.6   | 4.0   | 4.2   | 4.6   |      |
| Lane Util. Factor      |      |      |      | 0.95 | 0.95 | 1.00  | 1.00 | 0.95  | 1.00  | 1.00  | 0.95  |      |
| Frt                    |      |      |      | 1.00 | 1.00 | 0.85  | 1.00 | 1.00  | 0.85  | 1.00  | 1.00  |      |
| Flt Protected          |      |      |      | 0.95 | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (prot)      |      |      |      | 1681 | 1689 | 1583  | 1770 | 3539  | 1583  | 1770  | 3539  |      |
| Flt Permitted          |      |      |      | 0.95 | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (perm)      |      |      |      | 1681 | 1689 | 1583  | 1770 | 3539  | 1583  | 1770  | 3539  |      |
| Peak-hour factor, PHF  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)        | 0    | 0    | 0    | 440  | 10   | 150   | 10   | 1700  | 450   | 310   | 570   | 0    |
| RTOR Reduction (vph)   | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0     | 0     | 0     | 0    |
| Lane Group Flow (vph)  | 0    | 0    | 0    | 224  | 226  | 150   | 10   | 1700  | 450   | 310   | 570   | 0    |
| Turn Type              |      |      |      | Perm | NA   | pm+ov | Prot | NA    | Free  | Prot  | NA    |      |
| Protected Phases       |      |      |      |      | 8    |       | 5    | 2     |       | 1     | 6     |      |
| Permitted Phases       |      |      |      | 8    |      | 8     |      |       | Free  |       |       |      |
| Actuated Green, G (s)  |      |      |      | 23.3 | 23.3 | 37.1  | 11.8 | 99.3  | 150.0 | 13.8  | 101.3 |      |
| Effective Green, g (s) |      |      |      | 23.3 | 23.3 | 37.1  | 11.8 | 99.3  | 150.0 | 13.8  | 101.3 |      |
| Actuated g/C Ratio     |      |      |      | 0.16 | 0.16 | 0.25  | 0.08 | 0.66  | 1.00  | 0.09  | 0.68  |      |
| Clearance Time (s)     |      |      |      | 4.8  | 4.8  | 4.2   | 4.2  | 4.6   |       | 4.2   | 4.6   |      |
| Vehicle Extension (s)  |      |      |      | 1.2  | 1.2  | 1.3   | 2.0  | 3.5   |       | 1.3   | 3.5   |      |
| Lane Grp Cap (vph)     |      |      |      | 261  | 262  | 391   | 139  | 2342  | 1583  | 162   | 2390  |      |
| v/s Ratio Prot         |      |      |      |      |      | 0.04  | 0.01 | c0.48 |       | c0.18 | 0.16  |      |
| v/s Ratio Perm         |      |      |      | 0.13 | 0.13 | 0.06  |      |       | 0.28  |       |       |      |
| v/c Ratio              |      |      |      | 0.86 | 0.86 | 0.38  | 0.07 | 0.73  | 0.28  | 1.91  | 0.24  |      |
| Uniform Delay, d1      |      |      |      | 61.7 | 61.8 | 46.9  | 64.0 | 16.5  | 0.0   | 68.1  | 9.4   |      |
| Progression Factor     |      |      |      | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |      |
| Incremental Delay, d2  |      |      |      | 22.5 | 23.4 | 0.2   | 1.0  | 2.0   | 0.5   | 433.2 | 0.2   |      |
| Delay (s)              |      |      |      | 84.3 | 85.2 | 47.2  | 65.0 | 18.5  | 0.5   | 501.3 | 9.7   |      |
| Level of Service       |      |      |      | F    | F    | D     | E    | B     | A     | F     | A     |      |
| Approach Delay (s)     |      | 0.0  |      |      | 75.3 |       |      | 15.0  |       |       | 182.9 |      |
| Approach LOS           |      | A    |      |      | E    |       |      | B     |       |       | F     |      |

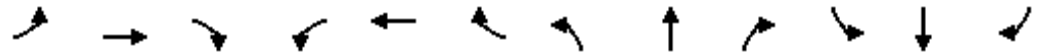
### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 65.5  | HCM 2000 Level of Service | E    |
| HCM 2000 Volume to Capacity ratio | 0.87  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 13.6 |
| Intersection Capacity Utilization | 88.0% | ICU Level of Service      | E    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Aviation Blvd  |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 4: Pacific Coast Hwy & Aviation Blvd (PM)

10/6/2015



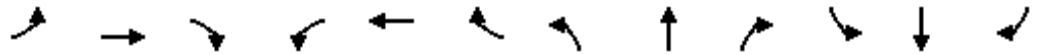
| Movement                          | EBL  | EBT  | EBR  | WBL   | WBT  | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR  |
|-----------------------------------|------|------|------|-------|------|-------|------|-------|-------|-------|-------|------|
| Lane Configurations               |      |      |      | ↖     | ↗    | ↖     | ↖    | ↕     | ↖     | ↖     | ↕     | ↕    |
| Volume (vph)                      | 0    | 0    | 0    | 490   | 10   | 330   | 20   | 910   | 390   | 220   | 1500  | 0    |
| Ideal Flow (vphpl)                | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 |
| Total Lost time (s)               |      |      |      | 4.8   | 4.8  | 4.2   | 4.2  | 4.6   | 4.0   | 4.2   | 4.6   |      |
| Lane Util. Factor                 |      |      |      | 0.95  | 0.95 | 1.00  | 1.00 | 0.95  | 1.00  | 1.00  | 0.95  |      |
| Fr <sub>t</sub>                   |      |      |      | 1.00  | 1.00 | 0.85  | 1.00 | 1.00  | 0.85  | 1.00  | 1.00  |      |
| Fl <sub>t</sub> Protected         |      |      |      | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (prot)                 |      |      |      | 1681  | 1689 | 1583  | 1770 | 3539  | 1583  | 1770  | 3539  |      |
| Fl <sub>t</sub> Permitted         |      |      |      | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (perm)                 |      |      |      | 1681  | 1689 | 1583  | 1770 | 3539  | 1583  | 1770  | 3539  |      |
| Peak-hour factor, PHF             | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)                   | 0    | 0    | 0    | 490   | 10   | 330   | 20   | 910   | 390   | 220   | 1500  | 0    |
| RTOR Reduction (vph)              | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0     | 0     | 0     | 0    |
| Lane Group Flow (vph)             | 0    | 0    | 0    | 250   | 250  | 330   | 20   | 910   | 390   | 220   | 1500  | 0    |
| Turn Type                         |      |      |      | Perm  | NA   | pm+ov | Prot | NA    | Free  | Prot  | NA    |      |
| Protected Phases                  |      |      |      |       | 8    |       | 5    | 2     |       | 1     |       | 6    |
| Permitted Phases                  |      |      |      | 8     |      | 8     |      |       | Free  |       |       |      |
| Actuated Green, G (s)             |      |      |      | 25.2  | 25.2 | 46.8  | 8.8  | 89.6  | 150.0 | 21.6  | 102.4 |      |
| Effective Green, g (s)            |      |      |      | 25.2  | 25.2 | 46.8  | 8.8  | 89.6  | 150.0 | 21.6  | 102.4 |      |
| Actuated g/C Ratio                |      |      |      | 0.17  | 0.17 | 0.31  | 0.06 | 0.60  | 1.00  | 0.14  | 0.68  |      |
| Clearance Time (s)                |      |      |      | 4.8   | 4.8  | 4.2   | 4.2  | 4.6   |       | 4.2   | 4.6   |      |
| Vehicle Extension (s)             |      |      |      | 1.2   | 1.2  | 1.3   | 2.0  | 3.5   |       | 1.3   | 3.5   |      |
| Lane Grp Cap (vph)                |      |      |      | 282   | 283  | 493   | 103  | 2113  | 1583  | 254   | 2415  |      |
| v/s Ratio Prot                    |      |      |      |       |      | 0.10  | 0.01 | c0.26 |       | c0.12 | c0.42 |      |
| v/s Ratio Perm                    |      |      |      | c0.15 | 0.15 | 0.11  |      |       | 0.25  |       |       |      |
| v/c Ratio                         |      |      |      | 0.89  | 0.88 | 0.67  | 0.19 | 0.43  | 0.25  | 0.87  | 0.62  |      |
| Uniform Delay, d <sub>1</sub>     |      |      |      | 61.0  | 61.0 | 44.9  | 67.2 | 16.4  | 0.0   | 62.8  | 13.1  |      |
| Progression Factor                |      |      |      | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |      |
| Incremental Delay, d <sub>2</sub> |      |      |      | 25.9  | 25.4 | 2.7   | 4.2  | 0.6   | 0.4   | 24.4  | 1.2   |      |
| Delay (s)                         |      |      |      | 86.9  | 86.4 | 47.5  | 71.4 | 17.0  | 0.4   | 87.2  | 14.3  |      |
| Level of Service                  |      |      |      | F     | F    | D     | E    | B     | A     | F     | B     |      |
| Approach Delay (s)                |      | 0.0  |      |       | 71.1 |       |      | 12.9  |       |       | 23.6  |      |
| Approach LOS                      |      | A    |      |       | E    |       |      | B     |       |       | C     |      |

| Intersection Summary              |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 30.2  | HCM 2000 Level of Service | C    |
| HCM 2000 Volume to Capacity ratio | 0.69  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 13.6 |
| Intersection Capacity Utilization | 73.3% | ICU Level of Service      | D    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Aviation Blvd  |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 5: Pacific Coast Hwy & Pier Ave (AM)

10/19/2015



| Movement               | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------|------|------|-------|------|------|------|------|-------|------|------|-------|------|
| Lane Configurations    |      |      |       |      |      |      |      |       |      |      |       |      |
| Volume (vph)           | 220  | 0    | 260   | 0    | 0    | 10   | 180  | 1560  | 10   | 10   | 640   | 70   |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 |
| Total Lost time (s)    | 4.6  |      | 4.2   |      |      | 4.2  | 4.2  | 4.6   |      | 4.2  | 4.6   |      |
| Lane Util. Factor      | 0.97 |      | 1.00  |      |      | 1.00 | 0.97 | 0.95  |      | 1.00 | 0.95  |      |
| Frt                    | 1.00 |      | 0.85  |      |      | 0.86 | 1.00 | 1.00  |      | 1.00 | 0.99  |      |
| Flt Protected          | 0.95 |      | 1.00  |      |      | 1.00 | 0.95 | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (prot)      | 3433 |      | 1583  |      |      | 1611 | 3433 | 3536  |      | 1770 | 3487  |      |
| Flt Permitted          | 0.95 |      | 1.00  |      |      | 1.00 | 0.95 | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (perm)      | 3433 |      | 1583  |      |      | 1611 | 3433 | 3536  |      | 1770 | 3487  |      |
| Peak-hour factor, PHF  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 220  | 0    | 260   | 0    | 0    | 10   | 180  | 1560  | 10   | 10   | 640   | 70   |
| RTOR Reduction (vph)   | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 3     | 0    |
| Lane Group Flow (vph)  | 220  | 0    | 260   | 0    | 0    | 10   | 180  | 1570  | 0    | 10   | 707   | 0    |
| Turn Type              | Prot |      | pm+ov |      |      | Over | Prot | NA    |      | Prot | NA    |      |
| Protected Phases       | 4    |      | 5     |      |      | 1    | 5    | 2     |      | 1    | 6     |      |
| Permitted Phases       |      |      | 4     |      |      |      |      |       |      |      |       |      |
| Actuated Green, G (s)  | 14.1 |      | 29.1  |      |      | 6.5  | 15.0 | 116.0 |      | 6.5  | 107.5 |      |
| Effective Green, g (s) | 14.1 |      | 29.1  |      |      | 6.5  | 15.0 | 116.0 |      | 6.5  | 107.5 |      |
| Actuated g/C Ratio     | 0.09 |      | 0.19  |      |      | 0.04 | 0.10 | 0.77  |      | 0.04 | 0.72  |      |
| Clearance Time (s)     | 4.6  |      | 4.2   |      |      | 4.2  | 4.2  | 4.6   |      | 4.2  | 4.6   |      |
| Vehicle Extension (s)  | 2.1  |      | 2.1   |      |      | 2.1  | 2.1  | 3.5   |      | 2.1  | 3.5   |      |
| Lane Grp Cap (vph)     | 322  |      | 307   |      |      | 69   | 343  | 2734  |      | 76   | 2499  |      |
| v/s Ratio Prot         | 0.06 |      | c0.08 |      |      | 0.01 | 0.05 | c0.44 |      | 0.01 | c0.20 |      |
| v/s Ratio Perm         |      |      | 0.08  |      |      |      |      |       |      |      |       |      |
| v/c Ratio              | 0.68 |      | 0.85  |      |      | 0.14 | 0.52 | 0.57  |      | 0.13 | 0.28  |      |
| Uniform Delay, d1      | 65.8 |      | 58.3  |      |      | 69.1 | 64.1 | 6.9   |      | 69.0 | 7.6   |      |
| Progression Factor     | 1.00 |      | 1.00  |      |      | 1.00 | 1.00 | 1.00  |      | 1.00 | 1.00  |      |
| Incremental Delay, d2  | 4.9  |      | 18.3  |      |      | 0.4  | 0.8  | 0.9   |      | 0.3  | 0.3   |      |
| Delay (s)              | 70.6 |      | 76.6  |      |      | 69.5 | 64.9 | 7.8   |      | 69.4 | 7.8   |      |
| Level of Service       | E    |      | E     |      |      | E    | E    | A     |      | E    | A     |      |
| Approach Delay (s)     |      | 73.9 |       |      | 69.5 |      |      | 13.7  |      |      | 8.7   |      |
| Approach LOS           |      | E    |       |      | E    |      |      | B     |      |      | A     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 22.4  | HCM 2000 Level of Service | C    |
| HCM 2000 Volume to Capacity ratio | 0.62  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 13.4 |
| Intersection Capacity Utilization | 66.2% | ICU Level of Service      | C    |
| Analysis Period (min)             | 15    |                           |      |

Description: PCH & Pier Ave

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
 5: Pacific Coast Hwy & Pier Ave (PM)

10/6/2015



| Movement               | EBL   | EBT  | EBR   | WBL  | WBT  | WBR  | NBL   | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------|-------|------|-------|------|------|------|-------|-------|------|------|-------|------|
| Lane Configurations    |       |      |       |      |      |      |       |       |      |      |       |      |
| Volume (vph)           | 250   | 0    | 240   | 0    | 0    | 20   | 360   | 950   | 10   | 10   | 1480  | 160  |
| Ideal Flow (vphpl)     | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 |
| Total Lost time (s)    | 4.6   |      | 4.2   |      |      | 4.2  | 4.2   | 4.6   |      | 4.2  | 4.6   |      |
| Lane Util. Factor      | 0.97  |      | 1.00  |      |      | 1.00 | 0.97  | 0.95  |      | 1.00 | 0.95  |      |
| Frt                    | 1.00  |      | 0.85  |      |      | 0.86 | 1.00  | 1.00  |      | 1.00 | 0.99  |      |
| Flt Protected          | 0.95  |      | 1.00  |      |      | 1.00 | 0.95  | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (prot)      | 3433  |      | 1583  |      |      | 1611 | 3433  | 3534  |      | 1770 | 3487  |      |
| Flt Permitted          | 0.95  |      | 1.00  |      |      | 1.00 | 0.95  | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (perm)      | 3433  |      | 1583  |      |      | 1611 | 3433  | 3534  |      | 1770 | 3487  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 250   | 0    | 240   | 0    | 0    | 20   | 360   | 950   | 10   | 10   | 1480  | 160  |
| RTOR Reduction (vph)   | 0     | 0    | 0     | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 4     | 0    |
| Lane Group Flow (vph)  | 250   | 0    | 240   | 0    | 0    | 20   | 360   | 960   | 0    | 10   | 1636  | 0    |
| Turn Type              | Prot  |      | pm+ov |      |      | Over | Prot  | NA    |      | Prot | NA    |      |
| Protected Phases       | 4     |      | 5     |      |      | 1    | 5     | 2     |      | 1    | 6     |      |
| Permitted Phases       |       |      | 4     |      |      |      |       |       |      |      |       |      |
| Actuated Green, G (s)  | 15.4  |      | 35.5  |      |      | 6.5  | 20.1  | 114.7 |      | 6.5  | 101.1 |      |
| Effective Green, g (s) | 15.4  |      | 35.5  |      |      | 6.5  | 20.1  | 114.7 |      | 6.5  | 101.1 |      |
| Actuated g/C Ratio     | 0.10  |      | 0.24  |      |      | 0.04 | 0.13  | 0.76  |      | 0.04 | 0.67  |      |
| Clearance Time (s)     | 4.6   |      | 4.2   |      |      | 4.2  | 4.2   | 4.6   |      | 4.2  | 4.6   |      |
| Vehicle Extension (s)  | 2.1   |      | 2.1   |      |      | 2.1  | 2.1   | 3.5   |      | 2.1  | 3.5   |      |
| Lane Grp Cap (vph)     | 352   |      | 374   |      |      | 69   | 460   | 2702  |      | 76   | 2350  |      |
| v/s Ratio Prot         | c0.07 |      | 0.09  |      |      | 0.01 | c0.10 | 0.27  |      | 0.01 | c0.47 |      |
| v/s Ratio Perm         |       |      | 0.07  |      |      |      |       |       |      |      |       |      |
| v/c Ratio              | 0.71  |      | 0.64  |      |      | 0.29 | 0.78  | 0.36  |      | 0.13 | 0.70  |      |
| Uniform Delay, d1      | 65.1  |      | 51.5  |      |      | 69.5 | 62.8  | 5.7   |      | 69.0 | 15.0  |      |
| Progression Factor     | 1.00  |      | 1.00  |      |      | 1.00 | 1.00  | 1.00  |      | 1.00 | 1.00  |      |
| Incremental Delay, d2  | 5.7   |      | 2.9   |      |      | 1.0  | 7.9   | 0.4   |      | 0.3  | 1.7   |      |
| Delay (s)              | 70.8  |      | 54.4  |      |      | 70.5 | 70.7  | 6.1   |      | 69.4 | 16.8  |      |
| Level of Service       | E     |      | D     |      |      | E    | E     | A     |      | E    | B     |      |
| Approach Delay (s)     |       | 62.8 |       |      | 70.5 |      |       | 23.7  |      |      | 17.1  |      |
| Approach LOS           |       | E    |       |      | E    |      |       | C     |      |      | B     |      |

| Intersection Summary              |       |                           |
|-----------------------------------|-------|---------------------------|
| HCM 2000 Control Delay            | 26.3  | HCM 2000 Level of Service |
| HCM 2000 Volume to Capacity ratio | 0.71  | C                         |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      |
| Intersection Capacity Utilization | 74.1% | 13.4                      |
| Analysis Period (min)             | 15    | ICU Level of Service      |
| Description: PCH & Pier Ave       |       | D                         |
| c Critical Lane Group             |       |                           |

HCM Signalized Intersection Capacity Analysis  
 6: Pacific Coast Hwy & 2nd St (AM)

10/19/2015



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations    |       | ↔     |      |       | ↔     |      | ↔     | ↕     | ↕    | ↔     | ↕     | ↕    |
| Volume (vph)           | 20    | 10    | 30   | 10    | 10    | 20   | 80    | 2090  | 10   | 10    | 920   | 30   |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Total Lost time (s)    |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      | 5.6   | 5.6   |      |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.95  |      | 1.00  | 0.95  |      |
| Frt                    |       | 0.93  |      |       | 0.93  |      | 1.00  | 1.00  |      | 1.00  | 1.00  |      |
| Flt Protected          |       | 0.98  |      |       | 0.99  |      | 0.95  | 1.00  |      | 0.95  | 1.00  |      |
| Satd. Flow (prot)      |       | 1709  |      |       | 1716  |      | 1770  | 3537  |      | 1770  | 3522  |      |
| Flt Permitted          |       | 0.98  |      |       | 0.99  |      | 0.28  | 1.00  |      | 0.06  | 1.00  |      |
| Satd. Flow (perm)      |       | 1709  |      |       | 1716  |      | 527   | 3537  |      | 105   | 3522  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)        | 20    | 10    | 30   | 10    | 10    | 20   | 80    | 2090  | 10   | 10    | 920   | 30   |
| RTOR Reduction (vph)   | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 1     | 0    |
| Lane Group Flow (vph)  | 0     | 60    | 0    | 0     | 40    | 0    | 80    | 2100  | 0    | 10    | 949   | 0    |
| Turn Type              | Split | NA    |      | Split | NA    |      | Perm  | NA    |      | Perm  | NA    |      |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      |       | 2     |      |       |       | 6    |
| Permitted Phases       |       |       |      |       |       |      | 2     |       |      |       | 6     |      |
| Actuated Green, G (s)  |       | 9.7   |      |       | 7.2   |      | 117.2 | 117.2 |      | 117.2 | 117.2 |      |
| Effective Green, g (s) |       | 9.7   |      |       | 7.2   |      | 117.2 | 117.2 |      | 117.2 | 117.2 |      |
| Actuated g/C Ratio     |       | 0.06  |      |       | 0.05  |      | 0.78  | 0.78  |      | 0.78  | 0.78  |      |
| Clearance Time (s)     |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      | 5.6   | 5.6   |      |
| Vehicle Extension (s)  |       | 3.5   |      |       | 2.1   |      | 3.5   | 3.5   |      | 3.5   | 3.5   |      |
| Lane Grp Cap (vph)     |       | 110   |      |       | 82    |      | 411   | 2763  |      | 82    | 2751  |      |
| v/s Ratio Prot         |       | c0.04 |      |       | c0.02 |      |       | c0.59 |      |       | 0.27  |      |
| v/s Ratio Perm         |       |       |      |       |       |      | 0.15  |       |      | 0.10  |       |      |
| v/c Ratio              |       | 0.55  |      |       | 0.49  |      | 0.19  | 0.76  |      | 0.12  | 0.35  |      |
| Uniform Delay, d1      |       | 68.0  |      |       | 69.6  |      | 4.2   | 8.8   |      | 4.0   | 4.9   |      |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00  |      | 1.00  | 1.00  |      |
| Incremental Delay, d2  |       | 6.0   |      |       | 2.0   |      | 1.1   | 2.0   |      | 3.0   | 0.3   |      |
| Delay (s)              |       | 74.0  |      |       | 71.6  |      | 5.3   | 10.9  |      | 7.0   | 5.3   |      |
| Level of Service       |       | E     |      |       | E     |      | A     | B     |      | A     | A     |      |
| Approach Delay (s)     |       | 74.0  |      |       | 71.6  |      |       | 10.6  |      |       | 5.3   |      |
| Approach LOS           |       | E     |      |       | E     |      |       | B     |      |       | A     |      |

Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 11.0  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.73  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 15.9 |
| Intersection Capacity Utilization | 83.3% | ICU Level of Service      | E    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & 2nd            |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 6: Pacific Coast Hwy & 2nd St (PM)

10/6/2015



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations    |       | ↕     |      |       | ↕     |      | ↕     | ↑↑↑   |      | ↕     | ↑↑↑   |      |
| Volume (vph)           | 80    | 10    | 30   | 20    | 10    | 20   | 60    | 1210  | 10   | 10    | 1750  | 40   |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Total Lost time (s)    |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      | 5.6   | 5.6   |      |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.91  |      | 1.00  | 0.91  |      |
| Frt                    |       | 0.97  |      |       | 0.95  |      | 1.00  | 1.00  |      | 1.00  | 1.00  |      |
| Flt Protected          |       | 0.97  |      |       | 0.98  |      | 0.95  | 1.00  |      | 0.95  | 1.00  |      |
| Satd. Flow (prot)      |       | 1742  |      |       | 1728  |      | 1770  | 5079  |      | 1770  | 5068  |      |
| Flt Permitted          |       | 0.97  |      |       | 0.98  |      | 0.10  | 1.00  |      | 0.20  | 1.00  |      |
| Satd. Flow (perm)      |       | 1742  |      |       | 1728  |      | 187   | 5079  |      | 378   | 5068  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)        | 80    | 10    | 30   | 20    | 10    | 20   | 60    | 1210  | 10   | 10    | 1750  | 40   |
| RTOR Reduction (vph)   | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 1     | 0    |
| Lane Group Flow (vph)  | 0     | 120   | 0    | 0     | 50    | 0    | 60    | 1220  | 0    | 10    | 1789  | 0    |
| Turn Type              | Split | NA    |      | Split | NA    |      | Perm  | NA    |      | Perm  | NA    |      |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      |       | 2     |      |       |       | 6    |
| Permitted Phases       |       |       |      |       |       |      | 2     |       |      |       | 6     |      |
| Actuated Green, G (s)  |       | 16.1  |      |       | 7.8   |      | 110.2 | 110.2 |      | 110.2 | 110.2 |      |
| Effective Green, g (s) |       | 16.1  |      |       | 7.8   |      | 110.2 | 110.2 |      | 110.2 | 110.2 |      |
| Actuated g/C Ratio     |       | 0.11  |      |       | 0.05  |      | 0.73  | 0.73  |      | 0.73  | 0.73  |      |
| Clearance Time (s)     |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      | 5.6   | 5.6   |      |
| Vehicle Extension (s)  |       | 3.5   |      |       | 2.1   |      | 3.5   | 3.5   |      | 3.5   | 3.5   |      |
| Lane Grp Cap (vph)     |       | 186   |      |       | 89    |      | 137   | 3731  |      | 277   | 3723  |      |
| v/s Ratio Prot         |       | c0.07 |      |       | c0.03 |      |       | 0.24  |      |       | c0.35 |      |
| v/s Ratio Perm         |       |       |      |       |       |      | 0.32  |       |      | 0.03  |       |      |
| v/c Ratio              |       | 0.65  |      |       | 0.56  |      | 0.44  | 0.33  |      | 0.04  | 0.48  |      |
| Uniform Delay, d1      |       | 64.2  |      |       | 69.4  |      | 7.8   | 6.9   |      | 5.4   | 8.2   |      |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00  |      | 1.00  | 1.00  |      |
| Incremental Delay, d2  |       | 7.8   |      |       | 5.1   |      | 9.9   | 0.2   |      | 0.2   | 0.4   |      |
| Delay (s)              |       | 72.0  |      |       | 74.5  |      | 17.6  | 7.2   |      | 5.7   | 8.6   |      |
| Level of Service       |       | E     |      |       | E     |      | B     | A     |      | A     | A     |      |
| Approach Delay (s)     |       | 72.0  |      |       | 74.5  |      |       | 7.7   |      |       | 8.6   |      |
| Approach LOS           |       | E     |      |       | E     |      |       | A     |      |       | A     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 11.6  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.50  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 15.9 |
| Intersection Capacity Utilization | 70.4% | ICU Level of Service      | C    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & 2nd            |       |                           |      |
| c Critical Lane Group             |       |                           |      |



HCM Signalized Intersection Capacity Analysis  
 7: Pacific Coast Hwy & 16th St (AM)

10/19/2015



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations    |       | ↕     |      |       | ↕     |      | ↗     | ↕↗    |      | ↗    | ↕↗   | ↗    |
| Volume (vph)           | 80    | 0     | 70   | 30    | 0     | 30   | 80    | 1300  | 50   | 20   | 870  | 20   |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9   |      | 4.2  | 4.9  | 4.9  |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.95  |      | 1.00 | 0.95 | 1.00 |
| Frt                    |       | 0.94  |      |       | 0.93  |      | 1.00  | 0.99  |      | 1.00 | 1.00 | 0.85 |
| Flt Protected          |       | 0.97  |      |       | 0.98  |      | 0.95  | 1.00  |      | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot)      |       | 1700  |      |       | 1695  |      | 1770  | 3520  |      | 1770 | 3539 | 1583 |
| Flt Permitted          |       | 0.97  |      |       | 0.98  |      | 0.95  | 1.00  |      | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm)      |       | 1700  |      |       | 1695  |      | 1770  | 3520  |      | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph)        | 80    | 0     | 70   | 30    | 0     | 30   | 80    | 1300  | 50   | 20   | 870  | 20   |
| RTOR Reduction (vph)   | 0     | 103   | 0    | 0     | 57    | 0    | 0     | 1     | 0    | 0    | 0    | 11   |
| Lane Group Flow (vph)  | 0     | 47    | 0    | 0     | 3     | 0    | 80    | 1349  | 0    | 20   | 870  | 9    |
| Turn Type              | Split | NA    |      | Split | NA    |      | Prot  | NA    |      | Prot | NA   | Perm |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      | 5     | 2     |      | 1    | 6    |      |
| Permitted Phases       |       |       |      |       |       |      |       |       |      |      |      | 6    |
| Actuated Green, G (s)  |       | 9.7   |      |       | 6.0   |      | 9.6   | 72.6  |      | 4.0  | 67.0 | 67.0 |
| Effective Green, g (s) |       | 9.7   |      |       | 6.0   |      | 9.6   | 72.6  |      | 4.0  | 67.0 | 67.0 |
| Actuated g/C Ratio     |       | 0.07  |      |       | 0.04  |      | 0.07  | 0.51  |      | 0.03 | 0.47 | 0.47 |
| Clearance Time (s)     |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9   |      | 4.2  | 4.9  | 4.9  |
| Vehicle Extension (s)  |       | 3.1   |      |       | 5.0   |      | 1.5   | 4.0   |      | 1.5  | 4.0  | 4.0  |
| Lane Grp Cap (vph)     |       | 115   |      |       | 71    |      | 118   | 1787  |      | 49   | 1658 | 741  |
| v/s Ratio Prot         |       | c0.03 |      |       | c0.00 |      | c0.05 | c0.38 |      | 0.01 | 0.25 |      |
| v/s Ratio Perm         |       |       |      |       |       |      |       |       |      |      |      | 0.01 |
| v/c Ratio              |       | 0.40  |      |       | 0.04  |      | 0.68  | 0.75  |      | 0.41 | 0.52 | 0.01 |
| Uniform Delay, d1      |       | 63.9  |      |       | 65.7  |      | 65.2  | 28.1  |      | 68.3 | 26.8 | 20.3 |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00  |      | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2  |       | 2.4   |      |       | 0.4   |      | 11.5  | 3.0   |      | 2.0  | 1.2  | 0.0  |
| Delay (s)              |       | 66.3  |      |       | 66.2  |      | 76.7  | 31.1  |      | 70.3 | 28.0 | 20.3 |
| Level of Service       |       | E     |      |       | E     |      | E     | C     |      | E    | C    | C    |
| Approach Delay (s)     |       | 66.3  |      |       | 66.2  |      | 33.7  |       |      | 28.7 |      |      |
| Approach LOS           |       | E     |      |       | E     |      | C     |       |      | C    |      |      |

Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 34.6  | HCM 2000 Level of Service | C    |
| HCM 2000 Volume to Capacity ratio | 0.52  |                           |      |
| Actuated Cycle Length (s)         | 143.0 | Sum of lost time (s)      | 21.7 |
| Intersection Capacity Utilization | 63.9% | ICU Level of Service      | B    |
| Analysis Period (min)             | 15    |                           |      |

Description: PCH & 16th St

c Critical Lane Group

# HCM Signalized Intersection Capacity Analysis

## 7: Pacific Coast Hwy & 16th St (PM)

10/6/2015



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL  | SBT   | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations    |       | ↕     |      |       | ↕     |      | ↕     | ↕↔   |      | ↕    | ↕↕    | ↕    |
| Volume (vph)           | 120   | 0     | 90   | 20    | 0     | 10   | 110   | 1040 | 30   | 10   | 1560  | 210  |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 |
| Total Lost time (s)    |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9  |      | 4.2  | 4.9   | 4.9  |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.95 |      | 1.00 | 0.95  | 1.00 |
| Frt                    |       | 0.94  |      |       | 0.95  |      | 1.00  | 1.00 |      | 1.00 | 1.00  | 0.85 |
| Flt Protected          |       | 0.97  |      |       | 0.97  |      | 0.95  | 1.00 |      | 0.95 | 1.00  | 1.00 |
| Satd. Flow (prot)      |       | 1706  |      |       | 1722  |      | 1770  | 3524 |      | 1770 | 3539  | 1583 |
| Flt Permitted          |       | 0.97  |      |       | 0.97  |      | 0.95  | 1.00 |      | 0.95 | 1.00  | 1.00 |
| Satd. Flow (perm)      |       | 1706  |      |       | 1722  |      | 1770  | 3524 |      | 1770 | 3539  | 1583 |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 120   | 0     | 90   | 20    | 0     | 10   | 110   | 1040 | 30   | 10   | 1560  | 210  |
| RTOR Reduction (vph)   | 0     | 100   | 0    | 0     | 29    | 0    | 0     | 1    | 0    | 0    | 0     | 60   |
| Lane Group Flow (vph)  | 0     | 110   | 0    | 0     | 1     | 0    | 110   | 1069 | 0    | 10   | 1560  | 150  |
| Turn Type              | Split | NA    |      | Split | NA    |      | Prot  | NA   |      | Prot | NA    | Perm |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      | 5     | 2    |      | 1    | 6     |      |
| Permitted Phases       |       |       |      |       |       |      |       |      |      |      |       | 6    |
| Actuated Green, G (s)  |       | 13.9  |      |       | 4.5   |      | 10.9  | 71.5 |      | 2.4  | 63.0  | 63.0 |
| Effective Green, g (s) |       | 13.9  |      |       | 4.5   |      | 10.9  | 71.5 |      | 2.4  | 63.0  | 63.0 |
| Actuated g/C Ratio     |       | 0.10  |      |       | 0.03  |      | 0.08  | 0.50 |      | 0.02 | 0.44  | 0.44 |
| Clearance Time (s)     |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9  |      | 4.2  | 4.9   | 4.9  |
| Vehicle Extension (s)  |       | 3.1   |      |       | 5.0   |      | 1.5   | 4.0  |      | 1.5  | 4.0   | 4.0  |
| Lane Grp Cap (vph)     |       | 165   |      |       | 54    |      | 134   | 1762 |      | 29   | 1559  | 697  |
| v/s Ratio Prot         |       | c0.06 |      |       | c0.00 |      | c0.06 | 0.30 |      | 0.01 | c0.44 |      |
| v/s Ratio Perm         |       |       |      |       |       |      |       |      |      |      |       | 0.09 |
| v/c Ratio              |       | 0.67  |      |       | 0.02  |      | 0.82  | 0.61 |      | 0.34 | 1.00  | 0.22 |
| Uniform Delay, d1      |       | 62.3  |      |       | 67.1  |      | 65.1  | 25.7 |      | 69.5 | 40.0  | 24.7 |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00 |      | 1.00 | 1.00  | 1.00 |
| Incremental Delay, d2  |       | 9.8   |      |       | 0.3   |      | 30.3  | 1.6  |      | 2.6  | 22.9  | 0.7  |
| Delay (s)              |       | 72.1  |      |       | 67.4  |      | 95.3  | 27.2 |      | 72.1 | 62.9  | 25.4 |
| Level of Service       |       | E     |      |       | E     |      | F     | C    |      | E    | E     | C    |
| Approach Delay (s)     |       | 72.1  |      |       | 67.4  |      | 33.6  |      |      | 58.6 |       |      |
| Approach LOS           |       | E     |      |       | E     |      | C     |      |      | E    |       |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 50.3  | HCM 2000 Level of Service | D    |
| HCM 2000 Volume to Capacity ratio | 0.67  |                           |      |
| Actuated Cycle Length (s)         | 143.0 | Sum of lost time (s)      | 21.7 |
| Intersection Capacity Utilization | 73.8% | ICU Level of Service      | D    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & 16th St        |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 8: Pacific Coast Hwy & 21st St (AM)

10/19/2015



| Movement               | EBL  | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|-------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations    |      | ↕     |      |      | ↕    |      | ↕    | ↕     |      | ↕    | ↕    |      |
| Volume (vph)           | 80   | 100   | 20   | 60   | 80   | 60   | 60   | 1240  | 40   | 30   | 930  | 40   |
| Ideal Flow (vphpl)     | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 4.0   |      |      | 4.0  |      | 4.0  | 4.0   |      | 4.0  | 4.0  |      |
| Lane Util. Factor      |      | 1.00  |      |      | 1.00 |      | 1.00 | 0.95  |      | 1.00 | 0.95 |      |
| Frt                    |      | 0.99  |      |      | 0.96 |      | 1.00 | 1.00  |      | 1.00 | 0.99 |      |
| Flt Protected          |      | 0.98  |      |      | 0.99 |      | 0.95 | 1.00  |      | 0.95 | 1.00 |      |
| Satd. Flow (prot)      |      | 1802  |      |      | 1761 |      | 1770 | 3523  |      | 1770 | 3517 |      |
| Flt Permitted          |      | 0.66  |      |      | 0.78 |      | 0.27 | 1.00  |      | 0.18 | 1.00 |      |
| Satd. Flow (perm)      |      | 1216  |      |      | 1400 |      | 502  | 3523  |      | 341  | 3517 |      |
| Peak-hour factor, PHF  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph)        | 80   | 100   | 20   | 60   | 80   | 60   | 60   | 1240  | 40   | 30   | 930  | 40   |
| RTOR Reduction (vph)   | 0    | 3     | 0    | 0    | 13   | 0    | 0    | 2     | 0    | 0    | 2    | 0    |
| Lane Group Flow (vph)  | 0    | 197   | 0    | 0    | 187  | 0    | 60   | 1278  | 0    | 30   | 968  | 0    |
| Turn Type              | Perm | NA    |      | Perm | NA   |      | Perm | NA    |      | Perm | NA   |      |
| Protected Phases       |      | 4     |      |      | 8    |      |      | 2     |      |      | 6    |      |
| Permitted Phases       | 4    |       |      | 8    |      |      | 2    |       |      | 6    |      |      |
| Actuated Green, G (s)  |      | 22.1  |      |      | 22.1 |      | 89.9 | 89.9  |      | 89.9 | 89.9 |      |
| Effective Green, g (s) |      | 22.1  |      |      | 22.1 |      | 89.9 | 89.9  |      | 89.9 | 89.9 |      |
| Actuated g/C Ratio     |      | 0.18  |      |      | 0.18 |      | 0.75 | 0.75  |      | 0.75 | 0.75 |      |
| Clearance Time (s)     |      | 4.0   |      |      | 4.0  |      | 4.0  | 4.0   |      | 4.0  | 4.0  |      |
| Vehicle Extension (s)  |      | 3.0   |      |      | 3.0  |      | 3.0  | 3.0   |      | 3.0  | 3.0  |      |
| Lane Grp Cap (vph)     |      | 223   |      |      | 257  |      | 376  | 2639  |      | 255  | 2634 |      |
| v/s Ratio Prot         |      |       |      |      |      |      |      | c0.36 |      |      | 0.28 |      |
| v/s Ratio Perm         |      | c0.16 |      |      | 0.13 |      | 0.12 |       |      | 0.09 |      |      |
| v/c Ratio              |      | 0.88  |      |      | 0.73 |      | 0.16 | 0.48  |      | 0.12 | 0.37 |      |
| Uniform Delay, d1      |      | 47.7  |      |      | 46.1 |      | 4.3  | 5.9   |      | 4.1  | 5.2  |      |
| Progression Factor     |      | 1.00  |      |      | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |      |
| Incremental Delay, d2  |      | 30.9  |      |      | 9.8  |      | 0.9  | 0.6   |      | 0.9  | 0.4  |      |
| Delay (s)              |      | 78.6  |      |      | 55.9 |      | 5.2  | 6.6   |      | 5.1  | 5.6  |      |
| Level of Service       |      | E     |      |      | E    |      | A    | A     |      | A    | A    |      |
| Approach Delay (s)     |      | 78.6  |      |      | 55.9 |      |      | 6.5   |      |      | 5.6  |      |
| Approach LOS           |      | E     |      |      | E    |      |      | A     |      |      | A    |      |

### Intersection Summary

|                                   |       |                           |     |
|-----------------------------------|-------|---------------------------|-----|
| HCM 2000 Control Delay            | 15.0  | HCM 2000 Level of Service | B   |
| HCM 2000 Volume to Capacity ratio | 0.56  |                           |     |
| Actuated Cycle Length (s)         | 120.0 | Sum of lost time (s)      | 8.0 |
| Intersection Capacity Utilization | 67.6% | ICU Level of Service      | C   |
| Analysis Period (min)             | 15    |                           |     |
| Description: PCH & 21st St        |       |                           |     |
| c Critical Lane Group             |       |                           |     |

# HCM Signalized Intersection Capacity Analysis

## 8: Pacific Coast Hwy & 21st St (PM)

10/6/2015



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR  |
|------------------------|------|------|------|------|-------|------|------|------|------|------|-------|------|
| Lane Configurations    |      | ↕    |      |      | ↕     |      | ↕    | ↕    |      | ↕    | ↕     |      |
| Volume (vph)           | 20   | 40   | 20   | 30   | 50    | 30   | 50   | 1090 | 20   | 80   | 1860  | 90   |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 |
| Total Lost time (s)    |      | 4.0  |      |      | 4.0   |      | 4.0  | 4.0  |      | 4.0  | 4.0   |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00  |      | 1.00 | 0.95 |      | 1.00 | 0.95  |      |
| Flt                    |      | 0.97 |      |      | 0.96  |      | 1.00 | 1.00 |      | 1.00 | 0.99  |      |
| Flt Protected          |      | 0.99 |      |      | 0.99  |      | 0.95 | 1.00 |      | 0.95 | 1.00  |      |
| Satd. Flow (prot)      |      | 1778 |      |      | 1770  |      | 1770 | 3530 |      | 1770 | 3515  |      |
| Flt Permitted          |      | 0.86 |      |      | 0.88  |      | 0.08 | 1.00 |      | 0.24 | 1.00  |      |
| Satd. Flow (perm)      |      | 1545 |      |      | 1570  |      | 156  | 3530 |      | 451  | 3515  |      |
| Peak-hour factor, PHF  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 20   | 40   | 20   | 30   | 50    | 30   | 50   | 1090 | 20   | 80   | 1860  | 90   |
| RTOR Reduction (vph)   | 0    | 12   | 0    | 0    | 13    | 0    | 0    | 1    | 0    | 0    | 2     | 0    |
| Lane Group Flow (vph)  | 0    | 68   | 0    | 0    | 97    | 0    | 50   | 1109 | 0    | 80   | 1948  | 0    |
| Turn Type              | Perm | NA   |      | Perm | NA    |      | Perm | NA   |      | Perm | NA    |      |
| Protected Phases       |      | 4    |      |      | 8     |      |      | 2    |      |      | 6     |      |
| Permitted Phases       | 4    |      |      | 8    |       |      | 2    |      |      | 6    |       |      |
| Actuated Green, G (s)  |      | 12.4 |      |      | 12.4  |      | 99.6 | 99.6 |      | 99.6 | 99.6  |      |
| Effective Green, g (s) |      | 12.4 |      |      | 12.4  |      | 99.6 | 99.6 |      | 99.6 | 99.6  |      |
| Actuated g/C Ratio     |      | 0.10 |      |      | 0.10  |      | 0.83 | 0.83 |      | 0.83 | 0.83  |      |
| Clearance Time (s)     |      | 4.0  |      |      | 4.0   |      | 4.0  | 4.0  |      | 4.0  | 4.0   |      |
| Vehicle Extension (s)  |      | 3.0  |      |      | 3.0   |      | 3.0  | 3.0  |      | 3.0  | 3.0   |      |
| Lane Grp Cap (vph)     |      | 159  |      |      | 162   |      | 129  | 2929 |      | 374  | 2917  |      |
| v/s Ratio Prot         |      |      |      |      |       |      |      | 0.31 |      |      | c0.55 |      |
| v/s Ratio Perm         |      | 0.04 |      |      | c0.06 |      | 0.32 |      |      | 0.18 |       |      |
| v/c Ratio              |      | 0.43 |      |      | 0.60  |      | 0.39 | 0.38 |      | 0.21 | 0.67  |      |
| Uniform Delay, d1      |      | 50.5 |      |      | 51.4  |      | 2.6  | 2.5  |      | 2.1  | 3.9   |      |
| Progression Factor     |      | 1.00 |      |      | 1.00  |      | 1.00 | 1.00 |      | 1.00 | 1.00  |      |
| Incremental Delay, d2  |      | 1.9  |      |      | 6.2   |      | 8.6  | 0.4  |      | 1.3  | 1.2   |      |
| Delay (s)              |      | 52.3 |      |      | 57.6  |      | 11.1 | 2.9  |      | 3.4  | 5.1   |      |
| Level of Service       |      | D    |      |      | E     |      | B    | A    |      | A    | A     |      |
| Approach Delay (s)     |      | 52.3 |      |      | 57.6  |      |      | 3.3  |      |      | 5.1   |      |
| Approach LOS           |      | D    |      |      | E     |      |      | A    |      |      | A     |      |

### Intersection Summary

|                                   |       |                           |     |
|-----------------------------------|-------|---------------------------|-----|
| HCM 2000 Control Delay            | 7.3   | HCM 2000 Level of Service | A   |
| HCM 2000 Volume to Capacity ratio | 0.66  |                           |     |
| Actuated Cycle Length (s)         | 120.0 | Sum of lost time (s)      | 8.0 |
| Intersection Capacity Utilization | 78.5% | ICU Level of Service      | D   |
| Analysis Period (min)             | 15    |                           |     |
| Description: PCH & 21st St        |       |                           |     |
| c Critical Lane Group             |       |                           |     |

**PLAN HERMOSA**

## **SIGNALIZED INTERSECTIONS**

| <b>Project Title:</b> |          | <b>City of Hermosa Beach General Plan Update</b> |        |          |                          |  |
|-----------------------|----------|--|--------|----------|--------------------------|--|
| <b>Intersection:</b>  |          | <b>1 Hermosa Avenue &amp; 13th Street</b>        |        |          |                          |  |
| <b>Description:</b>   |          | <b>PLAN Hermosa (2040)</b>                       |        |          |                          |  |
| <b>Date/Time:</b>     |          | <b>AM PEAK HOUR</b>                              |        |          |                          |  |
| Thru Lane:            | 1600 vph |  |        |          | N-S Split Phase :        | N  |
| Left Lane:            | 1600 vph |  |        |          | E-W Split Phase :        | N  |
| Double Lt Penalty:    | 10 %     |  |        |          | Lost Time (% of cycle) : | 10   |
| ITS:                  | 0 %      |  |        |          | V/C Round Off (decs.) :  | 3  |
| OLA Movements :       |          |  |        |          |                          |  |
| FF Movements:         |          |  |        |          |                          |  |
| APPROACH              | MVMT     | LANES  | VOLUME | CAPACITY | V/C                      | ICU ANALYSIS   |
| Southbound            | RT       | 0.00   | 30     | 0        | 0.000                    | N-S(1): 0.206 *<br>N-S(2): 0.106<br>E-W(1): 0.000<br>E-W(2): 0.013 * |
|                       | TH       | 2.00   | 230    | 3,200    | 0.081                    |  |
|                       | LT       | 0.00   | 0      | 0        | 0.000 *                  |  |
| Westbound             | RT       | 0.00   | 0      | 0        | 0.000                    | V/C: 0.219<br>Lost Time: 0.100<br>ITS: 0.000                         |
|                       | TH       | 0.00   | 0      | 0        | 0.000 *                  |  |
|                       | LT       | 0.00   | 0      | 0        | 0.000                    |  |
| Northbound            | RT       | 0.00   | 0      | 0        | 0.000                    | ICU: 0.319   |
|                       | TH       | 2.00   | 660    | 3,200    | 0.206 *                  |  |
|                       | LT       | 1.00   | 40     | 1,600    | 0.025                    |  |
| Eastbound             | RT       | 0.50   | 10     | 800      | 0.000                    | LOS: A   |
|                       | TH       | 0.00   | 0      | 0        | 0.000                    |  |
|                       | LT       | 0.50   | 10     | 800      | 0.013 *                  |  |
| <b>Date/Time:</b>     |          | <b>PM PEAK HOUR</b>                              |        |          |                          |  |
| APPROACH              | MVMT     | LANES  | VOLUME | CAPACITY | V/C                      | ICU ANALYSIS   |
| Southbound            | RT       | 0.00   | 20     | 0        | 0.000                    | N-S(1): 0.109<br>N-S(2): 0.194 *<br>E-W(1): 0.034<br>E-W(2): 0.063 * |
|                       | TH       | 2.00   | 420    | 3,200    | 0.138 *                  |  |
|                       | LT       | 0.00   | 0      | 0        | 0.000                    |  |
| Westbound             | RT       | 0.00   | 0      | 0        | 0.000                    | V/C: 0.257<br>Lost Time: 0.100<br>ITS: 0.000                         |
|                       | TH       | 0.00   | 0      | 0        | 0.000 *                  |  |
|                       | LT       | 0.00   | 0      | 0        | 0.000                    |  |
| Northbound            | RT       | 0.00   | 0      | 0        | 0.000                    | ICU: 0.357   |
|                       | TH       | 2.00   | 350    | 3,200    | 0.109                    |  |
|                       | LT       | 1.00   | 90     | 1,600    | 0.056 *                  |  |
| Eastbound             | RT       | 0.70   | 70     | 1,120    | 0.034                    | LOS: A   |
|                       | TH       | 0.00   | 0      | 0        | 0.000                    |  |
|                       | LT       | 0.30   | 30     | 480      | 0.063 *                  |  |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 2 Hermosa Avenue &amp; Pier Avenue</b><br><b>Description: PLAN Hermosa (2040)</b> |          |       |        |          |         |  |
|---|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>  |          |       |        |          |         |  |
| Thru Lane:  | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:  | 1600 vph |       |        |          |         | E-W Split Phase : N  |
| Double Lt Penalty:  | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:  | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :   |          |       |        |          |         |  |
| FF Movements:   |          |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.276 *<br>N-S(2): 0.059<br>E-W(1): 0.025<br>E-W(2): 0.038 * |
|   | TH       | 2.00  | 190    | 3,200    | 0.059   |  |
|   | LT       | 1.00  | 60     | 1,600    | 0.038 * |  |
| Westbound   | RT       | 1.00  | 90     | 1,600    | 0.038 * | V/C: 0.314<br>Lost Time: 0.100<br>ITS: 0.000                         |
|   | TH       | 0.00  | 0      | 0        | 0.000   |  |
|   | LT       | 1.00  | 40     | 1,600    | 0.025   |  |
| Northbound  | RT       | 0.00  | 120    | 0        | 0.000   | ICU: 0.414   |
|   | TH       | 2.00  | 640    | 3,200    | 0.238 * |  |
|   | LT       | 0.00  | 0      | 0        | 0.000   |  |
| Eastbound   | RT       | 0.00  | 0      | 0        | 0.000   | LOS: A   |
|   | TH       | 0.00  | 0      | 0        | 0.000   |  |
|   | LT       | 0.00  | 0      | 0        | 0.000 * |  |
| <b>Date/Time: PM PEAK HOUR</b>  |          |       |        |          |         |  |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound  | RT       | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.187 *<br>N-S(2): 0.134<br>E-W(1): 0.069 *<br>E-W(2): 0.053 |
|   | TH       | 2.00  | 430    | 3,200    | 0.134   |  |
|   | LT       | 1.00  | 90     | 1,600    | 0.056 * |  |
| Westbound   | RT       | 1.00  | 130    | 1,600    | 0.053   | V/C: 0.256<br>Lost Time: 0.100<br>ITS: 0.000                         |
|   | TH       | 0.00  | 0      | 0        | 0.000   |  |
|   | LT       | 1.00  | 110    | 1,600    | 0.069 * |  |
| Northbound  | RT       | 0.00  | 100    | 0        | 0.000   | ICU: 0.356   |
|   | TH       | 2.00  | 320    | 3,200    | 0.131 * |  |
|   | LT       | 0.00  | 0      | 0        | 0.000   |  |
| Eastbound   | RT       | 0.00  | 0      | 0        | 0.000   | LOS: A   |
|   | TH       | 0.00  | 0      | 0        | 0.000 * |  |
|   | LT       | 0.00  | 0      | 0        | 0.000   |  |

\* - Denotes critical movement



| <b>Project Title:</b> |          | <b>City of Hermosa Beach General Plan Update</b>       |        |          |                          |                  |
|-----------------------|----------|--|--------|----------|--------------------------|------------------|
| <b>Intersection:</b>  |          | <b>3 Pacific Coast Highway &amp; Artesia Boulevard</b> |        |          |                          |                  |
| <b>Description:</b>   |          | <b>PLAN Hermosa (2040)</b>                             |        |          |                          |                  |
| <b>Date/Time:</b>     |          | <b>AM PEAK HOUR</b>                                    |        |          |                          |                  |
| Thru Lane:            | 1600 vph |  |        |          | N-S Split Phase :        | N                |
| Left Lane:            | 1600 vph |  |        |          | E-W Split Phase :        | N                |
| Double Lt Penalty:    | 10 %     |  |        |          | Lost Time (% of cycle) : | 10               |
| ITS:                  | 0 %      |  |        |          | V/C Round Off (decs.) :  | 3                |
| OLA Movements :       | WBR      |  |        |          |                          |                  |
| FF Movements:         | NBR,     |  |        |          |                          |                  |
| APPROACH              | MVMT     | LANES  | VOLUME | CAPACITY | V/C                      | ICU ANALYSIS     |
| Southbound            | RT       | 0.00   | 80     | 0        | 0.000                    | N-S(1): 0.405 *  |
|                       | TH       | 2.00   | 630    | 3,200    | 0.222                    | N-S(2): 0.228    |
|                       | LT       | 2.00   | 150    | 2,880    | 0.052 *                  | E-W(1): 0.172    |
| Westbound             | RT       | 1.00   | 530    | 1,600    | 0.279 *                  | E-W(2): 0.304 *  |
|                       | TH       | 2.00   | 490    | 3,200    | 0.153                    |                  |
|                       | LT       | 2.00   | 190    | 2,880    | 0.066                    | V/C: 0.709       |
| Northbound            | RT       | 1.00   | 140    | 1,600    | 0.000                    | Lost Time: 0.100 |
|                       | TH       | 2.00   | 1,130  | 3,200    | 0.353 *                  | ITS: 0.000       |
|                       | LT       | 1.00   | 10     | 1,600    | 0.006                    |                  |
| Eastbound             | RT       | 0.00   | 50     | 0        | 0.000                    | ICU: 0.809       |
|                       | TH       | 2.00   | 290    | 3,200    | 0.106                    |                  |
|                       | LT       | 1.00   | 40     | 1,600    | 0.025 *                  | LOS: D           |
| <b>Date/Time:</b>     |          | <b>PM PEAK HOUR</b>                                    |        |          |                          |                  |
| APPROACH              | MVMT     | LANES  | VOLUME | CAPACITY | V/C                      | ICU ANALYSIS     |
| Southbound            | RT       | 0.00   | 120    | 0        | 0.000                    | N-S(1): 0.438    |
|                       | TH       | 2.00   | 1,490  | 3,200    | 0.503 *                  | N-S(2): 0.516 *  |
|                       | LT       | 2.00   | 550    | 2,880    | 0.191                    | E-W(1): 0.235 *  |
| Westbound             | RT       | 1.00   | 290    | 1,600    | 0.000                    | E-W(2): 0.147    |
|                       | TH       | 2.00   | 410    | 3,200    | 0.128                    |                  |
|                       | LT       | 2.00   | 220    | 2,880    | 0.076 *                  | V/C: 0.751       |
| Northbound            | RT       | 1.00   | 170    | 1,600    | 0.000                    | Lost Time: 0.100 |
|                       | TH       | 2.00   | 790    | 3,200    | 0.247                    | ITS: 0.000       |
|                       | LT       | 1.00   | 20     | 1,600    | 0.013 *                  |                  |
| Eastbound             | RT       | 0.00   | 20     | 0        | 0.000                    | ICU: 0.851       |
|                       | TH       | 2.00   | 490    | 3,200    | 0.159 *                  |                  |
|                       | LT       | 1.00   | 30     | 1,600    | 0.019                    | LOS: D           |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 4 Pacific Coast Highway &amp; Aviation Boulevard</b><br><b>Description: PLAN Hermosa (2040)</b> |          |       |        |          |         |                             |
|---|----------|-------|--------|----------|---------|-----------------------------|
| <b>Date/Time: AM PEAK HOUR</b>  |          |       |        |          |         |                             |
| Thru Lane:  | 1600 vph |       |        |          |         | N-S Split Phase : N         |
| Left Lane:  | 1600 vph |       |        |          |         | E-W Split Phase : N         |
| Double Lt Penalty:  | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10 |
| ITS:  | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3   |
| OLA Movements :   |          |       |        |          |         |                             |
| FF Movements:   | NBR, WBR |       |        |          |         |                             |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS                |
| Southbound  | RT       | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.629 *             |
|   | TH       | 2.00  | 510    | 3,200    | 0.159   | N-S(2): 0.165               |
|   | LT       | 1.00  | 260    | 1,600    | 0.163 * | E-W(1): 0.141 *             |
| Westbound   | RT       | 1.00  | 130    | 1,600    | 0.000   | E-W(2): 0.122               |
|   | TH       | 0.05  | 10     | 82       | 0.122   |                             |
|   | LT       | 1.95  | 380    | 2,806    | 0.135 * | V/C: 0.770                  |
| Northbound  | RT       | 1.00  | 390    | 1,600    | 0.000   | Lost Time: 0.100            |
|   | TH       | 2.00  | 1,490  | 3,200    | 0.466 * | ITS: 0.000                  |
|   | LT       | 1.00  | 10     | 1,600    | 0.006   |                             |
| Eastbound   | RT       | 1.00  | 10     | 1,600    | 0.006 * | ICU: 0.870                  |
|   | TH       | 0.00  | 0      | 0        | 0.000   |                             |
|   | LT       | 0.00  | 0      | 0        | 0.000   | LOS: D                      |
| <b>Date/Time: PM PEAK HOUR</b>  |          |       |        |          |         |                             |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS                |
| Southbound  | RT       | 0.00  | 0      | 0        | 0.000   | N-S(1): 0.372               |
|   | TH       | 2.00  | 1,320  | 3,200    | 0.413 * | N-S(2): 0.426 *             |
|   | LT       | 1.00  | 190    | 1,600    | 0.119   | E-W(1): 0.155 *             |
| Westbound   | RT       | 1.00  | 290    | 1,600    | 0.000   | E-W(2): 0.134               |
|   | TH       | 0.05  | 10     | 74       | 0.134   |                             |
|   | LT       | 1.95  | 420    | 2,813    | 0.149 * | V/C: 0.581                  |
| Northbound  | RT       | 1.00  | 340    | 1,600    | 0.000   | Lost Time: 0.100            |
|   | TH       | 2.00  | 810    | 3,200    | 0.253   | ITS: 0.000                  |
|   | LT       | 1.00  | 20     | 1,600    | 0.013 * |                             |
| Eastbound   | RT       | 1.00  | 10     | 1,600    | 0.006 * | ICU: 0.681                  |
|   | TH       | 0.00  | 0      | 0        | 0.000   |                             |
|   | LT       | 0.00  | 0      | 0        | 0.000   | LOS: B                      |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 5 Pacific Coast Highway &amp; Pier Avenue</b><br><b>Description: PLAN Hermosa (2040)</b> |          |       |        |          |         |  |
|--|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>   |          |       |        |          |         |  |
| Thru Lane:   | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:   | 1600 vph |       |        |          |         | E-W Split Phase : Y  |
| Double Lt Penalty:   | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:   | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :  | EBR,     |       |        |          |         |  |
| FF Movements:  |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 60     | 0        | 0.000   | N-S(1): 0.431 *<br>N-S(2): 0.253<br>E-W(1): 0.088 *<br>E-W(2): 0.000 |
|  | TH       | 2.00  | 570    | 3,200    | 0.197   |  |
|  | LT       | 1.00  | 10     | 1,600    | 0.006 * |  |
| Westbound  | RT       | 1.00  | 10     | 1,600    | 0.006 * | V/C: 0.519<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 0.00  | 0      | 0        | 0.000   |  |
| Northbound   | RT       | 0.00  | 10     | 0        | 0.000   | ICU: 0.619   |
|  | TH       | 2.00  | 1,350  | 3,200    | 0.425 * |  |
|  | LT       | 2.00  | 160    | 2,880    | 0.056   |  |
| Eastbound  | RT       | 1.00  | 220    | 1,600    | 0.082 * | LOS: B   |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 2.00  | 200    | 2,880    | 0.069   |  |
| <b>Date/Time: PM PEAK HOUR</b>   |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 150    | 0        | 0.000   | N-S(1): 0.269<br>N-S(2): 0.552 *<br>E-W(1): 0.089 *<br>E-W(2): 0.000 |
|  | TH       | 2.00  | 1,270  | 3,200    | 0.444 * |  |
|  | LT       | 1.00  | 10     | 1,600    | 0.006   |  |
| Westbound  | RT       | 1.00  | 20     | 1,600    | 0.013 * | V/C: 0.641<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 0.00  | 0      | 0        | 0.000   |  |
| Northbound   | RT       | 0.00  | 10     | 0        | 0.000   | ICU: 0.741   |
|  | TH       | 2.00  | 830    | 3,200    | 0.263   |  |
|  | LT       | 2.00  | 310    | 2,880    | 0.108 * |  |
| Eastbound  | RT       | 1.00  | 210    | 1,600    | 0.024   | LOS: C   |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 2.00  | 220    | 2,880    | 0.076 * |  |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 6 Pacific Coast Highway &amp; 2nd Street</b><br><b>Description: PLAN Hermosa (2040)</b> |          |       |        |          |         |                             |
|---|----------|-------|--------|----------|---------|-----------------------------|
| <b>Date/Time: AM PEAK HOUR</b>  |          |       |        |          |         |                             |
| Thru Lane:  | 1600 vph |       |        |          |         | N-S Split Phase : N         |
| Left Lane:  | 1600 vph |       |        |          |         | E-W Split Phase : Y         |
| Double Lt Penalty:  | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10 |
| ITS:  | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3   |
| OLA Movements :   |          |       |        |          |         |                             |
| FF Movements:   |          |       |        |          |         |                             |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS                |
| Southbound  | RT       | 0.00  | 30     | 0        | 0.000   | N-S(1): 0.575 *             |
|   | TH       | 2.00  | 810    | 3,200    | 0.266   | N-S(2): 0.329               |
|   | LT       | 0.00  | 10     | 1,600    | 0.006 * | E-W(1): 0.069 *             |
| Westbound   | RT       | 0.00  | 20     | 0        | 0.000   | E-W(2): 0.000               |
|   | TH       | 1.00  | 10     | 1,600    | 0.025 * |                             |
|   | LT       | 0.00  | 10     | 1,600    | 0.006   | V/C: 0.644                  |
| Northbound  | RT       | 0.00  | 10     | 0        | 0.000   | Lost Time: 0.100            |
|   | TH       | 2.00  | 1,810  | 3,200    | 0.569 * | ITS: 0.000                  |
|   | LT       | 1.00  | 100    | 1,600    | 0.063   |                             |
| Eastbound   | RT       | 0.00  | 30     | 0        | 0.000   | ICU: 0.744                  |
|   | TH       | 1.00  | 10     | 1,600    | 0.044 * |                             |
|   | LT       | 0.00  | 30     | 1,600    | 0.019   | LOS: C                      |
| <b>Date/Time: PM PEAK HOUR</b>  |          |       |        |          |         |                             |
| APPROACH  | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS                |
| Southbound  | RT       | 0.00  | 30     | 0        | 0.000   | N-S(1): 0.340               |
|   | TH       | 2.00  | 1,520  | 3,200    | 0.488 * | N-S(2): 0.532 *             |
|   | LT       | 0.00  | 10     | 1,600    | 0.006   | E-W(1): 0.100 *             |
| Westbound   | RT       | 0.00  | 20     | 0        | 0.000   | E-W(2): 0.000               |
|   | TH       | 1.00  | 10     | 1,600    | 0.031 * |                             |
|   | LT       | 0.00  | 20     | 1,600    | 0.013   | V/C: 0.632                  |
| Northbound  | RT       | 0.00  | 10     | 0        | 0.000   | Lost Time: 0.100            |
|   | TH       | 2.00  | 1,060  | 3,200    | 0.334   | ITS: 0.000                  |
|   | LT       | 1.00  | 70     | 1,600    | 0.044 * |                             |
| Eastbound   | RT       | 0.00  | 30     | 0        | 0.000   | ICU: 0.732                  |
|   | TH       | 1.00  | 10     | 1,600    | 0.069 * |                             |
|   | LT       | 0.00  | 70     | 1,600    | 0.044   | LOS: C                      |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 7 Pacific Coast Highway &amp; 16th Street</b><br><b>Description: PLAN Hermosa (2040)</b> |          |       |        |          |         |  |
|--|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>   |          |       |        |          |         |  |
| Thru Lane:   | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:   | 1600 vph |       |        |          |         | E-W Split Phase : Y  |
| Double Lt Penalty:   | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:   | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :  |          |       |        |          |         |  |
| FF Movements:  |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 1.00  | 130    | 1,600    | 0.059   | N-S(1): 0.379 *<br>N-S(2): 0.285<br>E-W(1): 0.082 *<br>E-W(2): 0.000 |
|  | TH       | 2.00  | 770    | 3,200    | 0.241   |  |
|  | LT       | 1.00  | 20     | 1,600    | 0.013 * |  |
| Westbound  | RT       | 0.50  | 30     | 800      | 0.031   | V/C: 0.461<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 0.50  | 30     | 800      | 0.038 * |  |
| Northbound   | RT       | 0.00  | 40     | 0        | 0.000   | ICU: 0.561   |
|  | TH       | 2.00  | 1,130  | 3,200    | 0.366 * |  |
|  | LT       | 1.00  | 70     | 1,600    | 0.044   |  |
| Eastbound  | RT       | 1.00  | 60     | 1,600    | 0.016   | LOS: A   |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 1.00  | 70     | 1,600    | 0.044 * |  |
| <b>Date/Time: PM PEAK HOUR</b>   |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 1.00  | 180    | 1,600    | 0.081   | N-S(1): 0.300<br>N-S(2): 0.488 *<br>E-W(1): 0.082 *<br>E-W(2): 0.000 |
|  | TH       | 2.00  | 1,360  | 3,200    | 0.425 * |  |
|  | LT       | 1.00  | 10     | 1,600    | 0.006   |  |
| Westbound  | RT       | 0.33  | 10     | 533      | 0.016   | V/C: 0.570<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 0.67  | 20     | 1,067    | 0.019 * |  |
| Northbound   | RT       | 0.00  | 30     | 0        | 0.000   | ICU: 0.670   |
|  | TH       | 2.00  | 910    | 3,200    | 0.294   |  |
|  | LT       | 1.00  | 100    | 1,600    | 0.063 * |  |
| Eastbound  | RT       | 1.00  | 80     | 1,600    | 0.019   | LOS: B   |
|  | TH       | 0.00  | 0      | 0        | 0.000   |  |
|  | LT       | 1.00  | 100    | 1,600    | 0.063 * |  |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 8 Pacific Coast Highway &amp; 21st Street</b><br><b>Description: PLAN Hermosa (2040)</b> |          |       |        |          |         |  |
|--|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>   |          |       |        |          |         |  |
| Thru Lane:   | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:   | 1600 vph |       |        |          |         | E-W Split Phase : N  |
| Double Lt Penalty:   | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:   | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :  |          |       |        |          |         |  |
| FF Movements:  |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 30     | 0        | 0.000   | N-S(1): 0.366 *<br>N-S(2): 0.297<br>E-W(1): 0.144 *<br>E-W(2): 0.138 |
|  | TH       | 2.00  | 820    | 3,200    | 0.266   |  |
|  | LT       | 1.00  | 30     | 1,600    | 0.019 * |  |
| Westbound  | RT       | 0.00  | 30     | 0        | 0.000   | V/C: 0.510<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 1.00  | 70     | 1,600    | 0.094   |  |
|  | LT       | 0.00  | 50     | 1,600    | 0.031 * |  |
| Northbound   | RT       | 0.00  | 30     | 0        | 0.000   | ICU: 0.610   |
|  | TH       | 2.00  | 1,080  | 3,200    | 0.347 * |  |
|  | LT       | 1.00  | 50     | 1,600    | 0.031   |  |
| Eastbound  | RT       | 0.00  | 20     | 0        | 0.000   | LOS: B   |
|  | TH       | 1.00  | 90     | 1,600    | 0.113 * |  |
|  | LT       | 0.00  | 70     | 1,600    | 0.044   |  |
| <b>Date/Time: PM PEAK HOUR</b>   |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 80     | 0        | 0.000   | N-S(1): 0.347<br>N-S(2): 0.553 *<br>E-W(1): 0.063<br>E-W(2): 0.076 * |
|  | TH       | 2.00  | 1,610  | 3,200    | 0.528 * |  |
|  | LT       | 1.00  | 70     | 1,600    | 0.044   |  |
| Westbound  | RT       | 0.00  | 30     | 0        | 0.000   | V/C: 0.629<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 1.00  | 40     | 1,600    | 0.063 * |  |
|  | LT       | 0.00  | 30     | 1,600    | 0.019   |  |
| Northbound   | RT       | 0.00  | 20     | 0        | 0.000   | ICU: 0.729   |
|  | TH       | 2.00  | 950    | 3,200    | 0.303   |  |
|  | LT       | 1.00  | 40     | 1,600    | 0.025 * |  |
| Eastbound  | RT       | 0.00  | 20     | 0        | 0.000   | LOS: C   |
|  | TH       | 1.00  | 30     | 1,600    | 0.044   |  |
|  | LT       | 0.00  | 20     | 1,600    | 0.013 * |  |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 9 Prospect Avenue &amp; Artesia Boulevard</b><br><b>Description: PLAN Hermosa (2040)</b> |          |       |        |          |         |  |
|--|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>   |          |       |        |          |         |  |
| Thru Lane:   | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:   | 1600 vph |       |        |          |         | E-W Split Phase : N  |
| Double Lt Penalty:   | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:   | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :  |          |       |        |          |         |  |
| FF Movements:  |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 30     | 0        | 0.000   | N-S(1): 0.275 *<br>N-S(2): 0.231<br>E-W(1): 0.278<br>E-W(2): 0.365 * |
|  | TH       | 1.00  | 30     | 1,600    | 0.056   |  |
|  | LT       | 0.00  | 30     | 1,600    | 0.019 * |  |
| Westbound  | RT       | 0.00  | 100    | 0        | 0.000   | V/C: 0.640<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 2.00  | 970    | 3,200    | 0.334 * |  |
|  | LT       | 1.00  | 120    | 1,600    | 0.075   |  |
| Northbound   | RT       | 1.00  | 300    | 1,600    | 0.150   | ICU: 0.740   |
|  | TH       | 1.00  | 130    | 1,600    | 0.256 * |  |
|  | LT       | 0.00  | 280    | 1,600    | 0.175   |  |
| Eastbound  | RT       | 0.00  | 80     | 0        | 0.000   | LOS: C   |
|  | TH       | 2.00  | 570    | 3,200    | 0.203   |  |
|  | LT       | 1.00  | 50     | 1,600    | 0.031 * |  |
| <b>Date/Time: PM PEAK HOUR</b>   |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 30     | 0        | 0.000   | N-S(1): 0.151<br>N-S(2): 0.207 *<br>E-W(1): 0.444 *<br>E-W(2): 0.269 |
|  | TH       | 1.00  | 90     | 1,600    | 0.113 * |  |
|  | LT       | 0.00  | 60     | 1,600    | 0.038   |  |
| Westbound  | RT       | 0.00  | 30     | 0        | 0.000   | V/C: 0.651<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 2.00  | 770    | 3,200    | 0.250   |  |
|  | LT       | 1.00  | 160    | 1,600    | 0.100 * |  |
| Northbound   | RT       | 1.00  | 140    | 1,600    | 0.038   | ICU: 0.751   |
|  | TH       | 1.00  | 30     | 1,600    | 0.113   |  |
|  | LT       | 0.00  | 150    | 1,600    | 0.094 * |  |
| Eastbound  | RT       | 0.00  | 110    | 0        | 0.000   | LOS: C   |
|  | TH       | 2.00  | 990    | 3,200    | 0.344 * |  |
|  | LT       | 1.00  | 30     | 1,600    | 0.019   |  |

\* - Denotes critical movement

| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 10 Prospect Avenue &amp; Aviation Boulevard</b><br><b>Description: PLAN Hermosa (2040)</b> |          |       |        |          |         |  |
|--|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>   |          |       |        |          |         |  |
| Thru Lane:   | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:   | 1600 vph |       |        |          |         | E-W Split Phase : N  |
| Double Lt Penalty:   | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:   | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :  |          |       |        |          |         |  |
| FF Movements:  | EBR,     |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 1.00  | 70     | 1,600    | 0.022   | N-S(1): 0.294 *<br>N-S(2): 0.125<br>E-W(1): 0.297 *<br>E-W(2): 0.244 |
|  | TH       | 1.00  | 110    | 1,600    | 0.069   |  |
|  | LT       | 1.00  | 60     | 1,600    | 0.038 * |  |
| Westbound  | RT       | 0.00  | 50     | 0        | 0.000   | V/C: 0.591<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 2.00  | 590    | 3,200    | 0.200   |  |
|  | LT       | 1.00  | 170    | 1,600    | 0.106 * |  |
| Northbound   | RT       | 1.00  | 330    | 1,600    | 0.153   | ICU: 0.691   |
|  | TH       | 1.00  | 410    | 1,600    | 0.256 * |  |
|  | LT       | 1.00  | 90     | 1,600    | 0.056   |  |
| Eastbound  | RT       | 1.00  | 30     | 1,600    | 0.000   | LOS: B   |
|  | TH       | 2.00  | 610    | 3,200    | 0.191 * |  |
|  | LT       | 1.00  | 70     | 1,600    | 0.044   |  |
| <b>Date/Time: PM PEAK HOUR</b>   |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 1.00  | 60     | 1,600    | 0.028   | N-S(1): 0.219<br>N-S(2): 0.312 *<br>E-W(1): 0.325 *<br>E-W(2): 0.257 |
|  | TH       | 1.00  | 450    | 1,600    | 0.281 * |  |
|  | LT       | 1.00  | 110    | 1,600    | 0.069   |  |
| Westbound  | RT       | 0.00  | 60     | 0        | 0.000   | V/C: 0.637<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 2.00  | 700    | 3,200    | 0.238   |  |
|  | LT       | 1.00  | 270    | 1,600    | 0.169 * |  |
| Northbound   | RT       | 1.00  | 180    | 1,600    | 0.028   | ICU: 0.737   |
|  | TH       | 1.00  | 240    | 1,600    | 0.150   |  |
|  | LT       | 1.00  | 50     | 1,600    | 0.031 * |  |
| Eastbound  | RT       | 1.00  | 60     | 1,600    | 0.000   | LOS: C   |
|  | TH       | 2.00  | 500    | 3,200    | 0.156 * |  |
|  | LT       | 1.00  | 30     | 1,600    | 0.019   |  |

\* - Denotes critical movement



| <b>Project Title: City of Hermosa Beach General Plan Update</b><br><b>Intersection: 11 Prospect Avenue &amp; Anita Street</b><br><b>Description: PLAN Hermosa (2040)</b> |          |       |        |          |         |  |
|--|----------|-------|--------|----------|---------|--|
| <b>Date/Time: AM PEAK HOUR</b>   |          |       |        |          |         |  |
| Thru Lane:   | 1600 vph |       |        |          |         | N-S Split Phase : N  |
| Left Lane:   | 1600 vph |       |        |          |         | E-W Split Phase : N  |
| Double Lt Penalty:   | 10 %     |       |        |          |         | Lost Time (% of cycle) : 10  |
| ITS:   | 0 %      |       |        |          |         | V/C Round Off (decs.) : 3  |
| OLA Movements :  |          |       |        |          |         |  |
| FF Movements:  |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 30     | 0        | 0.000   | N-S(1): 0.337 *<br>N-S(2): 0.216<br>E-W(1): 0.222<br>E-W(2): 0.253 * |
|  | TH       | 2.00  | 300    | 3,200    | 0.103   |  |
|  | LT       | 1.00  | 50     | 1,600    | 0.031 * |  |
| Westbound  | RT       | 0.00  | 130    | 0        | 0.000   | V/C: 0.590<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 2.00  | 540    | 3,200    | 0.209 * |  |
|  | LT       | 1.00  | 90     | 1,600    | 0.056   |  |
| Northbound   | RT       | 1.00  | 170    | 1,600    | 0.078   | ICU: 0.690   |
|  | TH       | 1.00  | 490    | 1,600    | 0.306 * |  |
|  | LT       | 1.00  | 180    | 1,600    | 0.113   |  |
| Eastbound  | RT       | 0.00  | 70     | 0        | 0.000   | LOS: B   |
|  | TH       | 2.00  | 460    | 3,200    | 0.166   |  |
|  | LT       | 1.00  | 70     | 1,600    | 0.044 * |  |
| <b>Date/Time: PM PEAK HOUR</b>   |          |       |        |          |         |  |
| APPROACH   | MVMT     | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
| Southbound   | RT       | 0.00  | 50     | 0        | 0.000   | N-S(1): 0.331 *<br>N-S(2): 0.238<br>E-W(1): 0.191<br>E-W(2): 0.241 * |
|  | TH       | 2.00  | 510    | 3,200    | 0.175   |  |
|  | LT       | 1.00  | 160    | 1,600    | 0.100 * |  |
| Westbound  | RT       | 0.00  | 120    | 0        | 0.000   | V/C: 0.572<br>Lost Time: 0.100<br>ITS: 0.000                         |
|  | TH       | 2.00  | 590    | 3,200    | 0.222 * |  |
|  | LT       | 1.00  | 100    | 1,600    | 0.063   |  |
| Northbound   | RT       | 1.00  | 90     | 1,600    | 0.025   | ICU: 0.672   |
|  | TH       | 1.00  | 370    | 1,600    | 0.231 * |  |
|  | LT       | 1.00  | 100    | 1,600    | 0.063   |  |
| Eastbound  | RT       | 0.00  | 80     | 0        | 0.000   | LOS: B   |
|  | TH       | 2.00  | 330    | 3,200    | 0.128   |  |
|  | LT       | 1.00  | 30     | 1,600    | 0.019 * |  |

\* - Denotes critical movement

## **UNSIGNALIZED INTERSECTIONS**

**Intersection**

|                           |      |
|---------------------------|------|
| Intersection Delay, s/veh | 38.2 |
| Intersection LOS          | E    |

| Movement          | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Vol, veh/h        | 0    | 400  | 140  | 10   | 0    | 30   | 110  | 80   | 0    | 10   | 260  | 80   |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 400  | 140  | 10   | 0    | 30   | 110  | 80   | 0    | 10   | 260  | 80   |
| Number of Lanes   | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   |
|----------------------------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   |
| Opposing Lanes             | 1    | 1    | 2    |
| Conflicting Approach Left  | SB   | NB   | EB   |
| Conflicting Lanes Left     | 2    | 1    | 1    |
| Conflicting Approach Right | NB   | SB   | WB   |
| Conflicting Lanes Right    | 1    | 2    | 1    |
| HCM Control Delay          | 66.3 | 16.7 | 25.8 |
| HCM LOS                    | F    | C    | D    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|
| Vol Left, %            | 3%    | 73%   | 14%   | 100%  | 0%    |
| Vol Thru, %            | 74%   | 25%   | 50%   | 0%    | 43%   |
| Vol Right, %           | 23%   | 2%    | 36%   | 0%    | 57%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 350   | 550   | 220   | 70    | 210   |
| LT Vol                 | 10    | 400   | 30    | 70    | 0     |
| Through Vol            | 260   | 140   | 110   | 0     | 90    |
| RT Vol                 | 80    | 10    | 80    | 0     | 120   |
| Lane Flow Rate         | 350   | 550   | 220   | 70    | 210   |
| Geometry Grp           | 5     | 2     | 2     | 7     | 7     |
| Degree of Util (X)     | 0.701 | 1     | 0.458 | 0.165 | 0.449 |
| Departure Headway (Hd) | 7.34  | 7.003 | 7.501 | 8.613 | 7.693 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 497   | 523   | 482   | 419   | 470   |
| Service Time           | 5.34  | 5.034 | 5.516 | 6.313 | 5.413 |
| HCM Lane V/C Ratio     | 0.704 | 1.052 | 0.456 | 0.167 | 0.447 |
| HCM Control Delay      | 25.8  | 66.3  | 16.7  | 13    | 16.5  |
| HCM Lane LOS           | D     | F     | C     | B     | C     |
| HCM 95th-tile Q        | 5.4   | 13.9  | 2.4   | 0.6   | 2.3   |

**Intersection**

Intersection Delay, s/veh  
 Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 70   | 90   | 120  |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 70   | 90   | 120  |
| Number of Lanes   | 0    | 1    | 1    | 0    |

**Approach** SB

|                            |      |
|----------------------------|------|
| Opposing Approach          | NB   |
| Opposing Lanes             | 1    |
| Conflicting Approach Left  | WB   |
| Conflicting Lanes Left     | 1    |
| Conflicting Approach Right | EB   |
| Conflicting Lanes Right    | 1    |
| HCM Control Delay          | 15.6 |
| HCM LOS                    | C    |

**Lane**

| Intersection              |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Intersection Delay, s/veh | 18.1 |      |      |      |      |      |      |      |      |      |      |      |
| Intersection LOS          | C    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                  | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
| Vol, veh/h                | 0    | 50   | 230  | 30   | 0    | 140  | 240  | 80   | 0    | 20   | 170  | 110  |
| Peak Hour Factor          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                 | 0    | 50   | 230  | 30   | 0    | 140  | 240  | 80   | 0    | 20   | 170  | 110  |
| Number of Lanes           | 0    | 0    | 1    | 1    | 0    | 1    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   |
|----------------------------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   |
| Opposing Lanes             | 2    | 2    | 1    |
| Conflicting Approach Left  | SB   | NB   | EB   |
| Conflicting Lanes Left     | 1    | 1    | 2    |
| Conflicting Approach Right | NB   | SB   | WB   |
| Conflicting Lanes Right    | 1    | 1    | 2    |
| HCM Control Delay          | 19.1 | 18.3 | 18.4 |
| HCM LOS                    | C    | C    | C    |

| Lane                   | NBLn1 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 7%    | 18%   | 0%    | 100%  | 0%    | 30%   |
| Vol Thru, %            | 57%   | 82%   | 0%    | 0%    | 75%   | 57%   |
| Vol Right, %           | 37%   | 0%    | 100%  | 0%    | 25%   | 13%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 300   | 280   | 30    | 140   | 320   | 230   |
| LT Vol                 | 20    | 50    | 0     | 140   | 0     | 70    |
| Through Vol            | 170   | 230   | 0     | 0     | 240   | 130   |
| RT Vol                 | 110   | 0     | 30    | 0     | 80    | 30    |
| Lane Flow Rate         | 300   | 280   | 30    | 140   | 320   | 230   |
| Geometry Grp           | 2     | 7     | 7     | 7     | 7     | 2     |
| Degree of Util (X)     | 0.565 | 0.579 | 0.055 | 0.297 | 0.617 | 0.457 |
| Departure Headway (Hd) | 6.774 | 7.441 | 6.629 | 7.636 | 6.942 | 7.159 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 531   | 482   | 537   | 469   | 518   | 499   |
| Service Time           | 4.854 | 5.223 | 4.41  | 5.415 | 4.721 | 5.249 |
| HCM Lane V/C Ratio     | 0.565 | 0.581 | 0.056 | 0.299 | 0.618 | 0.461 |
| HCM Control Delay      | 18.4  | 20.1  | 9.8   | 13.6  | 20.4  | 16.2  |
| HCM Lane LOS           | C     | C     | A     | B     | C     | C     |
| HCM 95th-tile Q        | 3.5   | 3.6   | 0.2   | 1.2   | 4.1   | 2.4   |

**Intersection**

Intersection Delay, s/veh

Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 70   | 130  | 30   |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 70   | 130  | 30   |
| Number of Lanes   | 0    | 0    | 1    | 0    |

**Approach** SB

Opposing Approach NB

Opposing Lanes 1

Conflicting Approach Left WB

Conflicting Lanes Left 2

Conflicting Approach Right EB

Conflicting Lanes Right 2

HCM Control Delay 16.2

HCM LOS C

**Lane**

**Intersection**

|                           |      |
|---------------------------|------|
| Intersection Delay, s/veh | 21.2 |
| Intersection LOS          | C    |

| Movement          | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Vol, veh/h        | 0    | 220  | 90   | 10   | 0    | 60   | 130  | 80   | 0    | 10   | 90   | 40   |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 220  | 90   | 10   | 0    | 60   | 130  | 80   | 0    | 10   | 90   | 40   |
| Number of Lanes   | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   |
|----------------------------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   |
| Opposing Lanes             | 1    | 1    | 2    |
| Conflicting Approach Left  | SB   | NB   | EB   |
| Conflicting Lanes Left     | 2    | 1    | 1    |
| Conflicting Approach Right | NB   | SB   | WB   |
| Conflicting Lanes Right    | 1    | 2    | 1    |
| HCM Control Delay          | 19.5 | 16.2 | 12.8 |
| HCM LOS                    | C    | C    | B    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|
| Vol Left, %            | 7%    | 69%   | 22%   | 100%  | 0%    |
| Vol Thru, %            | 64%   | 28%   | 48%   | 0%    | 38%   |
| Vol Right, %           | 29%   | 3%    | 30%   | 0%    | 62%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 140   | 320   | 270   | 70    | 450   |
| LT Vol                 | 10    | 220   | 60    | 70    | 0     |
| Through Vol            | 90    | 90    | 130   | 0     | 170   |
| RT Vol                 | 40    | 10    | 80    | 0     | 280   |
| Lane Flow Rate         | 140   | 320   | 270   | 70    | 450   |
| Geometry Grp           | 5     | 2     | 2     | 7     | 7     |
| Degree of Util (X)     | 0.275 | 0.6   | 0.498 | 0.142 | 0.797 |
| Departure Headway (Hd) | 7.071 | 6.745 | 6.64  | 7.328 | 6.372 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 505   | 534   | 540   | 489   | 567   |
| Service Time           | 5.157 | 4.812 | 4.711 | 5.086 | 4.13  |
| HCM Lane V/C Ratio     | 0.277 | 0.599 | 0.5   | 0.143 | 0.794 |
| HCM Control Delay      | 12.8  | 19.5  | 16.2  | 11.3  | 29.7  |
| HCM Lane LOS           | B     | C     | C     | B     | D     |
| HCM 95th-tile Q        | 1.1   | 3.9   | 2.8   | 0.5   | 7.7   |

**Intersection**

Intersection Delay, s/veh

Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 70   | 170  | 280  |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 70   | 170  | 280  |
| Number of Lanes   | 0    | 1    | 1    | 0    |

**Approach** SB

|                            |      |
|----------------------------|------|
| Opposing Approach          | NB   |
| Opposing Lanes             | 1    |
| Conflicting Approach Left  | WB   |
| Conflicting Lanes Left     | 1    |
| Conflicting Approach Right | EB   |
| Conflicting Lanes Right    | 1    |
| HCM Control Delay          | 27.2 |
| HCM LOS                    | D    |

**Lane**



| Intersection              |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Intersection Delay, s/veh | 20.8 |      |      |      |      |      |      |      |      |      |      |      |
| Intersection LOS          | C    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                  | EBU  | EBL  | EBT  | EBR  | WBU  | WBL  | WBT  | WBR  | NBU  | NBL  | NBT  | NBR  |
| Vol, veh/h                | 0    | 30   | 230  | 30   | 0    | 110  | 260  | 50   | 0    | 20   | 70   | 80   |
| Peak Hour Factor          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                 | 0    | 30   | 230  | 30   | 0    | 110  | 260  | 50   | 0    | 20   | 70   | 80   |
| Number of Lanes           | 0    | 0    | 1    | 1    | 0    | 1    | 1    | 0    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   |
|----------------------------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   |
| Opposing Lanes             | 2    | 2    | 1    |
| Conflicting Approach Left  | SB   | NB   | EB   |
| Conflicting Lanes Left     | 1    | 1    | 2    |
| Conflicting Approach Right | NB   | SB   | WB   |
| Conflicting Lanes Right    | 1    | 1    | 2    |
| HCM Control Delay          | 18.1 | 18.7 | 13.9 |
| HCM LOS                    | C    | C    | B    |

| Lane                   | NBLn1 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 12%   | 12%   | 0%    | 100%  | 0%    | 20%   |
| Vol Thru, %            | 41%   | 88%   | 0%    | 0%    | 84%   | 73%   |
| Vol Right, %           | 47%   | 0%    | 100%  | 0%    | 16%   | 7%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 170   | 260   | 30    | 110   | 310   | 410   |
| LT Vol                 | 20    | 30    | 0     | 110   | 0     | 80    |
| Through Vol            | 70    | 230   | 0     | 0     | 260   | 300   |
| RT Vol                 | 80    | 0     | 30    | 0     | 50    | 30    |
| Lane Flow Rate         | 170   | 260   | 30    | 110   | 310   | 410   |
| Geometry Grp           | 2     | 7     | 7     | 7     | 7     | 2     |
| Degree of Util (X)     | 0.337 | 0.544 | 0.056 | 0.237 | 0.614 | 0.758 |
| Departure Headway (Hd) | 7.129 | 7.533 | 6.751 | 7.765 | 7.135 | 6.658 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 502   | 476   | 527   | 461   | 502   | 541   |
| Service Time           | 5.226 | 5.318 | 4.536 | 5.548 | 4.917 | 4.728 |
| HCM Lane V/C Ratio     | 0.339 | 0.546 | 0.057 | 0.239 | 0.618 | 0.758 |
| HCM Control Delay      | 13.9  | 19    | 9.9   | 13    | 20.7  | 27.8  |
| HCM Lane LOS           | B     | C     | A     | B     | C     | D     |
| HCM 95th-tile Q        | 1.5   | 3.2   | 0.2   | 0.9   | 4.1   | 6.7   |

**Intersection**

Intersection Delay, s/veh  
 Intersection LOS

| Movement          | SBU  | SBL  | SBT  | SBR  |
|-------------------|------|------|------|------|
| Vol, veh/h        | 0    | 80   | 300  | 30   |
| Peak Hour Factor  | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles, % | 2    | 2    | 2    | 2    |
| Mvmt Flow         | 0    | 80   | 300  | 30   |
| Number of Lanes   | 0    | 0    | 1    | 0    |

**Approach**

| Approach                   | SB   |
|----------------------------|------|
| Opposing Approach          | NB   |
| Opposing Lanes             | 1    |
| Conflicting Approach Left  | WB   |
| Conflicting Lanes Left     | 2    |
| Conflicting Approach Right | EB   |
| Conflicting Lanes Right    | 2    |
| HCM Control Delay          | 27.8 |
| HCM LOS                    | D    |

**Lane**

## **CALTRANS ANALYSIS**

# HCM Signalized Intersection Capacity Analysis

## 3: Pacific Coast Hwy & Artesia Blvd

8/4/2016



| Movement               | EBL   | EBT  | EBR  | WBL   | WBT  | WBR   | NBL   | NBT   | NBR   | SBL  | SBT   | SBR  |
|------------------------|-------|------|------|-------|------|-------|-------|-------|-------|------|-------|------|
| Lane Configurations    | ↙     | ↕    |      | ↙     | ↕    | ↙     | ↙     | ↕     | ↙     | ↙    | ↕     | ↙    |
| Traffic Volume (vph)   | 40    | 290  | 50   | 190   | 490  | 530   | 10    | 1130  | 140   | 150  | 630   | 80   |
| Future Volume (vph)    | 40    | 290  | 50   | 190   | 490  | 530   | 10    | 1130  | 140   | 150  | 630   | 80   |
| Ideal Flow (vphpl)     | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Total Lost time (s)    | 4.0   | 4.0  |      | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   |      |
| Lane Util. Factor      | 1.00  | 0.95 |      | 0.97  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  | 0.97 | 0.95  |      |
| Frt                    | 1.00  | 0.98 |      | 1.00  | 1.00 | 0.85  | 1.00  | 1.00  | 0.85  | 1.00 | 0.98  |      |
| Flt Protected          | 0.95  | 1.00 |      | 0.95  | 1.00 | 1.00  | 0.95  | 1.00  | 1.00  | 0.95 | 1.00  |      |
| Satd. Flow (prot)      | 1770  | 3461 |      | 3433  | 3539 | 1583  | 1770  | 3539  | 1583  | 3433 | 3479  |      |
| Flt Permitted          | 0.95  | 1.00 |      | 0.95  | 1.00 | 1.00  | 0.95  | 1.00  | 1.00  | 0.95 | 1.00  |      |
| Satd. Flow (perm)      | 1770  | 3461 |      | 3433  | 3539 | 1583  | 1770  | 3539  | 1583  | 3433 | 3479  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 40    | 290  | 50   | 190   | 490  | 530   | 10    | 1130  | 140   | 150  | 630   | 80   |
| RTOR Reduction (vph)   | 0     | 7    | 0    | 0     | 0    | 91    | 0     | 0     | 43    | 0    | 4     | 0    |
| Lane Group Flow (vph)  | 40    | 333  | 0    | 190   | 490  | 439   | 10    | 1130  | 97    | 150  | 706   | 0    |
| Turn Type              | Prot  | NA   |      | Prot  | NA   | pm+ov | Prot  | NA    | Perm  | Prot | NA    |      |
| Protected Phases       | 7     | 4    |      | 3     | 8    | 1     | 5     | 2     |       | 1    | 6     |      |
| Permitted Phases       |       |      |      |       |      | 8     |       |       | 2     |      |       |      |
| Actuated Green, G (s)  | 8.7   | 26.7 |      | 16.4  | 34.4 | 62.8  | 3.2   | 112.5 | 112.5 | 28.4 | 137.7 |      |
| Effective Green, g (s) | 8.7   | 26.7 |      | 16.4  | 34.4 | 62.8  | 3.2   | 112.5 | 112.5 | 28.4 | 137.7 |      |
| Actuated g/C Ratio     | 0.04  | 0.13 |      | 0.08  | 0.17 | 0.31  | 0.02  | 0.56  | 0.56  | 0.14 | 0.69  |      |
| Clearance Time (s)     | 4.0   | 4.0  |      | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   |      |
| Vehicle Extension (s)  | 3.0   | 3.0  |      | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |      |
| Lane Grp Cap (vph)     | 76    | 462  |      | 281   | 608  | 497   | 28    | 1990  | 890   | 487  | 2395  |      |
| v/s Ratio Prot         | 0.02  | 0.10 |      | c0.06 | 0.14 | c0.13 | 0.01  | c0.32 |       | 0.04 | 0.20  |      |
| v/s Ratio Perm         |       |      |      |       |      | 0.15  |       |       | 0.06  |      |       |      |
| v/c Ratio              | 0.53  | 0.72 |      | 0.68  | 0.81 | 0.88  | 0.36  | 0.57  | 0.11  | 0.31 | 0.29  |      |
| Uniform Delay, d1      | 93.6  | 83.1 |      | 89.2  | 79.6 | 65.1  | 97.4  | 28.1  | 20.4  | 77.0 | 12.2  |      |
| Progression Factor     | 1.00  | 1.00 |      | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  |      |
| Incremental Delay, d2  | 6.4   | 5.5  |      | 6.3   | 7.7  | 16.9  | 7.7   | 1.2   | 0.2   | 0.4  | 0.3   |      |
| Delay (s)              | 100.1 | 88.6 |      | 95.5  | 87.3 | 82.0  | 105.0 | 29.3  | 20.6  | 77.3 | 12.5  |      |
| Level of Service       | F     | F    |      | F     | F    | F     | F     | C     | C     | E    | B     |      |
| Approach Delay (s)     |       | 89.8 |      |       | 86.3 |       |       | 28.9  |       |      | 23.8  |      |
| Approach LOS           |       | F    |      |       | F    |       |       | C     |       |      | C     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 52.6  | HCM 2000 Level of Service | D    |
| HCM 2000 Volume to Capacity ratio | 0.69  |                           |      |
| Actuated Cycle Length (s)         | 200.0 | Sum of lost time (s)      | 16.0 |
| Intersection Capacity Utilization | 78.2% | ICU Level of Service      | D    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Artesia Blvd   |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 4: Pacific Coast Hwy & Aviation Blvd

8/4/2016



| Movement                          | EBL  | EBT  | EBR   | WBL  | WBT                       | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR  |  |
|-----------------------------------|------|------|-------|------|---------------------------|-------|------|-------|-------|-------|-------|------|--|
| Lane Configurations               |      |      |       | ↙    | ↖                         | ↗     | ↘    | ↑↑    | ↗     | ↘     | ↖     | ↙    |  |
| Traffic Volume (vph)              | 0    | 0    | 10    | 380  | 10                        | 130   | 10   | 1490  | 390   | 260   | 510   | 0    |  |
| Future Volume (vph)               | 0    | 0    | 10    | 380  | 10                        | 130   | 10   | 1490  | 390   | 260   | 510   | 0    |  |
| Ideal Flow (vphpl)                | 1900 | 1900 | 1900  | 1900 | 1900                      | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 |  |
| Total Lost time (s)               |      | 4.0  |       | 4.8  | 4.8                       | 4.2   | 4.2  | 4.6   | 4.0   | 4.2   | 4.6   |      |  |
| Lane Util. Factor                 |      | 1.00 |       | 0.95 | 0.95                      | 1.00  | 1.00 | 0.95  | 1.00  | 1.00  | 0.95  |      |  |
| Frt                               |      | 0.85 |       | 1.00 | 1.00                      | 0.85  | 1.00 | 1.00  | 0.85  | 1.00  | 1.00  |      |  |
| Flt Protected                     |      | 1.00 |       | 0.95 | 0.95                      | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  |      |  |
| Satd. Flow (prot)                 |      | 0    |       | 1681 | 1689                      | 1583  | 1770 | 3539  | 1583  | 1770  | 3539  |      |  |
| Flt Permitted                     |      | 1.00 |       | 0.95 | 0.95                      | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  |      |  |
| Satd. Flow (perm)                 |      | 0    |       | 1681 | 1689                      | 1583  | 1770 | 3539  | 1583  | 1770  | 3539  |      |  |
| Peak-hour factor, PHF             | 1.00 | 1.00 | 1.00  | 1.00 | 1.00                      | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 |  |
| Adj. Flow (vph)                   | 0    | 0    | 10    | 380  | 10                        | 130   | 10   | 1490  | 390   | 260   | 510   | 0    |  |
| RTOR Reduction (vph)              | 0    | 10   | 0     | 0    | 0                         | 0     | 0    | 0     | 0     | 0     | 0     | 0    |  |
| Lane Group Flow (vph)             | 0    | 0    | 0     | 194  | 196                       | 130   | 10   | 1490  | 390   | 260   | 510   | 0    |  |
| Turn Type                         |      |      |       | Perm | NA                        | pm+ov | Prot | NA    | Free  | Prot  | NA    |      |  |
| Protected Phases                  |      |      |       |      | 8                         | 1     | 5    | 2     |       | 1     | 6     |      |  |
| Permitted Phases                  |      |      |       | 8    |                           | 8     |      |       | Free  |       |       |      |  |
| Actuated Green, G (s)             |      | 0.0  |       | 21.0 | 21.0                      | 34.8  | 11.8 | 101.6 | 150.0 | 13.8  | 103.6 |      |  |
| Effective Green, g (s)            |      | 0.0  |       | 21.0 | 21.0                      | 34.8  | 11.8 | 101.6 | 150.0 | 13.8  | 103.6 |      |  |
| Actuated g/C Ratio                |      | 0.00 |       | 0.14 | 0.14                      | 0.23  | 0.08 | 0.68  | 1.00  | 0.09  | 0.69  |      |  |
| Clearance Time (s)                |      |      |       | 4.8  | 4.8                       | 4.2   | 4.2  | 4.6   |       | 4.2   | 4.6   |      |  |
| Vehicle Extension (s)             |      |      |       | 1.2  | 1.2                       | 1.3   | 2.0  | 3.5   |       | 1.3   | 3.5   |      |  |
| Lane Grp Cap (vph)                |      | 0    |       | 235  | 236                       | 367   | 139  | 2397  | 1583  | 162   | 2444  |      |  |
| v/s Ratio Prot                    |      |      |       |      |                           | 0.03  | 0.01 | c0.42 |       | c0.15 | 0.14  |      |  |
| v/s Ratio Perm                    |      |      |       | 0.12 | 0.12                      | 0.05  |      |       | 0.25  |       |       |      |  |
| v/c Ratio                         |      | 0.00 |       | 0.83 | 0.83                      | 0.35  | 0.07 | 0.62  | 0.25  | 1.60  | 0.21  |      |  |
| Uniform Delay, d1                 |      | 75.0 |       | 62.7 | 62.8                      | 48.2  | 64.0 | 13.5  | 0.0   | 68.1  | 8.4   |      |  |
| Progression Factor                |      | 1.00 |       | 1.00 | 1.00                      | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |      |  |
| Incremental Delay, d2             |      | 0.0  |       | 19.6 | 20.5                      | 0.2   | 1.0  | 1.2   | 0.4   | 299.1 | 0.2   |      |  |
| Delay (s)                         |      | 75.0 |       | 82.3 | 83.2                      | 48.4  | 65.0 | 14.7  | 0.4   | 367.2 | 8.6   |      |  |
| Level of Service                  |      | E    |       | F    | F                         | D     | E    | B     | A     | F     | A     |      |  |
| Approach Delay (s)                |      | 75.0 |       |      | 74.2                      |       |      | 12.0  |       |       | 129.7 |      |  |
| Approach LOS                      |      | E    |       |      | E                         |       |      | B     |       |       | F     |      |  |
| <b>Intersection Summary</b>       |      |      |       |      |                           |       |      |       |       |       |       |      |  |
| HCM 2000 Control Delay            |      |      | 50.7  |      | HCM 2000 Level of Service |       |      |       |       | D     |       |      |  |
| HCM 2000 Volume to Capacity ratio |      |      | 0.75  |      |                           |       |      |       |       |       |       |      |  |
| Actuated Cycle Length (s)         |      |      | 150.0 |      | Sum of lost time (s)      |       |      |       |       | 13.6  |       |      |  |
| Intersection Capacity Utilization |      |      | Err%  |      | ICU Level of Service      |       |      |       |       | H     |       |      |  |
| Analysis Period (min)             |      |      | 15    |      |                           |       |      |       |       |       |       |      |  |
| Description: PCH & Aviation Blvd  |      |      |       |      |                           |       |      |       |       |       |       |      |  |
| c Critical Lane Group             |      |      |       |      |                           |       |      |       |       |       |       |      |  |

# HCM Signalized Intersection Capacity Analysis

## 5: Pacific Coast Hwy & Pier Ave

8/4/2016



| Movement               | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------|------|------|-------|------|------|------|------|-------|------|------|-------|------|
| Lane Configurations    |      |      |       |      |      |      |      |       |      |      |       |      |
| Traffic Volume (vph)   | 200  | 0    | 220   | 0    | 0    | 10   | 160  | 1350  | 10   | 10   | 570   | 60   |
| Future Volume (vph)    | 200  | 0    | 220   | 0    | 0    | 10   | 160  | 1350  | 10   | 10   | 570   | 60   |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 |
| Total Lost time (s)    | 4.6  |      | 4.2   |      |      | 4.2  | 4.2  | 4.6   |      | 4.2  | 4.6   |      |
| Lane Util. Factor      | 0.97 |      | 1.00  |      |      | 1.00 | 0.97 | 0.95  |      | 1.00 | 0.95  |      |
| Frt                    | 1.00 |      | 0.85  |      |      | 0.86 | 1.00 | 1.00  |      | 1.00 | 0.99  |      |
| Flt Protected          | 0.95 |      | 1.00  |      |      | 1.00 | 0.95 | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (prot)      | 3433 |      | 1583  |      |      | 1611 | 3433 | 3535  |      | 1770 | 3489  |      |
| Flt Permitted          | 0.95 |      | 1.00  |      |      | 1.00 | 0.95 | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (perm)      | 3433 |      | 1583  |      |      | 1611 | 3433 | 3535  |      | 1770 | 3489  |      |
| Peak-hour factor, PHF  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 200  | 0    | 220   | 0    | 0    | 10   | 160  | 1350  | 10   | 10   | 570   | 60   |
| RTOR Reduction (vph)   | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 3     | 0    |
| Lane Group Flow (vph)  | 200  | 0    | 220   | 0    | 0    | 10   | 160  | 1360  | 0    | 10   | 627   | 0    |
| Turn Type              | Prot |      | pm+ov |      |      | Over | Prot | NA    |      | Prot | NA    |      |
| Protected Phases       | 4    |      | 5     |      |      | 1    | 5    | 2     |      | 1    | 6     |      |
| Permitted Phases       |      |      | 4     |      |      |      |      |       |      |      |       |      |
| Actuated Green, G (s)  | 13.2 |      | 25.3  |      |      | 6.5  | 12.1 | 116.9 |      | 6.5  | 111.3 |      |
| Effective Green, g (s) | 13.2 |      | 25.3  |      |      | 6.5  | 12.1 | 116.9 |      | 6.5  | 111.3 |      |
| Actuated g/C Ratio     | 0.09 |      | 0.17  |      |      | 0.04 | 0.08 | 0.78  |      | 0.04 | 0.74  |      |
| Clearance Time (s)     | 4.6  |      | 4.2   |      |      | 4.2  | 4.2  | 4.6   |      | 4.2  | 4.6   |      |
| Vehicle Extension (s)  | 2.1  |      | 2.1   |      |      | 2.1  | 2.1  | 3.5   |      | 2.1  | 3.5   |      |
| Lane Grp Cap (vph)     | 302  |      | 266   |      |      | 69   | 276  | 2754  |      | 76   | 2588  |      |
| v/s Ratio Prot         | 0.06 |      | c0.07 |      |      | 0.01 | 0.05 | c0.38 |      | 0.01 | c0.18 |      |
| v/s Ratio Perm         |      |      | 0.07  |      |      |      |      |       |      |      |       |      |
| v/c Ratio              | 0.66 |      | 0.83  |      |      | 0.14 | 0.58 | 0.49  |      | 0.13 | 0.24  |      |
| Uniform Delay, d1      | 66.2 |      | 60.2  |      |      | 69.1 | 66.5 | 5.9   |      | 69.0 | 6.1   |      |
| Progression Factor     | 1.00 |      | 1.00  |      |      | 1.00 | 1.00 | 1.00  |      | 1.00 | 1.00  |      |
| Incremental Delay, d2  | 4.3  |      | 17.9  |      |      | 0.4  | 2.0  | 0.6   |      | 0.3  | 0.2   |      |
| Delay (s)              | 70.6 |      | 78.1  |      |      | 69.5 | 68.4 | 6.6   |      | 69.4 | 6.3   |      |
| Level of Service       | E    |      | E     |      |      | E    | E    | A     |      | E    | A     |      |
| Approach Delay (s)     |      | 74.5 |       |      | 69.5 |      |      | 13.1  |      |      | 7.3   |      |
| Approach LOS           |      | E    |       |      | E    |      |      | B     |      |      | A     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 21.8  | HCM 2000 Level of Service | C    |
| HCM 2000 Volume to Capacity ratio | 0.54  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 13.4 |
| Intersection Capacity Utilization | 59.8% | ICU Level of Service      | B    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Pier Ave       |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 6: Pacific Coast Hwy & 2nd St

8/4/2016



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations    |       | ↕     |      |       | ↕     |      | ↕     | ↕     |      | ↕     | ↕     |      |
| Traffic Volume (vph)   | 30    | 10    | 30   | 10    | 10    | 20   | 100   | 1810  | 10   | 10    | 810   | 30   |
| Future Volume (vph)    | 30    | 10    | 30   | 10    | 10    | 20   | 100   | 1810  | 10   | 10    | 810   | 30   |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Total Lost time (s)    |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      | 5.6   | 5.6   |      |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.95  |      | 1.00  | 0.95  |      |
| Frt                    |       | 0.94  |      |       | 0.93  |      | 1.00  | 1.00  |      | 1.00  | 0.99  |      |
| Flt Protected          |       | 0.98  |      |       | 0.99  |      | 0.95  | 1.00  |      | 0.95  | 1.00  |      |
| Satd. Flow (prot)      |       | 1718  |      |       | 1716  |      | 1770  | 3536  |      | 1770  | 3520  |      |
| Flt Permitted          |       | 0.98  |      |       | 0.99  |      | 0.32  | 1.00  |      | 0.09  | 1.00  |      |
| Satd. Flow (perm)      |       | 1718  |      |       | 1716  |      | 597   | 3536  |      | 168   | 3520  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)        | 30    | 10    | 30   | 10    | 10    | 20   | 100   | 1810  | 10   | 10    | 810   | 30   |
| RTOR Reduction (vph)   | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 1     | 0    |
| Lane Group Flow (vph)  | 0     | 70    | 0    | 0     | 40    | 0    | 100   | 1820  | 0    | 10    | 839   | 0    |
| Turn Type              | Split | NA    |      | Split | NA    |      | Perm  | NA    |      | Perm  | NA    |      |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      |       | 2     |      |       | 6     |      |
| Permitted Phases       |       |       |      |       |       |      | 2     |       |      | 6     |       |      |
| Actuated Green, G (s)  |       | 10.5  |      |       | 7.2   |      | 116.4 | 116.4 |      | 116.4 | 116.4 |      |
| Effective Green, g (s) |       | 10.5  |      |       | 7.2   |      | 116.4 | 116.4 |      | 116.4 | 116.4 |      |
| Actuated g/C Ratio     |       | 0.07  |      |       | 0.05  |      | 0.78  | 0.78  |      | 0.78  | 0.78  |      |
| Clearance Time (s)     |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      | 5.6   | 5.6   |      |
| Vehicle Extension (s)  |       | 3.5   |      |       | 2.1   |      | 3.5   | 3.5   |      | 3.5   | 3.5   |      |
| Lane Grp Cap (vph)     |       | 120   |      |       | 82    |      | 463   | 2743  |      | 130   | 2731  |      |
| v/s Ratio Prot         |       | c0.04 |      |       | c0.02 |      |       | c0.51 |      |       | 0.24  |      |
| v/s Ratio Perm         |       |       |      |       |       |      | 0.17  |       |      | 0.06  |       |      |
| v/c Ratio              |       | 0.58  |      |       | 0.49  |      | 0.22  | 0.66  |      | 0.08  | 0.31  |      |
| Uniform Delay, d1      |       | 67.6  |      |       | 69.6  |      | 4.5   | 7.8   |      | 4.0   | 4.9   |      |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00  |      | 1.00  | 1.00  |      |
| Incremental Delay, d2  |       | 7.5   |      |       | 2.0   |      | 1.1   | 1.3   |      | 1.2   | 0.3   |      |
| Delay (s)              |       | 75.1  |      |       | 71.6  |      | 5.6   | 9.0   |      | 5.2   | 5.2   |      |
| Level of Service       |       | E     |      |       | E     |      | A     | A     |      | A     | A     |      |
| Approach Delay (s)     |       | 75.1  |      |       | 71.6  |      |       | 8.9   |      |       | 5.2   |      |
| Approach LOS           |       | E     |      |       | E     |      |       | A     |      |       | A     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 10.3  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.65  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 15.9 |
| Intersection Capacity Utilization | 84.4% | ICU Level of Service      | E    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & 2nd            |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 7: Pacific Coast Hwy & 16th St

8/4/2016



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations    |       | ↕     |      |       | ↕     |      | ↗     | ↕     |      | ↗    | ↕    | ↗    |
| Traffic Volume (vph)   | 70    | 0     | 60   | 30    | 0     | 30   | 70    | 1130  | 40   | 20   | 770  | 130  |
| Future Volume (vph)    | 70    | 0     | 60   | 30    | 0     | 30   | 70    | 1130  | 40   | 20   | 770  | 130  |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9   |      | 4.2  | 4.9  | 4.9  |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.95  |      | 1.00 | 0.95 | 1.00 |
| Frt                    |       | 0.94  |      |       | 0.93  |      | 1.00  | 0.99  |      | 1.00 | 1.00 | 0.85 |
| Flt Protected          |       | 0.97  |      |       | 0.98  |      | 0.95  | 1.00  |      | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot)      |       | 1701  |      |       | 1695  |      | 1770  | 3521  |      | 1770 | 3539 | 1583 |
| Flt Permitted          |       | 0.97  |      |       | 0.98  |      | 0.95  | 1.00  |      | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm)      |       | 1701  |      |       | 1695  |      | 1770  | 3521  |      | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph)        | 70    | 0     | 60   | 30    | 0     | 30   | 70    | 1130  | 40   | 20   | 770  | 130  |
| RTOR Reduction (vph)   | 0     | 104   | 0    | 0     | 57    | 0    | 0     | 1     | 0    | 0    | 0    | 67   |
| Lane Group Flow (vph)  | 0     | 26    | 0    | 0     | 3     | 0    | 70    | 1169  | 0    | 20   | 770  | 63   |
| Turn Type              | Split | NA    |      | Split | NA    |      | Prot  | NA    |      | Prot | NA   | Perm |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      | 5     | 2     |      | 1    | 6    |      |
| Permitted Phases       |       |       |      |       |       |      |       |       |      |      |      | 6    |
| Actuated Green, G (s)  |       | 8.4   |      |       | 6.0   |      | 8.1   | 73.9  |      | 4.0  | 69.8 | 69.8 |
| Effective Green, g (s) |       | 8.4   |      |       | 6.0   |      | 8.1   | 73.9  |      | 4.0  | 69.8 | 69.8 |
| Actuated g/C Ratio     |       | 0.06  |      |       | 0.04  |      | 0.06  | 0.52  |      | 0.03 | 0.49 | 0.49 |
| Clearance Time (s)     |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9   |      | 4.2  | 4.9  | 4.9  |
| Vehicle Extension (s)  |       | 3.1   |      |       | 5.0   |      | 1.5   | 4.0   |      | 1.5  | 4.0  | 4.0  |
| Lane Grp Cap (vph)     |       | 99    |      |       | 71    |      | 100   | 1819  |      | 49   | 1727 | 772  |
| v/s Ratio Prot         |       | c0.02 |      |       | c0.00 |      | c0.04 | c0.33 |      | 0.01 | 0.22 |      |
| v/s Ratio Perm         |       |       |      |       |       |      |       |       |      |      |      | 0.04 |
| v/c Ratio              |       | 0.26  |      |       | 0.04  |      | 0.70  | 0.64  |      | 0.41 | 0.45 | 0.08 |
| Uniform Delay, d1      |       | 64.3  |      |       | 65.7  |      | 66.3  | 25.0  |      | 68.3 | 23.9 | 19.5 |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00  |      | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2  |       | 1.4   |      |       | 0.4   |      | 15.9  | 1.8   |      | 2.0  | 0.8  | 0.2  |
| Delay (s)              |       | 65.8  |      |       | 66.2  |      | 82.1  | 26.8  |      | 70.3 | 24.8 | 19.7 |
| Level of Service       |       | E     |      |       | E     |      | F     | C     |      | E    | C    | B    |
| Approach Delay (s)     |       | 65.8  |      |       | 66.2  |      | 29.9  |       |      | 25.1 |      |      |
| Approach LOS           |       | E     |      |       | E     |      | C     |       |      | C    |      |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 30.9  | HCM 2000 Level of Service | C    |
| HCM 2000 Volume to Capacity ratio | 0.44  |                           |      |
| Actuated Cycle Length (s)         | 143.0 | Sum of lost time (s)      | 21.7 |
| Intersection Capacity Utilization | 57.5% | ICU Level of Service      | B    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & 16th St        |       |                           |      |
| c Critical Lane Group             |       |                           |      |



# HCM Signalized Intersection Capacity Analysis

## 8: Pacific Coast Hwy & 21st St

8/4/2016



| Movement               | EBL  | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|-------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations    |      | ↕     |      |      | ↕    |      | ↗    | ↕     |      | ↗    | ↕    | ↗    |
| Traffic Volume (vph)   | 70   | 90    | 20   | 50   | 70   | 30   | 50   | 1080  | 30   | 30   | 820  | 30   |
| Future Volume (vph)    | 70   | 90    | 20   | 50   | 70   | 30   | 50   | 1080  | 30   | 30   | 820  | 30   |
| Ideal Flow (vphpl)     | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 4.0   |      |      | 4.0  |      | 4.0  | 4.0   |      | 4.0  | 4.0  |      |
| Lane Util. Factor      |      | 1.00  |      |      | 1.00 |      | 1.00 | 0.95  |      | 1.00 | 0.95 |      |
| Frt                    |      | 0.98  |      |      | 0.97 |      | 1.00 | 1.00  |      | 1.00 | 0.99 |      |
| Flt Protected          |      | 0.98  |      |      | 0.98 |      | 0.95 | 1.00  |      | 0.95 | 1.00 |      |
| Satd. Flow (prot)      |      | 1800  |      |      | 1783 |      | 1770 | 3525  |      | 1770 | 3520 |      |
| Flt Permitted          |      | 0.72  |      |      | 0.77 |      | 0.31 | 1.00  |      | 0.23 | 1.00 |      |
| Satd. Flow (perm)      |      | 1326  |      |      | 1395 |      | 585  | 3525  |      | 431  | 3520 |      |
| Peak-hour factor, PHF  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph)        | 70   | 90    | 20   | 50   | 70   | 30   | 50   | 1080  | 30   | 30   | 820  | 30   |
| RTOR Reduction (vph)   | 0    | 4     | 0    | 0    | 8    | 0    | 0    | 1     | 0    | 0    | 2    | 0    |
| Lane Group Flow (vph)  | 0    | 176   | 0    | 0    | 142  | 0    | 50   | 1109  | 0    | 30   | 848  | 0    |
| Turn Type              | Perm | NA    |      | Perm | NA   |      | Perm | NA    |      | Perm | NA   |      |
| Protected Phases       |      | 4     |      |      | 8    |      |      | 2     |      |      | 6    |      |
| Permitted Phases       | 4    |       |      | 8    |      |      | 2    |       |      | 6    |      |      |
| Actuated Green, G (s)  |      | 19.5  |      |      | 19.5 |      | 92.5 | 92.5  |      | 92.5 | 92.5 |      |
| Effective Green, g (s) |      | 19.5  |      |      | 19.5 |      | 92.5 | 92.5  |      | 92.5 | 92.5 |      |
| Actuated g/C Ratio     |      | 0.16  |      |      | 0.16 |      | 0.77 | 0.77  |      | 0.77 | 0.77 |      |
| Clearance Time (s)     |      | 4.0   |      |      | 4.0  |      | 4.0  | 4.0   |      | 4.0  | 4.0  |      |
| Vehicle Extension (s)  |      | 3.0   |      |      | 3.0  |      | 3.0  | 3.0   |      | 3.0  | 3.0  |      |
| Lane Grp Cap (vph)     |      | 215   |      |      | 226  |      | 450  | 2717  |      | 332  | 2713 |      |
| v/s Ratio Prot         |      |       |      |      |      |      |      | c0.31 |      |      | 0.24 |      |
| v/s Ratio Perm         |      | c0.13 |      |      | 0.10 |      | 0.09 |       |      | 0.07 |      |      |
| v/c Ratio              |      | 0.82  |      |      | 0.63 |      | 0.11 | 0.41  |      | 0.09 | 0.31 |      |
| Uniform Delay, d1      |      | 48.5  |      |      | 46.9 |      | 3.4  | 4.6   |      | 3.4  | 4.2  |      |
| Progression Factor     |      | 1.00  |      |      | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |      |
| Incremental Delay, d2  |      | 20.8  |      |      | 5.3  |      | 0.5  | 0.5   |      | 0.5  | 0.3  |      |
| Delay (s)              |      | 69.4  |      |      | 52.2 |      | 3.9  | 5.1   |      | 3.9  | 4.5  |      |
| Level of Service       |      | E     |      |      | D    |      | A    | A     |      | A    | A    |      |
| Approach Delay (s)     |      | 69.4  |      |      | 52.2 |      |      | 5.0   |      |      | 4.4  |      |
| Approach LOS           |      | E     |      |      | D    |      |      | A     |      |      | A    |      |

### Intersection Summary

|                                   |       |                           |     |
|-----------------------------------|-------|---------------------------|-----|
| HCM 2000 Control Delay            | 12.7  | HCM 2000 Level of Service | B   |
| HCM 2000 Volume to Capacity ratio | 0.48  |                           |     |
| Actuated Cycle Length (s)         | 120.0 | Sum of lost time (s)      | 8.0 |
| Intersection Capacity Utilization | 60.4% | ICU Level of Service      | B   |
| Analysis Period (min)             | 15    |                           |     |
| Description: PCH & 21st St        |       |                           |     |
| c Critical Lane Group             |       |                           |     |

# HCM Signalized Intersection Capacity Analysis

## 3: Pacific Coast Hwy & Artesia Blvd

8/4/2016



| Movement               | EBL  | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR  |
|------------------------|------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations    | ↘    | ↕↗    |      | ↘↗    | ↕↗   | ↗     | ↘     | ↕↗    | ↗     | ↘↗    | ↕↗    |      |
| Traffic Volume (vph)   | 30   | 490   | 20   | 220   | 410  | 290   | 20    | 790   | 170   | 550   | 1490  | 120  |
| Future Volume (vph)    | 30   | 490   | 20   | 220   | 410  | 290   | 20    | 790   | 170   | 550   | 1490  | 120  |
| Ideal Flow (vphpl)     | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 |
| Total Lost time (s)    | 4.0  | 4.0   |      | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |      |
| Lane Util. Factor      | 1.00 | 0.95  |      | 0.97  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  | 0.97  | 0.95  |      |
| Frt                    | 1.00 | 0.99  |      | 1.00  | 1.00 | 0.85  | 1.00  | 1.00  | 0.85  | 1.00  | 0.99  |      |
| Flt Protected          | 0.95 | 1.00  |      | 0.95  | 1.00 | 1.00  | 0.95  | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (prot)      | 1770 | 3518  |      | 3433  | 3539 | 1583  | 1770  | 3539  | 1583  | 3433  | 3500  |      |
| Flt Permitted          | 0.95 | 1.00  |      | 0.95  | 1.00 | 1.00  | 0.95  | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (perm)      | 1770 | 3518  |      | 3433  | 3539 | 1583  | 1770  | 3539  | 1583  | 3433  | 3500  |      |
| Peak-hour factor, PHF  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)        | 30   | 490   | 20   | 220   | 410  | 290   | 20    | 790   | 170   | 550   | 1490  | 120  |
| RTOR Reduction (vph)   | 0    | 2     | 0    | 0     | 0    | 151   | 0     | 0     | 75    | 0     | 3     | 0    |
| Lane Group Flow (vph)  | 30   | 508   | 0    | 220   | 410  | 139   | 20    | 790   | 95    | 550   | 1607  | 0    |
| Turn Type              | Prot | NA    |      | Prot  | NA   | pm+ov | Prot  | NA    | Perm  | Prot  | NA    |      |
| Protected Phases       | 7    | 4     |      | 3     | 8    | 1     | 5     | 2     |       | 1     | 6     |      |
| Permitted Phases       |      |       |      |       |      | 8     |       |       | 2     |       |       |      |
| Actuated Green, G (s)  | 7.7  | 26.8  |      | 18.1  | 37.2 | 64.8  | 5.4   | 111.5 | 111.5 | 27.6  | 133.7 |      |
| Effective Green, g (s) | 7.7  | 26.8  |      | 18.1  | 37.2 | 64.8  | 5.4   | 111.5 | 111.5 | 27.6  | 133.7 |      |
| Actuated g/C Ratio     | 0.04 | 0.13  |      | 0.09  | 0.19 | 0.32  | 0.03  | 0.56  | 0.56  | 0.14  | 0.67  |      |
| Clearance Time (s)     | 4.0  | 4.0   |      | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |      |
| Vehicle Extension (s)  | 3.0  | 3.0   |      | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      |
| Lane Grp Cap (vph)     | 68   | 471   |      | 310   | 658  | 512   | 47    | 1972  | 882   | 473   | 2339  |      |
| v/s Ratio Prot         | 0.02 | c0.14 |      | c0.06 | 0.12 | 0.04  | 0.01  | c0.22 |       | c0.16 | c0.46 |      |
| v/s Ratio Perm         |      |       |      |       |      | 0.05  |       |       | 0.06  |       |       |      |
| v/c Ratio              | 0.44 | 1.08  |      | 0.71  | 0.62 | 0.27  | 0.43  | 0.40  | 0.11  | 1.16  | 0.69  |      |
| Uniform Delay, d1      | 94.0 | 86.6  |      | 88.4  | 74.9 | 50.1  | 95.8  | 25.2  | 20.8  | 86.2  | 20.3  |      |
| Progression Factor     | 1.00 | 1.00  |      | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |      |
| Incremental Delay, d2  | 4.5  | 64.4  |      | 7.3   | 1.8  | 0.3   | 6.1   | 0.6   | 0.2   | 94.4  | 1.7   |      |
| Delay (s)              | 98.6 | 151.0 |      | 95.7  | 76.8 | 50.4  | 101.9 | 25.8  | 21.1  | 180.6 | 22.0  |      |
| Level of Service       | F    | F     |      | F     | E    | D     | F     | C     | C     | F     | C     |      |
| Approach Delay (s)     |      | 148.1 |      |       | 73.0 |       |       | 26.5  |       |       | 62.4  |      |
| Approach LOS           |      | F     |      |       | E    |       |       | C     |       |       | E     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 66.9  | HCM 2000 Level of Service | E    |
| HCM 2000 Volume to Capacity ratio | 0.80  |                           |      |
| Actuated Cycle Length (s)         | 200.0 | Sum of lost time (s)      | 16.0 |
| Intersection Capacity Utilization | 83.0% | ICU Level of Service      | E    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Artesia Blvd   |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 4: Pacific Coast Hwy & Aviation Blvd

8/4/2016



| Movement                          | EBL  | EBT  | EBR   | WBL  | WBT                       | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR  |
|-----------------------------------|------|------|-------|------|---------------------------|-------|------|-------|-------|-------|-------|------|
| Lane Configurations               |      |      |       | ↙    | ↖                         | ↗     | ↘    | ↑↑    | ↗     | ↘     | ↖     | ↗    |
| Traffic Volume (vph)              | 0    | 0    | 10    | 420  | 10                        | 290   | 20   | 810   | 340   | 190   | 1320  | 0    |
| Future Volume (vph)               | 0    | 0    | 10    | 420  | 10                        | 290   | 20   | 810   | 340   | 190   | 1320  | 0    |
| Ideal Flow (vphpl)                | 1900 | 1900 | 1900  | 1900 | 1900                      | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 |
| Total Lost time (s)               |      | 4.0  |       | 4.8  | 4.8                       | 4.2   | 4.2  | 4.6   | 4.0   | 4.2   | 4.6   |      |
| Lane Util. Factor                 |      | 1.00 |       | 0.95 | 0.95                      | 1.00  | 1.00 | 0.95  | 1.00  | 1.00  | 0.95  |      |
| Frt                               |      | 0.85 |       | 1.00 | 1.00                      | 0.85  | 1.00 | 1.00  | 0.85  | 1.00  | 1.00  |      |
| Flt Protected                     |      | 1.00 |       | 0.95 | 0.95                      | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (prot)                 |      | 0    |       | 1681 | 1689                      | 1583  | 1770 | 3539  | 1583  | 1770  | 3539  |      |
| Flt Permitted                     |      | 1.00 |       | 0.95 | 0.95                      | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 1.00  |      |
| Satd. Flow (perm)                 |      | 0    |       | 1681 | 1689                      | 1583  | 1770 | 3539  | 1583  | 1770  | 3539  |      |
| Peak-hour factor, PHF             | 1.00 | 1.00 | 1.00  | 1.00 | 1.00                      | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)                   | 0    | 0    | 10    | 420  | 10                        | 290   | 20   | 810   | 340   | 190   | 1320  | 0    |
| RTOR Reduction (vph)              | 0    | 10   | 0     | 0    | 0                         | 0     | 0    | 0     | 0     | 0     | 0     | 0    |
| Lane Group Flow (vph)             | 0    | 0    | 0     | 214  | 216                       | 290   | 20   | 810   | 340   | 190   | 1320  | 0    |
| Turn Type                         |      |      |       | Perm | NA                        | pm+ov | Prot | NA    | Free  | Prot  | NA    |      |
| Protected Phases                  |      |      |       |      | 8                         | 1     | 5    | 2     |       | 1     | 6     |      |
| Permitted Phases                  |      |      |       | 8    |                           | 8     |      |       | Free  |       |       |      |
| Actuated Green, G (s)             |      | 0.0  |       | 22.8 | 22.8                      | 42.5  | 8.8  | 93.9  | 150.0 | 19.7  | 104.8 |      |
| Effective Green, g (s)            |      | 0.0  |       | 22.8 | 22.8                      | 42.5  | 8.8  | 93.9  | 150.0 | 19.7  | 104.8 |      |
| Actuated g/C Ratio                |      | 0.00 |       | 0.15 | 0.15                      | 0.28  | 0.06 | 0.63  | 1.00  | 0.13  | 0.70  |      |
| Clearance Time (s)                |      |      |       | 4.8  | 4.8                       | 4.2   | 4.2  | 4.6   |       | 4.2   | 4.6   |      |
| Vehicle Extension (s)             |      |      |       | 1.2  | 1.2                       | 1.3   | 2.0  | 3.5   |       | 1.3   | 3.5   |      |
| Lane Grp Cap (vph)                |      | 0    |       | 255  | 256                       | 448   | 103  | 2215  | 1583  | 232   | 2472  |      |
| v/s Ratio Prot                    |      |      |       |      |                           | 0.08  | 0.01 | c0.23 |       | c0.11 | c0.37 |      |
| v/s Ratio Perm                    |      |      |       | 0.13 | 0.13                      | 0.10  |      |       | 0.21  |       |       |      |
| v/c Ratio                         |      | 0.00 |       | 0.84 | 0.84                      | 0.65  | 0.19 | 0.37  | 0.21  | 0.82  | 0.53  |      |
| Uniform Delay, d1                 |      | 75.0 |       | 61.8 | 61.9                      | 47.2  | 67.2 | 13.6  | 0.0   | 63.4  | 10.9  |      |
| Progression Factor                |      | 1.00 |       | 1.00 | 1.00                      | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |      |
| Incremental Delay, d2             |      | 0.0  |       | 20.0 | 20.9                      | 2.4   | 4.2  | 0.5   | 0.3   | 18.8  | 0.8   |      |
| Delay (s)                         |      | 75.0 |       | 81.8 | 82.7                      | 49.6  | 71.4 | 14.1  | 0.3   | 82.2  | 11.7  |      |
| Level of Service                  |      | E    |       | F    | F                         | D     | E    | B     | A     | F     | B     |      |
| Approach Delay (s)                |      | 75.0 |       |      | 69.1                      |       |      | 11.1  |       |       | 20.6  |      |
| Approach LOS                      |      | E    |       |      | E                         |       |      | B     |       |       | C     |      |
| <b>Intersection Summary</b>       |      |      |       |      |                           |       |      |       |       |       |       |      |
| HCM 2000 Control Delay            |      |      | 27.7  |      | HCM 2000 Level of Service |       |      |       | C     |       |       |      |
| HCM 2000 Volume to Capacity ratio |      |      | 0.61  |      |                           |       |      |       |       |       |       |      |
| Actuated Cycle Length (s)         |      |      | 150.0 |      | Sum of lost time (s)      |       |      |       | 13.6  |       |       |      |
| Intersection Capacity Utilization |      |      | Err%  |      | ICU Level of Service      |       |      |       | H     |       |       |      |
| Analysis Period (min)             |      |      | 15    |      |                           |       |      |       |       |       |       |      |
| Description: PCH & Aviation Blvd  |      |      |       |      |                           |       |      |       |       |       |       |      |
| c Critical Lane Group             |      |      |       |      |                           |       |      |       |       |       |       |      |

# HCM Signalized Intersection Capacity Analysis

## 5: Pacific Coast Hwy & Pier Ave

8/4/2016



| Movement               | EBL   | EBT  | EBR   | WBL  | WBT  | WBR  | NBL   | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------|-------|------|-------|------|------|------|-------|-------|------|------|-------|------|
| Lane Configurations    |       |      |       |      |      |      |       |       |      |      |       |      |
| Traffic Volume (vph)   | 220   | 0    | 210   | 0    | 0    | 20   | 310   | 830   | 10   | 10   | 1270  | 150  |
| Future Volume (vph)    | 220   | 0    | 210   | 0    | 0    | 20   | 310   | 830   | 10   | 10   | 1270  | 150  |
| Ideal Flow (vphpl)     | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 |
| Total Lost time (s)    | 4.6   |      | 4.2   |      |      | 4.2  | 4.2   | 4.6   |      | 4.2  | 4.6   |      |
| Lane Util. Factor      | 0.97  |      | 1.00  |      |      | 1.00 | 0.97  | 0.95  |      | 1.00 | 0.95  |      |
| Frt                    | 1.00  |      | 0.85  |      |      | 0.86 | 1.00  | 1.00  |      | 1.00 | 0.98  |      |
| Flt Protected          | 0.95  |      | 1.00  |      |      | 1.00 | 0.95  | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (prot)      | 3433  |      | 1583  |      |      | 1611 | 3433  | 3533  |      | 1770 | 3483  |      |
| Flt Permitted          | 0.95  |      | 1.00  |      |      | 1.00 | 0.95  | 1.00  |      | 0.95 | 1.00  |      |
| Satd. Flow (perm)      | 3433  |      | 1583  |      |      | 1611 | 3433  | 3533  |      | 1770 | 3483  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 220   | 0    | 210   | 0    | 0    | 20   | 310   | 830   | 10   | 10   | 1270  | 150  |
| RTOR Reduction (vph)   | 0     | 0    | 0     | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 4     | 0    |
| Lane Group Flow (vph)  | 220   | 0    | 210   | 0    | 0    | 20   | 310   | 840   | 0    | 10   | 1416  | 0    |
| Turn Type              | Prot  |      | pm+ov |      |      | Over | Prot  | NA    |      | Prot | NA    |      |
| Protected Phases       | 4     |      | 5     |      |      | 1    | 5     | 2     |      | 1    | 6     |      |
| Permitted Phases       |       |      | 4     |      |      |      |       |       |      |      |       |      |
| Actuated Green, G (s)  | 14.1  |      | 32.1  |      |      | 6.5  | 18.0  | 116.0 |      | 6.5  | 104.5 |      |
| Effective Green, g (s) | 14.1  |      | 32.1  |      |      | 6.5  | 18.0  | 116.0 |      | 6.5  | 104.5 |      |
| Actuated g/C Ratio     | 0.09  |      | 0.21  |      |      | 0.04 | 0.12  | 0.77  |      | 0.04 | 0.70  |      |
| Clearance Time (s)     | 4.6   |      | 4.2   |      |      | 4.2  | 4.2   | 4.6   |      | 4.2  | 4.6   |      |
| Vehicle Extension (s)  | 2.1   |      | 2.1   |      |      | 2.1  | 2.1   | 3.5   |      | 2.1  | 3.5   |      |
| Lane Grp Cap (vph)     | 322   |      | 338   |      |      | 69   | 411   | 2732  |      | 76   | 2426  |      |
| v/s Ratio Prot         | c0.06 |      | 0.07  |      |      | 0.01 | c0.09 | 0.24  |      | 0.01 | c0.41 |      |
| v/s Ratio Perm         |       |      | 0.06  |      |      |      |       |       |      |      |       |      |
| v/c Ratio              | 0.68  |      | 0.62  |      |      | 0.29 | 0.75  | 0.31  |      | 0.13 | 0.58  |      |
| Uniform Delay, d1      | 65.8  |      | 53.4  |      |      | 69.5 | 63.9  | 5.1   |      | 69.0 | 11.6  |      |
| Progression Factor     | 1.00  |      | 1.00  |      |      | 1.00 | 1.00  | 1.00  |      | 1.00 | 1.00  |      |
| Incremental Delay, d2  | 4.9   |      | 2.6   |      |      | 1.0  | 6.9   | 0.3   |      | 0.3  | 1.0   |      |
| Delay (s)              | 70.6  |      | 56.1  |      |      | 70.5 | 70.8  | 5.3   |      | 69.4 | 12.7  |      |
| Level of Service       | E     |      | E     |      |      | E    | E     | A     |      | E    | B     |      |
| Approach Delay (s)     |       | 63.5 |       |      | 70.5 |      |       | 23.0  |      |      | 13.1  |      |
| Approach LOS           |       | E    |       |      | E    |      |       | C     |      |      | B     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 24.4  | HCM 2000 Level of Service | C    |
| HCM 2000 Volume to Capacity ratio | 0.62  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 13.4 |
| Intersection Capacity Utilization | 65.7% | ICU Level of Service      | C    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & Pier Ave       |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 6: Pacific Coast Hwy & 2nd St

8/4/2016



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations    |       | ↕     |      |       | ↕     |      | ↗     | ↕↕↕   |      | ↗     | ↕↕↕   |      |
| Traffic Volume (vph)   | 70    | 10    | 30   | 20    | 10    | 20   | 70    | 1060  | 10   | 10    | 1520  | 30   |
| Future Volume (vph)    | 70    | 10    | 30   | 20    | 10    | 20   | 70    | 1060  | 10   | 10    | 1520  | 30   |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Total Lost time (s)    |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      | 5.6   | 5.6   |      |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.91  |      | 1.00  | 0.91  |      |
| Frt                    |       | 0.96  |      |       | 0.95  |      | 1.00  | 1.00  |      | 1.00  | 1.00  |      |
| Flt Protected          |       | 0.97  |      |       | 0.98  |      | 0.95  | 1.00  |      | 0.95  | 1.00  |      |
| Satd. Flow (prot)      |       | 1739  |      |       | 1728  |      | 1770  | 5078  |      | 1770  | 5071  |      |
| Flt Permitted          |       | 0.97  |      |       | 0.98  |      | 0.14  | 1.00  |      | 0.24  | 1.00  |      |
| Satd. Flow (perm)      |       | 1739  |      |       | 1728  |      | 254   | 5078  |      | 453   | 5071  |      |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)        | 70    | 10    | 30   | 20    | 10    | 20   | 70    | 1060  | 10   | 10    | 1520  | 30   |
| RTOR Reduction (vph)   | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 1     | 0    | 0     | 1     | 0    |
| Lane Group Flow (vph)  | 0     | 110   | 0    | 0     | 50    | 0    | 70    | 1069  | 0    | 10    | 1549  | 0    |
| Turn Type              | Split | NA    |      | Split | NA    |      | Perm  | NA    |      | Perm  | NA    |      |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      |       | 2     |      |       | 6     |      |
| Permitted Phases       |       |       |      |       |       |      | 2     |       |      | 6     |       |      |
| Actuated Green, G (s)  |       | 15.3  |      |       | 7.8   |      | 111.0 | 111.0 |      | 111.0 | 111.0 |      |
| Effective Green, g (s) |       | 15.3  |      |       | 7.8   |      | 111.0 | 111.0 |      | 111.0 | 111.0 |      |
| Actuated g/C Ratio     |       | 0.10  |      |       | 0.05  |      | 0.74  | 0.74  |      | 0.74  | 0.74  |      |
| Clearance Time (s)     |       | 5.6   |      |       | 4.7   |      | 5.6   | 5.6   |      | 5.6   | 5.6   |      |
| Vehicle Extension (s)  |       | 3.5   |      |       | 2.1   |      | 3.5   | 3.5   |      | 3.5   | 3.5   |      |
| Lane Grp Cap (vph)     |       | 177   |      |       | 89    |      | 187   | 3757  |      | 335   | 3752  |      |
| v/s Ratio Prot         |       | c0.06 |      |       | c0.03 |      |       | 0.21  |      |       | c0.31 |      |
| v/s Ratio Perm         |       |       |      |       |       |      | 0.28  |       |      | 0.02  |       |      |
| v/c Ratio              |       | 0.62  |      |       | 0.56  |      | 0.37  | 0.28  |      | 0.03  | 0.41  |      |
| Uniform Delay, d1      |       | 64.6  |      |       | 69.4  |      | 7.0   | 6.4   |      | 5.2   | 7.3   |      |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00  |      | 1.00  | 1.00  |      |
| Incremental Delay, d2  |       | 6.9   |      |       | 5.1   |      | 5.6   | 0.2   |      | 0.2   | 0.3   |      |
| Delay (s)              |       | 71.5  |      |       | 74.5  |      | 12.7  | 6.6   |      | 5.3   | 7.6   |      |
| Level of Service       |       | E     |      |       | E     |      | B     | A     |      | A     | A     |      |
| Approach Delay (s)     |       | 71.5  |      |       | 74.5  |      |       | 7.0   |      |       | 7.6   |      |
| Approach LOS           |       | E     |      |       | E     |      |       | A     |      |       | A     |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 11.0  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.44  |                           |      |
| Actuated Cycle Length (s)         | 150.0 | Sum of lost time (s)      | 15.9 |
| Intersection Capacity Utilization | 66.6% | ICU Level of Service      | C    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & 2nd            |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 7: Pacific Coast Hwy & 16th St

8/4/2016



| Movement               | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL  | SBT   | SBR  |
|------------------------|-------|-------|------|-------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations    |       | ↕     |      |       | ↕     |      | ↗     | ↕    |      | ↗    | ↕     | ↗    |
| Traffic Volume (vph)   | 100   | 0     | 80   | 20    | 0     | 10   | 100   | 910  | 30   | 10   | 1360  | 180  |
| Future Volume (vph)    | 100   | 0     | 80   | 20    | 0     | 10   | 100   | 910  | 30   | 10   | 1360  | 180  |
| Ideal Flow (vphpl)     | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 |
| Total Lost time (s)    |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9  |      | 4.2  | 4.9   | 4.9  |
| Lane Util. Factor      |       | 1.00  |      |       | 1.00  |      | 1.00  | 0.95 |      | 1.00 | 0.95  | 1.00 |
| Frt                    |       | 0.94  |      |       | 0.95  |      | 1.00  | 1.00 |      | 1.00 | 1.00  | 0.85 |
| Flt Protected          |       | 0.97  |      |       | 0.97  |      | 0.95  | 1.00 |      | 0.95 | 1.00  | 1.00 |
| Satd. Flow (prot)      |       | 1704  |      |       | 1722  |      | 1770  | 3522 |      | 1770 | 3539  | 1583 |
| Flt Permitted          |       | 0.97  |      |       | 0.97  |      | 0.95  | 1.00 |      | 0.95 | 1.00  | 1.00 |
| Satd. Flow (perm)      |       | 1704  |      |       | 1722  |      | 1770  | 3522 |      | 1770 | 3539  | 1583 |
| Peak-hour factor, PHF  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 |
| Adj. Flow (vph)        | 100   | 0     | 80   | 20    | 0     | 10   | 100   | 910  | 30   | 10   | 1360  | 180  |
| RTOR Reduction (vph)   | 0     | 102   | 0    | 0     | 29    | 0    | 0     | 1    | 0    | 0    | 0     | 57   |
| Lane Group Flow (vph)  | 0     | 78    | 0    | 0     | 1     | 0    | 100   | 939  | 0    | 10   | 1360  | 123  |
| Turn Type              | Split | NA    |      | Split | NA    |      | Prot  | NA   |      | Prot | NA    | Perm |
| Protected Phases       | 8     | 8     |      | 4     | 4     |      | 5     | 2    |      | 1    | 6     |      |
| Permitted Phases       |       |       |      |       |       |      |       |      |      |      |       | 6    |
| Actuated Green, G (s)  |       | 11.9  |      |       | 4.5   |      | 10.6  | 73.5 |      | 2.4  | 65.3  | 65.3 |
| Effective Green, g (s) |       | 11.9  |      |       | 4.5   |      | 10.6  | 73.5 |      | 2.4  | 65.3  | 65.3 |
| Actuated g/C Ratio     |       | 0.08  |      |       | 0.03  |      | 0.07  | 0.51 |      | 0.02 | 0.46  | 0.46 |
| Clearance Time (s)     |       | 4.2   |      |       | 4.2   |      | 4.2   | 4.9  |      | 4.2  | 4.9   | 4.9  |
| Vehicle Extension (s)  |       | 3.1   |      |       | 5.0   |      | 1.5   | 4.0  |      | 1.5  | 4.0   | 4.0  |
| Lane Grp Cap (vph)     |       | 141   |      |       | 54    |      | 131   | 1810 |      | 29   | 1616  | 722  |
| v/s Ratio Prot         |       | c0.05 |      |       | c0.00 |      | c0.06 | 0.27 |      | 0.01 | c0.38 |      |
| v/s Ratio Perm         |       |       |      |       |       |      |       |      |      |      |       | 0.08 |
| v/c Ratio              |       | 0.55  |      |       | 0.02  |      | 0.76  | 0.52 |      | 0.34 | 0.84  | 0.17 |
| Uniform Delay, d1      |       | 63.0  |      |       | 67.1  |      | 65.0  | 23.0 |      | 69.5 | 34.3  | 22.9 |
| Progression Factor     |       | 1.00  |      |       | 1.00  |      | 1.00  | 1.00 |      | 1.00 | 1.00  | 1.00 |
| Incremental Delay, d2  |       | 4.8   |      |       | 0.3   |      | 20.8  | 1.1  |      | 2.6  | 5.5   | 0.5  |
| Delay (s)              |       | 67.8  |      |       | 67.4  |      | 85.7  | 24.1 |      | 72.1 | 39.8  | 23.4 |
| Level of Service       |       | E     |      |       | E     |      | F     | C    |      | E    | D     | C    |
| Approach Delay (s)     |       | 67.8  |      |       | 67.4  |      | 30.0  |      |      | 38.1 |       |      |
| Approach LOS           |       | E     |      |       | E     |      | C     |      |      | D    |       |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 37.3  | HCM 2000 Level of Service | D    |
| HCM 2000 Volume to Capacity ratio | 0.57  |                           |      |
| Actuated Cycle Length (s)         | 143.0 | Sum of lost time (s)      | 21.7 |
| Intersection Capacity Utilization | 65.7% | ICU Level of Service      | C    |
| Analysis Period (min)             | 15    |                           |      |
| Description: PCH & 16th St        |       |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Signalized Intersection Capacity Analysis

## 8: Pacific Coast Hwy & 21st St

8/4/2016



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|------------------------|------|------|------|------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations    |      | ↕    |      |      | ↕     |      | ↕     | ↕     |      | ↕     | ↕     |      |
| Traffic Volume (vph)   | 20   | 30   | 20   | 30   | 40    | 30   | 40    | 950   | 20   | 70    | 1610  | 80   |
| Future Volume (vph)    | 20   | 30   | 20   | 30   | 40    | 30   | 40    | 950   | 20   | 70    | 1610  | 80   |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Total Lost time (s)    |      | 4.0  |      |      | 4.0   |      | 4.0   | 4.0   |      | 4.0   | 4.0   |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00  |      | 1.00  | 0.95  |      | 1.00  | 0.95  |      |
| Frt                    |      | 0.96 |      |      | 0.96  |      | 1.00  | 1.00  |      | 1.00  | 0.99  |      |
| Flt Protected          |      | 0.99 |      |      | 0.99  |      | 0.95  | 1.00  |      | 0.95  | 1.00  |      |
| Satd. Flow (prot)      |      | 1766 |      |      | 1761  |      | 1770  | 3528  |      | 1770  | 3514  |      |
| Flt Permitted          |      | 0.85 |      |      | 0.88  |      | 0.12  | 1.00  |      | 0.28  | 1.00  |      |
| Satd. Flow (perm)      |      | 1527 |      |      | 1571  |      | 226   | 3528  |      | 529   | 3514  |      |
| Peak-hour factor, PHF  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 |
| Adj. Flow (vph)        | 20   | 30   | 20   | 30   | 40    | 30   | 40    | 950   | 20   | 70    | 1610  | 80   |
| RTOR Reduction (vph)   | 0    | 14   | 0    | 0    | 14    | 0    | 0     | 1     | 0    | 0     | 2     | 0    |
| Lane Group Flow (vph)  | 0    | 56   | 0    | 0    | 86    | 0    | 40    | 969   | 0    | 70    | 1688  | 0    |
| Turn Type              | Perm | NA   |      | Perm | NA    |      | Perm  | NA    |      | Perm  | NA    |      |
| Protected Phases       |      | 4    |      |      | 8     |      |       | 2     |      |       | 6     |      |
| Permitted Phases       | 4    |      |      | 8    |       |      | 2     |       |      | 6     |       |      |
| Actuated Green, G (s)  |      | 11.7 |      |      | 11.7  |      | 100.3 | 100.3 |      | 100.3 | 100.3 |      |
| Effective Green, g (s) |      | 11.7 |      |      | 11.7  |      | 100.3 | 100.3 |      | 100.3 | 100.3 |      |
| Actuated g/C Ratio     |      | 0.10 |      |      | 0.10  |      | 0.84  | 0.84  |      | 0.84  | 0.84  |      |
| Clearance Time (s)     |      | 4.0  |      |      | 4.0   |      | 4.0   | 4.0   |      | 4.0   | 4.0   |      |
| Vehicle Extension (s)  |      | 3.0  |      |      | 3.0   |      | 3.0   | 3.0   |      | 3.0   | 3.0   |      |
| Lane Grp Cap (vph)     |      | 148  |      |      | 153   |      | 188   | 2948  |      | 442   | 2937  |      |
| v/s Ratio Prot         |      |      |      |      |       |      |       | 0.27  |      |       | c0.48 |      |
| v/s Ratio Perm         |      | 0.04 |      |      | c0.05 |      | 0.18  |       |      | 0.13  |       |      |
| v/c Ratio              |      | 0.38 |      |      | 0.56  |      | 0.21  | 0.33  |      | 0.16  | 0.57  |      |
| Uniform Delay, d1      |      | 50.8 |      |      | 51.7  |      | 2.0   | 2.2   |      | 1.9   | 3.1   |      |
| Progression Factor     |      | 1.00 |      |      | 1.00  |      | 1.00  | 1.00  |      | 1.00  | 1.00  |      |
| Incremental Delay, d2  |      | 1.6  |      |      | 4.4   |      | 2.6   | 0.3   |      | 0.8   | 0.8   |      |
| Delay (s)              |      | 52.4 |      |      | 56.1  |      | 4.5   | 2.5   |      | 2.6   | 3.9   |      |
| Level of Service       |      | D    |      |      | E     |      | A     | A     |      | A     | A     |      |
| Approach Delay (s)     |      | 52.4 |      |      | 56.1  |      |       | 2.6   |      |       | 3.9   |      |
| Approach LOS           |      | D    |      |      | E     |      |       | A     |      |       | A     |      |

### Intersection Summary

|                                   |       |                           |     |
|-----------------------------------|-------|---------------------------|-----|
| HCM 2000 Control Delay            | 6.4   | HCM 2000 Level of Service | A   |
| HCM 2000 Volume to Capacity ratio | 0.57  |                           |     |
| Actuated Cycle Length (s)         | 120.0 | Sum of lost time (s)      | 8.0 |
| Intersection Capacity Utilization | 70.4% | ICU Level of Service      | C   |
| Analysis Period (min)             | 15    |                           |     |
| Description: PCH & 21st St        |       |                           |     |
| c Critical Lane Group             |       |                           |     |





## **G-5: TRAFFIC METHODOLOGY**



## MEMORANDUM

Date: September 10<sup>th</sup>, 2015  
To: Ken Robertson, City of Hermosa Beach  
From: Jeremy Klop and Jeff Pierson, Fehr & Peers  
**Subject: Transportation Thresholds of Significance and Analysis Methodology**

*LA13-2621*

---

This technical memorandum discusses the analysis methodology and thresholds of significance for the transportation section of the Hermosa Beach General Plan EIR. The transportation analysis will include intersection Level of Service calculations using the City of Hermosa Beach guidelines, Caltrans guidelines, and Los Angeles County's Congestion Management Program guidelines for locations within each agency's jurisdiction. Daily street segment Level of Service will be calculated using guidelines from the City of Hermosa Beach and Los Angeles County's Congestion Management Program. In anticipation of forthcoming guidelines related to SB743, citywide vehicle miles travelled results will be presented and discussed but will not be compared to any significance threshold (none have been established).

### INTERSECTION ANALYSIS

The intersections that have been selected to analyze the potential transportation impacts of the Hermosa Beach General Plan scenarios will be studied under the guidelines published by the City of Hermosa Beach, Caltrans, and Los Angeles County's Congestion Management Program. Table 1 identifies the intersection control and responsible agencies for each study location.

The Intersection Capacity Utilization (ICU) and Highway Capacity Manual 2010 (HCM) methodologies will be used to assign Level of Service (LOS) values to each intersection for both the AM and PM peak hours. Table 2 shows the LOS definitions for each methodology.



**TABLE 1 STUDY INTERSECTIONS**

| <b>Intersection</b>                                 | <b>Control</b> | <b>Jurisdiction</b>        |
|---|----------------|----------------------------|
| 1 - Hermosa Avenue & 13 <sup>th</sup> Street        | Signal         | Hermosa Beach              |
| 2 - Hermosa Avenue & Pier Avenue                    | Signal         | Hermosa Beach              |
| 3 - Pacific Coast Highway & Artesia Boulevard       | Signal         | Hermosa Beach/Caltrans/CMP |
| 4 - Pacific Coast Highway & Aviation Boulevard      | Signal         | Hermosa Beach/Caltrans     |
| 5 - Pacific Coast Highway & Pier Avenue             | Signal         | Hermosa Beach/Caltrans     |
| 6 - Pacific Coast Highway & 2 <sup>nd</sup> Street  | Signal         | Hermosa Beach/Caltrans     |
| 7 - Pacific Coast Highway & 16 <sup>th</sup> Street | Signal         | Hermosa Beach/Caltrans     |
| 8 - Pacific Coast Highway & 21 <sup>st</sup> Street | Signal         | Hermosa Beach/Caltrans     |
| 9 - Prospect Avenue & Artesia Boulevard             | Signal         | Hermosa Beach              |
| 10 - Prospect Avenue & Aviation Boulevard           | Signal         | Hermosa Beach              |
| 11 - Prospect Avenue & Anita Street                 | Signal         | Hermosa Beach              |
| 12 - Manhattan Avenue & 27 <sup>th</sup> Street     | AWSC           | Hermosa Beach              |
| 13 - Valley Drive & Gould Avenue                    | AWSC           | Hermosa Beach              |

Source: Fehr & Peers.

**TABLE 2 INTERSECTION LEVEL OF SERVICE CRITERIA**

| <b>Level of Service</b> | <b>V/C Ratio<br/>(ICU Signalized)</b> | <b>Control Delay in Seconds<br/>(HCM Signalized)</b> | <b>Control Delay in Seconds<br/>(HCM Unsignalized)</b> |
|-------------------------|---------------------------------------|--|--|
| A                       | 0.00 to 0.60                          | 0.0 to 10.0  | 0.0 to 10.0  |
| B                       | 0.61 to 0.70                          | 10.1 to 20.0   | 10.1 to 15.0   |
| C                       | 0.71 to 0.80                          | 20.1 to 35.0   | 15.1 to 25.0   |
| D                       | 0.81 to 0.90                          | 35.1 to 55.0   | 25.1 to 35.0   |
| E                       | 0.91 to 1.00                          | 55.1 to 80.0   | 35.1 to 50.0   |
| F                       | 1.01 or greater                       | 80.1 or greater                                      | 50.1 or greater  |

Source: 2010 Highway Capacity Manual (TRB).



## CITY OF HERMOSA BEACH

The Level of Service (LOS) standards for intersections within the City of Hermosa Beach are provided in the *City of Hermosa Beach Final Circulation Transportation and Parking Element* (March 1990). The City maintains a policy of LOS C or better for both signalized and unsignalized intersections. For signalized intersections, the ICU methodology is used to calculate LOS and significant impacts are defined as a change in LOS to E or F, or a change in V /C ratio greater than 0.05 at an intersection already operating at LOS E or F.

Since the *City of Hermosa Beach Final Circulation Transportation and Parking Element* does not specify significance criteria beyond the overall LOS D threshold, additional detail has been subsequently established in project level EIR documents where the City of Hermosa Beach is the lead agency. The traffic analysis in the most recent project level EIR overseen by the City, the *Sketchers Design Center Project Traffic Impact Study* (June 2015), utilizes additional significance criteria for signalized intersections and uses the HCM methodology with additional significance criteria for unsignalized intersections. The impact threshold criteria for signalized and unsignalized intersections used in that study are shown in Tables 3 and 4. This approach is consistent with the state of the practice and will be utilized for this effort.

**TABLE 3 HERMOSA BEACH SIGNALIZED INTERSECTION IMPACT CRITERIA**

| Level of Service | Impact Threshold   |
|------------------|--|
| LOS A, B, or C   | Degrades to LOS D, E, or F   |
| LOS D            | Increase in V/C ratio greater than or equal to 0.02, or degrades to LOS E or F |
| LOS E            | Increase in V/C ratio greater than or equal to 0.05, or degrades to LOS F      |
| LOS F            | Increase in V/C ratio greater than or equal to 0.05                            |

Source: Sketchers Design Center Project Traffic Impact Study (June 2015).



**TABLE 4 HERMOSA BEACH UNSIGNALIZED INTERSECTION IMPACT CRITERIA**

| Level of Service | Impact Threshold   |
|------------------|--|
| LOS A, B, or C   | Degrades to LOS D, E, or F   |
| LOS D, E or F    | Increase in intersection traffic volume greater than or equal to 10% |

Source: Sketchers Design Center Project Traffic Impact Study (June 2015).

## CALIFORNIA DEPARTMENT OF TRANSPORTATION

The Level of Service (LOS) standards for intersections under the jurisdiction of Caltrans are defined in the *Guide for the Preparation of Traffic Impact Studies (December 2002)*. Caltrans requires State-controlled intersections to be analyzed using the latest HCM methodology. While Caltrans attempts to maintain a target of LOS C or better, Caltrans acknowledges that this is not always feasible. Specific methodology should be determined through coordination with Caltrans in the scoping process. Recent communications with Caltrans on the *Sketchers Design Center Project Traffic Impact Study* resulted in a target of LOS D and significance criteria defined as maintaining the existing LOS when the target LOS is exceeded. The impact criteria for signalized intersections under Caltrans jurisdiction are shown in Table 5. This effort will apply the same methods.

**TABLE 5 CALTRANS SIGNALIZED INTERSECTION IMPACT CRITERIA**

| Level of Service  | Impact Threshold                      |
|-------------------|---------------------------------------|
| LOS A, B, C, or D | Degrades to LOS E or F                |
| LOS E             | Degrades to LOS F                     |
| LOS F             | Any increase in average control delay |

Source: Guide for the Preparation of Traffic Impact Studies (Caltrans).



## CONGESTION MANAGEMENT PROGRAM

The Los Angeles County Congestion Management Program (CMP) requires arterial intersection analysis at CMP monitoring locations where the proposed project will add 50 or more peak hour vehicle trips. Intersections are analyzed using the ICU methodology and the CMP identifies a minimum LOS requirement of LOS E. Significant impacts are identified if there is an increase in V/C ratio greater than or equal to 0.02 and the LOS degrades to LOS F or is already at LOS F. The impact criteria for CMP arterial monitoring locations are shown in Table 6.

**TABLE 6 CMP ARTERTIAL INTERSECTION IMPACT CRITERIA**

| Level of Service     | Impact Threshold  |
|----------------------|---|
| LOS A, B, C, D, or E | Increase in V/C ratio greater than or equal to 0.02 and degrades to LOS F |
| LOS F                | Increase in V/C ratio greater than or equal to 0.02                       |

Source: 2010 Congestion Management Program (Los Angeles County Metropolitan Transportation Authority).

## STREET SEGMENT ANALYSIS

Arterial roadway segments will be analyzed under guidelines published by the City of Hermosa Beach. Freeway mainline segments will be analyzed under the CMP guidelines published by Los Angeles County.

### CITY OF HERMOSA BEACH

Table 7 shows the street segments that have been identified for analysis within the City of Hermosa Beach. The functional classification, number of lanes, and estimated daily capacities from the *City of Hermosa Beach Final Circulation Transportation and Parking Element* have also been included in the table. Since the publication of the Transportation Element in 1990, the AM and PM peak period configurations of Pacific Coast Highway have changed due to parking restrictions and the daily capacity values in the table have been updated to reflect these changes. The configurations of all other segments are consistent with existing conditions.



**TABLE 7 STUDY ROADWAY SEGMENTS**

| Segment            | Location                                   | Functional Classification | Lanes | Daily Capacity |
|--------------------|--|---------------------------|-------|----------------|
| Hermosa Ave        | 27 <sup>th</sup> St to 22 <sup>nd</sup> St | Collector                 | 4     | 22,000         |
| Hermosa Ave        | 22 <sup>nd</sup> St to 16 <sup>th</sup> St | Collector                 | 4     | 22,000         |
| Hermosa Ave        | 16 <sup>th</sup> St to 8 <sup>th</sup> St  | Arterial                  | 4     | 29,000         |
| Hermosa Ave        | 8 <sup>th</sup> St to Herondo St           | Arterial                  | 4     | 29,000         |
| Valley Dr          | Gould Ave to Pier Ave                      | Local                     | 2     | 15,000         |
| Valley Dr          | Pier Ave to 8 <sup>th</sup> St             | Collector                 | 2     | 15,000         |
| Ardmore Ave        | 16 <sup>th</sup> St to 11 <sup>th</sup> St | Local                     | 2     | 15,000         |
| Ardmore Ave        | 8 <sup>th</sup> St to 2 <sup>nd</sup> St   | Local                     | 2     | 15,000         |
| Pacific Coast Hwy  | Artesia Blvd to Aviation Blvd              | Arterial                  | 6     | 44,000         |
| Pacific Coast Hwy  | Aviation Blvd to 2 <sup>nd</sup> St        | Arterial                  | 6     | 44,000         |
| Prospect Ave       | Artesia Blvd to Aviation Blvd              | Collector                 | 2     | 15,000         |
| Prospect Ave       | Aviation Blvd to 2 <sup>nd</sup> St        | Collector                 | 2     | 15,000         |
| Artesia Blvd       | Pacific Coast Hwy to Prospect Ave          | Arterial                  | 4     | 29,000         |
| Aviation Blvd      | Pacific Coast Hwy to Prospect Ave          | Arterial                  | 4     | 29,000         |
| Pier Ave           | Hermosa Ave to Valley Dr                   | Collector                 | 4     | 29,000         |
| Pier Ave           | Ardmore Ave to Pacific Coast Hwy           | Arterial                  | 4     | 29,000         |
| Gould Ave          | Ardmore Ave to Pacific Coast Hwy           | Collector                 | 4     | 22,000         |
| 8 <sup>th</sup> St | Hermosa Ave to Valley Dr                   | Collector                 | 2     | 15,000         |
| 8 <sup>th</sup> St | Pacific Coast Hwy to Prospect Ave          | Local                     | 2     | 2,500          |
| Herondo St         | Hermosa Ave to Valley Dr                   | Arterial                  | 2     | 13,000         |

Source: City of Hermosa Beach Final Circulation Transportation and Parking Element (March 1990).





The Level of Service (LOS) standards for roadways within the City of Hermosa Beach are provided in the Transportation Element. The City maintains a policy of LOS D for arterial mid-block segments calculated using average daily traffic volumes. Since the Transportation Element does not stipulate an analysis methodology or significant impact criteria, the following will be used. LOS will be determined based on a V/C ratio calculated using the capacities in Table 7 and the LOS thresholds shown in Table 2. The impact criteria for segments will be consistent with the criteria for signalized intersections within the City of Hermosa Beach as shown below in Table 8.

**TABLE 8 HERMOSA BEACH ARTERIAL SEGMENT IMPACT CRITERIA**

| Level of Service | Impact Threshold   |
|------------------|--|
| LOS A, B, or C   | Degrades to LOS D, E, or F   |
| LOS D            | Increase in V/C ratio greater than or equal to 0.02, or degrades to LOS E or F |
| LOS E            | Increase in V/C ratio greater than or equal to 0.05, or degrades to LOS F      |
| LOS F            | Increase in V/C ratio greater than or equal to 0.05                            |

Source: Sketchers Design Center Project Traffic Impact Study (June 2015).

## CONGESTION MANAGEMENT PROGRAM

The Los Angeles County Congestion Management Program (CMP) requires freeway mainline analysis at CMP monitoring locations where the proposed project will add 150 or more peak hour vehicle trips. Freeways are analyzed by calculating V/C ratios and the CMP identifies a minimum LOS requirement of LOS E. Significant impacts are identified if there is an increase in V/C ratio greater than or equal to 0.02 and the LOS degrades to LOS F or is already at LOS F. The impact criteria for CMP arterial monitoring locations are shown in Table 9.

**TABLE 9 CMP ARTERIAL IMPACT CRITERIA**

| Level of Service     | Impact Threshold  |
|----------------------|---|
| LOS A, B, C, D, or E | Increase in V/C ratio greater than or equal to 0.02 and degrades to LOS F |
| LOS F                | Increase in V/C ratio greater than or equal to 0.02                       |

Source: 2010 Congestion Management Program (Los Angeles County Metropolitan Transportation Authority).



## VEHICLE MILES TRAVELLED

Senate Bill 743, signed into law on September 27, 2013, creates a process to change analysis of transportation impacts under the California Environmental Quality Act (CEQA). The State of California Governor's Office of Planning and Research (OPR) has released draft recommendations that LOS and other delay-based metrics be potentially replaced with other transportation metrics including, but not limited to, vehicle miles travelled (VMT), vehicle trips (VT) generated, VMT per capita and VT per capita. SB 743 does not authorize OPR to set thresholds, but it does direct OPR to develop guidelines for determining significance of transportation impacts for projects.

Since new analysis metrics and thresholds of significance are still under development, the following citywide metrics will be calculated and discussed but will not be used to determine significant impacts:

- Vehicle miles travelled (VMT)
- VMT per capita
- Vehicle Trips (VT)
- VT per capita

The capita basis will be the sum of citywide population and employment.

**G-6: VMT REDUCTION METHODS AND  
TDM+ TOOL OUTPUTS**



## MEMORANDUM

To: Ken Robertson, City of Hermosa Beach  
From: Rachel Neumann and Jeremy Klop, Fehr and Peers  
**Subject: *PLAN Hermosa TDM Measures and VMT Reductions***

Ref: LA13-2621

### OVERVIEW

As part of its focus on reducing greenhouse gas emissions, PLAN Hermosa includes mobility related goals and a proposed mobility network focused on improving and connecting the pedestrian network, enhancing bicycle facilities, enhancing transit options and providing transportation alternatives to driving alone. These goals are further supported by a number of policies and implementation actions that will result in a reduction in vehicle miles traveled (VMT), which thereby reduces transportation-related greenhouse gas (GHG) emissions.

While there are many methods and approaches to estimating the potential reductions in VMT, statewide guidance was prepared by the California Air Pollution Control Officers Associated (CAPCOA) in 2010. CAPCOA developed, [Quantifying Greenhouse Gas Mitigation Measures](#), to serve as a resource for Lead Agencies in quantifying the expected emission reductions from the implementation of certain greenhouse gas reduction measures in compliance with the California Environmental Quality Act. The CAPCOA document uses empirical evidence and research to standardize the methods for quantifying emissions for frequently-considered measures, document the procedures and limitations for quantifying emissions reductions from measures, and provide a range of reasonable reductions that may be achieved based on the project or area context. Estimating the appropriate change in VMT associated with implementation of PLAN Hermosa is a complex endeavor since many strategies only apply to certain types of vehicle trips, such as those related to work, or may only affect only some portion of the community, such as households with school age children. Because of these reasons, the CAPCOA document was selected as the preferred method upon which to base the estimated VMT reductions that could reasonably be achieved through the implementation of PLAN Hermosa.

### TRANSPORTATION STRATEGY ORGANIZATION

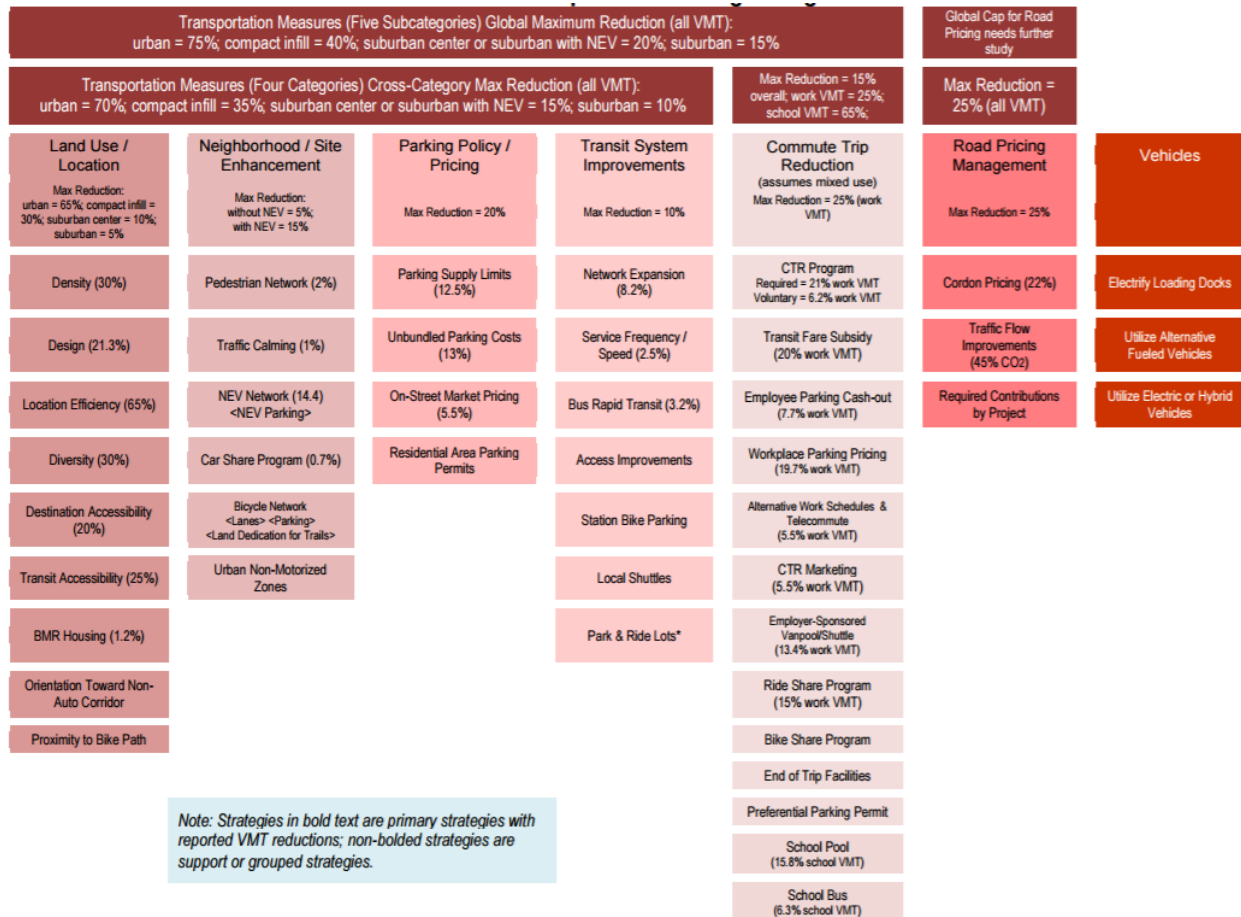
The CAPCOA document organizes mitigation measures and presents information in the form of fact sheets for nine categories: energy, transportation, water, area landscaping, solid waste, vegetation, construction, miscellaneous, and general plans. Within the transportation category, mitigation measures are further organized into sub-categories (presented in Figure 1) :

- land use/location,
- neighborhood/site enhancements,
- parking policy/pricing,
- transit system improvements,
- commute trip reductions
- road pricing management
- electric and hybrid vehicles

Since a number of CAPCOA strategies related to land use location or transit system improvements are already accounted for in the regional travel demand model that is used to project future transportation projections, additional VMT reductions from those strategies are not included in this analysis to avoid double counting. Forecast land use changes and related assumptions were built directly in the travel demand model used to forecast overall PLAN Hermosa VMT for the year 2040. Transit strategies beyond those already included in the regional model were not included based on knowledge of LA Metro’s future transit system plans for the area and of transportation priorities for the South Bay Cities Council of Governments.

It should also be noted that electric vehicle and hybrid vehicle strategies, which are included in PLAN Hermosa, do reduce GHG emissions, but do not reduce VMT or influence congestion or Level of Service performance standards, and are addressed separately in the GHG section of the EIR. Additionally, road pricing management strategies have not been included in PLAN Hermosa, and are therefore not described in further detail in this memo.

FIGURE 1 – CAPCOA TRANSPORTATION STRATEGIES ORGANIZATION



Source: CAPCOA 2010.

## QUANTIFICATION METHODS

Within each transportation sub-category, there are multiple potential mitigation measures that can be implemented. However, CAPCOA caps the maximum reduction allowed per category, because the mitigation measures often affect similar types of trips. The max reduction caps, identified in Figure 1, ensure that interactions between measures are appropriately accounted for and that emission reductions are not double counted.

There is also a cap on the total VMT reductions that can be achieved across all categories and combinations of strategies, referred to as the “global maximum” reduction in VMT. The global maximum in VMT reductions is based on the characteristics of the community context, identified as: urban, compact infill, suburban center, or suburban. While Hermosa may not be as urban in comparison to higher density locations in the region, for calculation purposes, it meets the criteria that CAPCOA uses for the “compact infill” context including location relative to the regional core, ratio of jobs and housing, density character, and transit availability (as identified in Figure 2). This means that the global maximum reduction that could be achieved in Hermosa Beach is a 40% reduction in VMT.

FIGURE 2 – COMPACT INFILL CHARACTERISTICS

The average reflects a range of 22% less VMT/capita (Franklin Park, Hollywood) to 42% less VMT/capita (Hayward) compared to the statewide average. The compact infill locations listed above have the following characteristics:

- Location relative to the regional core: these locations are typically 5 to 15 miles outside a regional CBD
- Ratio or relationship between jobs and housing: balanced (jobs/housing ratio ranging from 0.9 to 1.2)
- Density character
  - typical building heights in stories: two to four stories
  - typical street pattern: grid
  - typical setbacks: 0 to 20 feet
  - parking supply: constrained
  - parking prices: low to moderate
- Transit availability: rail service within two miles, or bus service at 15 minute peak headways or less

Source: CAPCOA 2010.

## PLAN HERMOSA TRANSPORTATION MEASURES

This technical memorandum includes: (1) an overview of the VMT reduction measures included in PLAN Hermosa, organized by transportation sub-category, (2) the relevant PLAN Hermosa policies that provide the basis for the selection of the mitigation measure, (3) the maximum reduction possible for that measure as calculated by CAPCOA, and (4) the assumptions made about the level of implementation or adoption in PLAN Hermosa of the selected mitigation measures.

Screenshots from the spreadsheet based VMT reduction tool developed by Fehr & Peers to calculate the CAPCOA reductions and show the inputs described are included in each section below. In some cases, PLAN Hermosa includes policies and implementation actions to address certain VMT reduction categories, but the analysis does not take additional credit for these VMT reductions because of the uncertainty of the policies or likely overlap between other measures.

### ***Neighborhood/ Site Enhancements***

CAPCOA has identified the maximum VMT reduction associated with neighborhood site enhancement measures as 15% with inclusion of a Neighborhood Electric Vehicle (NEV) network. The 15% reduction in

VMT can be achieved by enhancing the pedestrian and bicycle network, implementing traffic calming techniques, and establishing an NEV network, car share programs, and urban non-motorized zones, although CAPCOA notes the limitations with quantifying potential VMT reductions from certain measures.

The VMT reduction related to neighborhood site enhancements included in PLAN Hermosa is 1.2% based on the inclusion of the following neighborhood/site enhancement strategies.



### Pedestrian Network

Providing pedestrian network improvements within a specific site has the ability to reduce VMT up to 2%. While PLAN Hermosa includes numerous policies to enhance the pedestrian network, including Mobility Element policies 1.5, 3.2, 3.3, and 3.4 the policies do not prohibit features like walls, landscaping, and slopes or guarantee that all future development projects would be pedestrian-oriented in nature. Therefore, this analysis has taken a conservative approach and not taken any VMT reduction credits for some degree of implementation of this measure.

### Traffic Calming

Traffic calming mitigation measures can reduce VMT by up to 1% by providing a safer environment for people to walk or bike, resulting in decreased VMT. PLAN Hermosa includes plans to redesign roadways to reduce motor vehicle speeds, to provide roadway space for all users, including through dedicated bicycle facilities and wider, connected sidewalks, which will calm traffic indirectly, and by implementing direct traffic calming features including marked crosswalks, curb extensions, raised crosswalks, parkway planters with street trees, and roundabouts or traffic circles.



VMT reductions are based on Mobility Element Policies 2.2 and 7.2, in addition to several of the City's current corridor improvement projects referenced throughout PLAN Hermosa. Based on these policies and efforts, traffic calming features will be installed on a number of City street segments and intersections, with an expectation that 25% of arterial streets within the City will be traffic calmed and 25% of intersections will receive traffic calming improvements by 2040. Hermosa Beach includes approximately 200 intersections and 12 arterial roadways. Recently implemented corridor enhancement projects like the Pier Avenue Improvement Project was able to add traffic calming features to one of the 12 roadways, and simultaneously address crossings at eight intersections along the corridor.

Based on the assumptions noted above, it is reasonable to estimate that PLAN Hermosa's traffic calming measures would result in a 0.3% reduction in VMT.

#### NEV Network

Research on the implementation of a formal Neighborhood Electric Vehicle (NEV) network has shown that VMT reductions can range from a 0.5% reduction in VMT up to a 12.7% reduction depending on the scale of the network and rate of households utilizing NEVs. While PLAN Hermosa includes Mobility Element Policy 3.5, NEVs can already be used on nearly all roads in Hermosa Beach since the posted speed limits are 35 miles per hour or less.

Since the roadway network allowing NEVs is already in place, and several residents already own and utilize NEVs, no additional VMT reductions were taken for this measure at this time. The City can however support greater use of NEVs, by implementing NEV parking, charging facilities, signage, and educational tools and could in the future measure the impact of the measure.

#### Car-Share Program

Implementation of a car-sharing program can reduce VMT by up to 1%. Implementation of a citywide car-sharing program will provide on-demand access to a shared fleet of vehicles on an as-needed basis. In PLAN Hermosa, the full 1% VMT reduction was assumed with the expectation that a citywide car-sharing program will be implemented by 2040. Assumptions about car-sharing program related VMT reductions are based on Mobility Element Policies 3.5, 4.9 and 6.3.

#### Urban Non-Motorized Zones

PLAN Hermosa does not include any specific policies or actions to establish urban non-motorized or "car free" zones in Hermosa Beach.

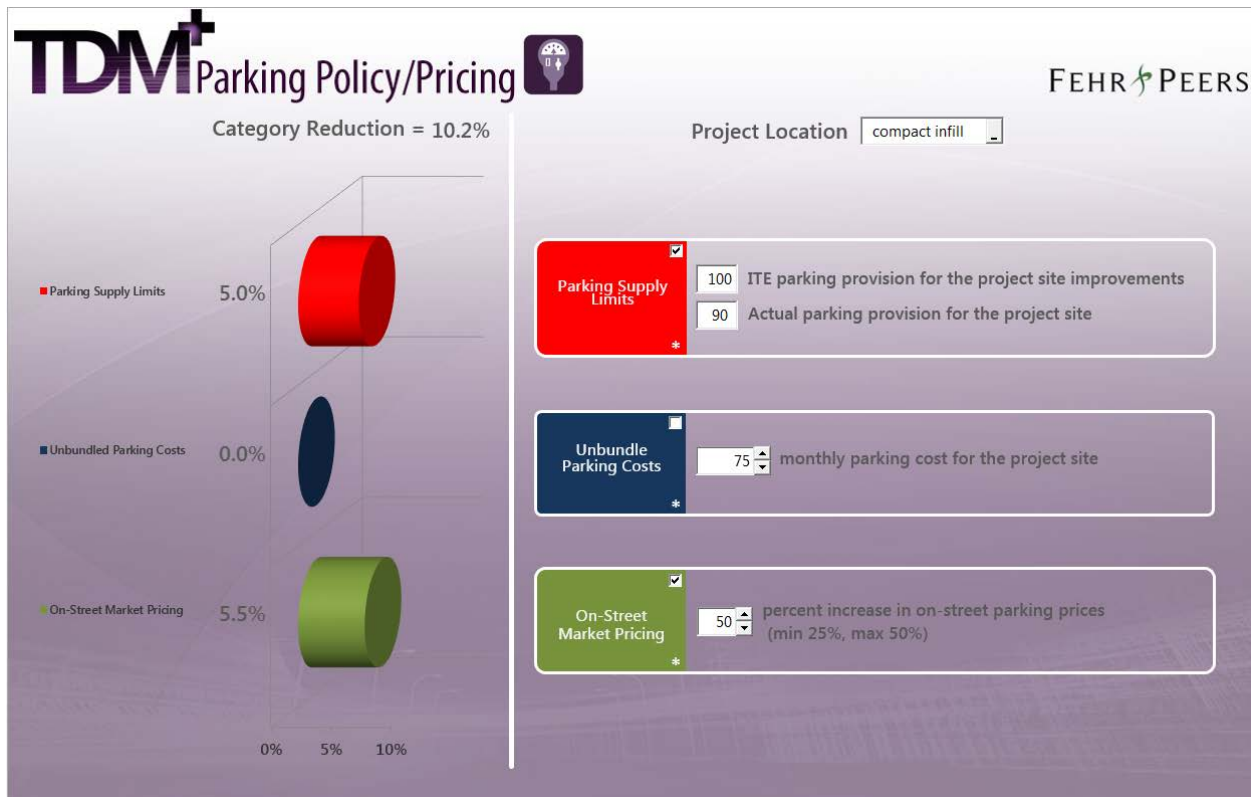
#### Bicycle Network

The CAPCOA research indicates that the implementation of a bicycle network including bicycle lanes, routes, and shared-use paths has the ability to reduce VMT by shifting vehicle trips to bicycle use. However, since this strategy is most effective when implemented with the pedestrian network and traffic calming strategies noted above, no additional VMT reductions are attributed to the implementation of this measure. PLAN Hermosa specifically includes a map indicating the intended bicycle network to be completed by 2040, with the addition of some form of bicycle facilities along 16 street segments. The intended bicycle network is further supported by Mobility Element policies 3.3 and 3.6, as well as Mobility Element implementation actions 3, 13, 14, and 15.

**Parking Policy/Pricing**

CAPCOA has identified the maximum VMT reduction associated with parking pricing measures as 20%. Reducing the amount of parking required on private property, unbundling parking costs from property rental costs, and appropriately pricing on-street parking to reach optimum parking utilization rates can all effectively help to reduce VMT by encouraging greater rates of carpooling, transit use, or walking/biking. CAPCOA further recommends that parking strategies need to be implemented in combination with each other to limit the potential spillover of parking from one area to another (i.e. reduced parking supply in the downtown core without residential permit parking can result in impacts to residential areas).

The VMT reduction related to parking policy and pricing included in PLAN Hermosa is 10.2% based on the inclusion of the following strategies.



Parking Supply Limits

Limiting private parking supply can reduce VMT by up to 12.5%. Reduced parking supply will encourage alternative transportation choices by residents and employees, and “park once” behaviors by commercial visitors. In PLAN Hermosa, a 5.5% VMT reduction was calculated, with an expectation that off-street minimum parking standards will be reduced by at least 10%, that parking standards will include a maximum amount of off-street supply to be provided, and that the parking standards will facilitate the provision of some shared parking between uses by 2040. Residential permit parking programs and on-street market-priced parking areas will be maintained to counterbalance spillover. The implementation of this measure is based on PLAN Hermosa Mobility Element policies 4.1, 4.5, 4.6 and 4.8 as well as implementation action Mobility-7 to work with commercial property owners to assess utilization of private parking supply and evaluate potential for shared use agreements.

### Unbundled Parking Costs

Unbundling separates parking from property costs, requiring those who wish to purchase parking spaces to do so at an additional cost from the property cost. This removes the burden from those who do not wish to utilize a parking space. Parking will be priced separately from home rents/purchase prices or office leases. An assumption is made that the parking costs are passed through to the vehicle owners/drivers utilizing the parking spaces. PLAN Hermosa does not include any specific policies to require projects to unbundle the parking costs from property purchase or rent costs.

### On-Street Market Pricing

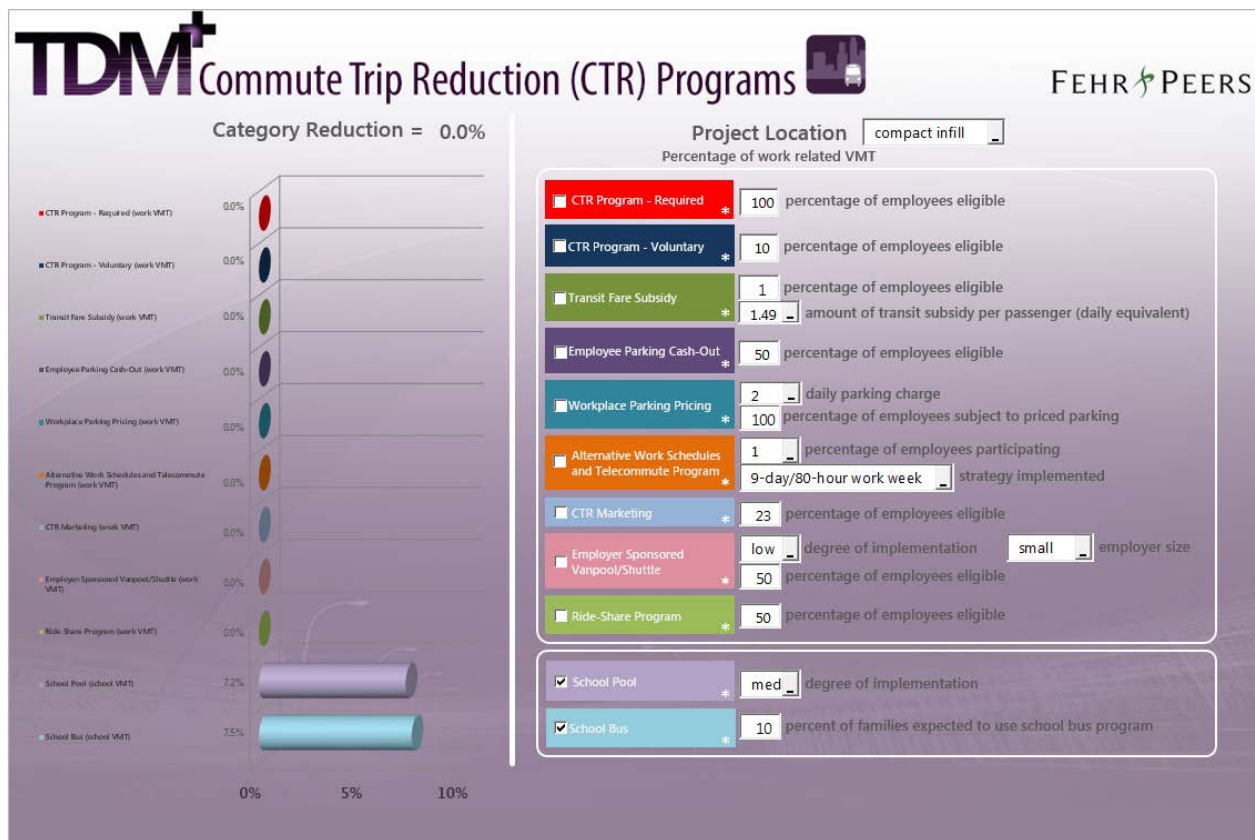
Adjusting the rates of on-street parking to reflect market prices and demand for parking at various times of the day can reduce VMT by up to 5.5% by reducing the amount of time spent circling to look for parking and also encouraging drivers to factor the cost of parking into their mode choice. In PLAN Hermosa, a 5.5% reduction was assumed, with an expectation that on-street parking pricing – for meters and/or permits - will be adjusted beyond inflation by approximately 50% by 2040.

The implementation of this measure is based on PLAN Hermosa Mobility Element policies 4.4, 4.5, 4.7 and 4.8 as well as implementation actions Mobility-10 to set parking utilization and turnover goals and implement demand-based pricing strategies for public parking spaces and Mobility-11 to develop smart technology street parking systems in the Coastal Zone.

### ***Commuter Trip Reductions***

Commuter trip reductions may include changes in the way employees get to and from work, and the way in which children travel to and from school. Since PLAN Hermosa does not include measures requiring employers to participate in commuter trip reduction programs, and LA County already offers voluntary commuter trip reduction programs, VMT reductions from this work-based trip category are negligible.

Instead, commuter trip VMT reduction measures included in PLAN Hermosa focus on how school children get to and from school. CAPCOA has identified the maximum VMT reduction associated with school trips at 15%. In PLAN Hermosa, a 1.7% reduction in VMT from school trips was assumed with an expectation that the City will facilitate a robust and supportive School Pool program (in which children carpool to school), and will support the expansion of the walking school bus program which is expected to be utilized by a small number of local families. Following are the specific measures included in the PLAN.



### School Pool

Implementation of a School Pool will reduce the number of vehicle trips made to and from schools every day by encouraging parents of local school children living near one another to sign up to be matched to transport students to school in a carpool. Facilitation of a School Pool can reduce school-related VMT by up to 15.8%. In PLAN Hermosa, Mobility Element policies 4.9, 6.3, 7.1 and 7.4 support strategies to carpool or share rides to reduce VMT and improve safety around school zones.

Based on those policies, a 7.2% reduction in school VMT was assumed with an expectation that, due to the city's small geographic size, it was assumed that a school pool could be implemented to a medium degree by 2040. Medium degree of implementation means that as many as 75% of students will be included on the School Pool contact list and may school pool occasionally or every day.

### Walking School Bus

VMT reductions based on walking school busing entail expanding the program to accommodate any local school child whose parents wish to utilize the school bus system. Currently, the walking school bus program operated by the Beach Cities Health District only operates two routes. While school-related VMT reductions based on this strategy can be as high as 63%, that reduction is focused on more traditional school bus programs. In PLAN Hermosa, Mobility Element policies 3.5, 6.3, 7.1 and 7.4 support strategies to reduce VMT and improve safety around school zones.

Based on those policies, a 7.5% VMT reduction in school-related VMT was assumed with the expectation that 10% of families would take advantage of a walking school bus. An actual school bus program need

not be implemented in order to meet the requirements of this metric. A walking or biking school bus program could be implemented every day or on specific, limited days of the week only to encourage travel to school by alternative modes.

### GLOBAL VMT REDUCTION SUMMARY

As described in the introduction, when VMT reduction strategies are implemented in concert, their interactions combine to create a composite benefit. Maximum VMT reduction caps are included in the VMT reduction calculations to avoid double-counting benefits. The combined benefit of all the PLAN Hermosa strategies when implemented in concert is a 12.9% reduction in vehicle trips generated and in VMT compared with the demand estimates forecast by the Southern California Association of Governments Regional Transportation Plan model.

