APPENDIX D

SCENARIO 3B WITHOUT LA MEDIA ROAD

1. **Scenario 3B Without La Media Road Land Use Summary & Trip Generation File**
2. **Revised Otay Mesa 3B – 2030 Street Network Plot**
3. **Revised Otay Mesa CPU 2030 3B ADT Plot (Without La Media Road)**
4. **SANDAG 2050 Regional Transportation Plan (excerpt, pg. A-17)**
5. **CALTRANS Ramp Meter Rate E-Mail**
6. **I-805 Peak Hour Volume Data**
7. **City Requested ADT Adjustments**
8. **E-Memo: OMCPU Intersection Peak Hour Turn Volumes (Method Used)**
9. **Freeway On-Ramp Lengths**
10. **Buildout Recommended Lane Configurations – Alternative 3B Without La Media Road**
11. **Buildout AM / PM Peak Hour Traffic – Alternative 3B Without La Media Road**
12. **Table Appendix D-1, Traffic Signal Warrant Worksheets**
13. **Intersection LOS Worksheets**

Otay Mesa Buildout (3B) Land Use Summary

Land Use	Input Vehicle Trip Generation		
	Type	Amount	Veh. Trips
Single Family	du	4,273	37,570
Multi-Family	du	14,501	116,056
Elementary school	site	7	8,295
Junior College	student	5,000	9,095
Senior High School	student	4,800	8,230
∗IBT - Office	ksf	2,771	39,103
∗L-R Office	ksf	362	5,760
∗Heavy Industry	ksf	8,458	34,962
∗IBT- Industrial Park	ksf	8,034	64,283
∗IBT - Business Park	ksf	5,356	87,819
∗Industrial Park	ksf	6,020	97,463
∗Light Industry LGR IP	ksf	12,685	101,497
∗IBT - Manufacturing	ksf	2,678	10,823
Commercial Airport	Flt	682	1,368
✔ Community Commercial	ksf	3,848	269,768
✔ Neighborhood Commercial	ksf	69	8,295
Gas Station w/fdmt	pump	27	6,710
∗ IBT- Warehouse	ksf	8,034	40,060
Truck Storage	acre	30	920
Warehouse or Storage	ksf	63	315
Active Park	acre	166	7,284
Cross Border Facility (CBF)	Passenger	17,225	31,205
Lodging - Hotel (BRWN FLD & CBF)	room	570	5,693
Air & Space Museum (BRWN FLD)		360	732
Restaurant (BRWN FLD)		30	12,000
Park & Ride (BRWN FLD)	Site	1	297
Solar Field (BRWN FLD)		67	5
Communication or Utility	acre	6	18
OMPOE in/out Laden	truck	2,000	8,096
OMPOE in/out unladen	truck	4,000	16,192
Church	site	5	205
Police or Fire Station	site	11	225
Other Health Care	ksf	293	14,681
Grand Total:			*1,045,025*

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∗ **Industrial Square footage total of 54,461,000**

✔ **Commercial square footage total of 3,917,000**

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     ---------------------- Land Use ----------------------   -----Trips-----
Zone   Code   Name                           Type    Amount   Person Vehicle

4429    101   SINGLE FAMILY                  du       800.0   10080.    7034.
4429   4112   RIGHT-OF-WAY                   acre      62.0      0.       0.
4429   7601   ACTIVE PARK                    acre       6.0    400.     263.
4429   9101   INACTIVE USE                   acre     249.7      0.       0.
4429   9710   MULTI-FAMILY(UNDER20DU/AC)     du       820.0    9348.    6563.
4429          TOTAL                                           19828.   13860.

4431   6102   CHURCH                         acre       5.0    267.     205.
4431   7601   ACTIVE PARK                    acre      11.0    733.     482.
4431   9711   GAS STATION W/FDMT(PUMP)       pump      12.0   2466.    1790.
4431   9719   OTHER HEALTH CARE(KSF)         ksf      292.7  19788.   14681.
4431          TOTAL                                           23254.   17158.

4443    101   SINGLE FAMILY                  du      1069.0  13469.    9399.
4443   4112   RIGHT-OF-WAY                   acre      47.4      0.       0.
4443   7601   ACTIVE PARK                    acre       5.3    353.     232.
4443   9101   INACTIVE USE                   acre     263.2      0.       0.
4443   9710   MULTI-FAMILY(UNDER20DU/AC)     du       330.0   3762.    2641.
4443          TOTAL                                           17584.   12273.

4450   4112   RIGHT-OF-WAY                   acre      13.6      0.       0.
4450   9101   INACTIVE USE                   acre     187.3      0.       0.
4450          TOTAL                                               0.       0.

4460   9715   LIGHT INDUSTRY LRG IP(KSF)     ksf      830.9    8226.    6648.
4460          TOTAL                                            8226.    6648.

4463   4112   RIGHT-OF-WAY                   acre      15.8      0.       0.
4463   9101   INACTIVE USE                   acre     168.4      0.       0.
4463          TOTAL                                               0.       0.

4464   4112   RIGHT-OF-WAY                   acre      24.4      0.       0.
4464   9733   COMMUNITY COMMERCIAL (KSF)     ksf      770.9   77088.   54542.
4464          TOTAL                                           77088.   54542.

4467    101   SINGLE FAMILY                  du       387.0   4876.    3403.
4467   4112   RIGHT-OF-WAY                   acre      28.4      0.       0.
4467   7601   ACTIVE PARK                    acre       7.0    466.     307.
4467   9101   INACTIVE USE                   acre     132.7      0.       0.
4467   9710   MULTI-FAMILY(UNDER20DU/AC)     du       216.0   2462.    1729.
4467          TOTAL                                            7805.    5438.

4472   4112   RIGHT-OF-WAY                   acre      40.0      0.       0.
4472   9101   INACTIVE USE                   acre     238.3      0.       0.
4472   9715   LIGHT INDUSTRY LRG IP(KSF)     ksf      725.0   7177.    5801.
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     ---------------------- Land Use ----------------------   -----Trips-----
Zone   Code   Name                           Type    Amount   Person Vehicle

4472   9717   INDUSTRIAL PARK(KSF)           ksf      777.0   15540.   12739.
4472   9768   AIR&SPACE MUSEUM(BRWN FLD)     ksf      360.0    1080.     732.
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4472    9770    SOLAR FIELD (BRWN FLD)          acre      66.5        7.       5.
4472            TOTAL                                              23804.   19277.

4479    4112    RIGHT-OF-WAY                    acre      60.5        0.       0.
4479    9715    LIGHT INDUSTRY LRG IP(KSF)      ksf     1960.2   19406.   15684.
4479    9734    HEAVY INDUSTRY (KSF)            ksf     1960.2    9801.    8103.
4479            TOTAL                                              29207.   23787.

4496    4112    RIGHT-OF-WAY                    acre       6.4        0.       0.
4496    9101    INACTIVE USE                    acre      54.2        0.       0.
4496    9710    MULTI-FAMILY(UNDER20DU/AC)      du      1016.0   11582.    8131.
4496    9731    NEIGHBORHOOD COMMERCIAL(KSF)    ksf       33.2    5630.    3983.
4496            TOTAL                                              17212.   12115.

4497    4112    RIGHT-OF-WAY                    acre      16.0        0.       0.
4497    9101    INACTIVE USE                    acre      67.0        0.       0.
4497    9715    LIGHT INDUSTRY LRG IP(KSF)      ksf     1916.6   18975.   15335.
4497            TOTAL                                              18975.   15335.

4499     101    SINGLE FAMILY                   du       123.0    1550.    1081.
4499    4112    RIGHT-OF-WAY                    acre      54.9        0.       0.
4499    7601    ACTIVE PARK                     acre       4.9      326.     215.
4499    9101    INACTIVE USE                    acre      32.9        0.       0.
4499    9710    MULTI-FAMILY(UNDER20DU/AC)      du       630.0    7182.    5042.
4499    9714    WAREHOUSING OR STORAGE(KSF)     ksf       63.2      385.     315.
4499            TOTAL                                               9443.    6653.

4505    4112    RIGHT-OF-WAY                    acre      33.0        0.       0.
4505    6806    ELEMENTARY SCHOOL               site       1.0    2119.    1185.
4505    7601    ACTIVE PARK                     acre      15.0      999.     657.
4505    9101    INACTIVE USE                    acre      21.0        0.       0.
4505    9710    MULTI-FAMILY(UNDER20DU/AC)      du      1578.0   17989.   12629.
4505            TOTAL                                              21107.   14472.

4511    4112    RIGHT-OF-WAY                    acre       5.7        0.       0.
4511    6806    ELEMENTARY SCHOOL               acre       2.0    4237.    2370.
4511    9733    COMMUNITY COMMERCIAL (KSF)      ksf      234.7   23470.   16606.
4511            TOTAL                                              27707.   18976.

4517     101    SINGLE FAMILY                   du       435.0    5481.    3825.
4517    4112    RIGHT-OF-WAY                    acre      78.1        0.       0.
4517    9101    INACTIVE USE                    acre      64.4        0.       0.
4517            TOTAL                                               5481.    3825.

4520    4112    RIGHT-OF-WAY                    acre      26.8        0.       0.
4520    9733    COMMUNITY COMMERCIAL (KSF)      ksf      326.7   32670.   23115.
4520            TOTAL                                              32670.   23115.

4521    4112    RIGHT-OF-WAY                    acre      10.0        0.       0.
4521    9733    COMMUNITY COMMERCIAL (KSF)      acre     271.7   27168.   19222.
4521            TOTAL                                              27168.   19222.

4522    4112    RIGHT-OF-WAY                    acre      16.7        0.       0.
4522    9101    INACTIVE USE                    acre      24.7        0.       0.
4522    9735    IBT-WAREHOUSE (KSF)             ksf      161.6      986.     806.
4522    9736    IBT-BUSINESS PARK(KSF)          ksf      107.7    2154.    1766.
4522    9737    IBT-INDUSTRIAL PARK(KSF)        ksf      161.6    1600.    1293.
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                ---------------------- Land Use ----------------------    -----Trips-----
Zone    Code    Name                                Type      Amount    Person  Vehicle

4522    9738    IBT-MANUFACTURING (KSF)             ksf        53.9      269.     218.
4522    9747    IBT-OFFICE(KSF-53.9;ZN 4522)        ksf        53.9     1373.    1053.
4522            TOTAL                                                   6383.    5135.

4524    4112    RIGHT-OF-WAY                        acre       20.9        0.       0.
4524    9735    IBT-WAREHOUSE (KSF)                 ksf       379.4     2315.    1892.
4524    9736    IBT-BUSINESS PARK(KSF)              ksf       252.9     5059.    4147.
4524    9737    IBT-INDUSTRIAL PARK(KSF)            ksf       379.4     3756.    3036.
4524    9738    IBT-MANUFACTURING (KSF)             ksf       126.5      632.     511.
4524    9749    IBT-OFFICE(KSF-126;ZN 4524)         ksf       126.5     2618.    2007.
4524            TOTAL                                                  14380.   11593.

4525    4112    RIGHT-OF-WAY                        acre       20.0        0.       0.
4525    9735    IBT-WAREHOUSE (KSF)                 ksf       370.5     2260.    1847.
4525    9736    IBT-BUSINESS PARK(KSF)              ksf       247.0     4940.    4049.
4525    9737    IBT-INDUSTRIAL PARK(KSF)            ksf       370.5     3668.    2964.
4525    9738    IBT-MANUFACTURING (KSF)             ksf       123.5      617.     499.
4525    9750    IBT-OFFICE(KSF-123;ZN 4525)         ksf       123.5     2569.    1969.
4525            TOTAL                                                  14053.   11329.

4526     101    SINGLE FAMILY                       du         75.0      945.     659.
4526    4112    RIGHT-OF-WAY                        acre       14.6        0.       0.
4526    9101    INACTIVE USE                        acre       45.0        0.       0.
4526    9710    MULTI-FAMILY(UNDER20DU/AC)          du        340.0     3876.    2721.
4526    9733    COMMUNITY COMMERCIAL (KSF)          ksf       248.3    24829.   17567.
4526            TOTAL                                                  29650.   20948.

4527    4112    RIGHT-OF-WAY                        acre       20.5        0.       0.
4527    9735    IBT-WAREHOUSE (KSF)                 ksf       423.4     2583.    2111.
4527    9736    IBT-BUSINESS PARK(KSF)              ksf       282.3     5645.    4628.
4527    9737    IBT-INDUSTRIAL PARK(KSF)            ksf       423.4     4192.    3388.
4527    9738    IBT-MANUFACTURING (KSF)             ksf       141.1      706.     570.
4527    9751    IBT-OFFICE(KSF-141;ZN 4527)         ksf       141.1     2837.    2174.
4527            TOTAL                                                  15962.   12871.

4528    4112    RIGHT-OF-WAY                        acre       16.7        0.       0.
4528    9717    INDUSTRIAL PARK(KSF)                ksf       199.6     3991.    3272.
4528    9733    COMMUNITY COMMERCIAL (KSF)          ksf       478.9    47892.   33885.
4528            TOTAL                                                  51883.   37156.

4529    4112    RIGHT-OF-WAY                        acre       17.0        0.       0.
4529    9735    IBT-WAREHOUSE (KSF)                 ksf       118.7      724.     592.
4529    9736    IBT-BUSINESS PARK(KSF)              ksf        79.1     1582.    1297.
4529    9737    IBT-INDUSTRIAL PARK(KSF)            ksf       118.7     1175.     949.
4529    9738    IBT-MANUFACTURING (KSF)             ksf        39.5      198.     160.
4529    9747    IBT-OFFICE(KSF-53.9;ZN 4522)        ksf        39.5     1009.     773.
4529            TOTAL                                                   4687.    3771.

4530    4112    RIGHT-OF-WAY                        acre       42.2        0.       0.
4530    9717    INDUSTRIAL PARK(KSF)                ksf       217.4     4347.    3564.
4530    9733    COMMUNITY COMMERCIAL (KSF)          ksf       521.7    52167.   36910.
4530            TOTAL                                                  56515.   40474.
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     ---------------------- Land Use ----------------------    -----Trips-----
Zone    Code   Name                            Type    Amount    Person Vehicle

4531    4112   RIGHT-OF-WAY                    acre      33.2       0.       0.
4531    4113   COMMUNICATION OR UTILITY        acre       2.1       8.       6.
4531    9715   LIGHT INDUSTRY LRG IP(KSF)      ksf     1128.0   11167.    9025.
4531    9734   HEAVY INDUSTRY (KSF)            ksf      149.9     749.     619.
4531           TOTAL                                            11925.    9651.

4532    4112   RIGHT-OF-WAY                    acre       8.2       0.       0.
4532    9715   LIGHT INDUSTRY LRG IP(KSF)      ksf     1337.1   13237.   10698.
4532           TOTAL                                            13237.   10698.

4545    4112   RIGHT-OF-WAY                    acre      23.3       0.       0.
4545    9101   INACTIVE USE                    acre      87.3       0.       0.
4545    9710   MULTI-FAMILY(UNDER20DU/AC)      du       381.0    4343.    3049.
4545    9717   INDUSTRIAL PARK(KSF)            ksf      778.2   15564.   12759.
4545    9733   COMMUNITY COMMERCIAL (KSF)      ksf       17.0    1699.    1202.
4545           TOTAL                                            21606.   17010.

4546     101   SINGLE FAMILY                   du        59.0     743.     519.
4546    4112   RIGHT-OF-WAY                    acre       2.9       0.       0.
4546    4113   COMMUNICATION OR UTILITY        acre       3.9      16.      12.
4546    9101   INACTIVE USE                    acre     134.1       0.       0.
4546    9710   MULTI-FAMILY(UNDER20DU/AC)      du        40.0     456.     320.
4546           TOTAL                                             1215.     851.

4547    4112   RIGHT-OF-WAY                    acre      16.6       0.       0.
4547    7601   ACTIVE PARK                     acre       8.1     539.     355.
4547    9710   MULTI-FAMILY(UNDER20DU/AC)      du      1111.0   12665.    8892.
4547    9717   INDUSTRIAL PARK(KSF)            ksf      991.9   19838.   16263.
4547    9733   COMMUNITY COMMERCIAL (KSF)      ksf       15.7    1568.    1110.
4547           TOTAL                                            34611.   26619.

4548    4112   RIGHT-OF-WAY                    acre      18.2       0.       0.
4548    9717   INDUSTRIAL PARK(KSF)            ksf     1417.9   28358.   23247.
4548           TOTAL                                            28358.   23247.

4549    4112   RIGHT-OF-WAY                    acre      18.2       0.       0.
4549    9101   INACTIVE USE                    acre       6.4       0.       0.
4549    9706   JUNIOR COLLEGE (STUDENTS)       stu     5000.0   11500.    9095.
4549    9717   INDUSTRIAL PARK(KSF)            ksf      179.2    3585.    2939.
4549           TOTAL                                            15085.   12033.

4550    4112   RIGHT-OF-WAY                    acre       9.3       0.       0.
4550    9735   IBT-WAREHOUSE (KSF)             ksf      200.1    1221.     998.
4550    9736   IBT-BUSINESS PARK(KSF)          ksf      133.4    2668.    2188.
4550    9737   IBT-INDUSTRIAL PARK(KSF)        ksf      200.1    1981.    1601.
4550    9738   IBT-MANUFACTURING (KSF)         ksf       66.7     334.     270.
4550    9746   IBT-OFFICE(KSF-66.7;ZN 4550)    ksf       66.7    1614.    1237.
4550           TOTAL                                             7819.    6294.

4551    4112   RIGHT-OF-WAY                    acre      45.0       0.       0.
4551    9735   IBT-WAREHOUSE (KSF)             ksf      502.3    3064.    2505.
4551    9736   IBT-BUSINESS PARK(KSF)          ksf      334.9    6698.    5491.
4551    9737   IBT-INDUSTRIAL PARK(KSF)        ksf      502.3    4973.    4019.
4551    9738   IBT-MANUFACTURING (KSF)         ksf      167.4     837.     677.
4551    9753   IBT-OFFICE(KSF-166;ZN 4551)     ksf      167.4    3232.    2477.
4551           TOTAL                                            18804.   15168.

4558     101   SINGLE FAMILY                   du       125.0    1575.    1099.
4558    4112   RIGHT-OF-WAY                    acre       3.6       0.       0.
4558    6806   ELEMENTARY SCHOOL               site       1.0    2119.    1185.
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4558   7601   ACTIVE PARK                      acre         5.2      346.      228.
4558   9101   INACTIVE USE                     acre       108.3        0.        0.
4558   9710   MULTI-FAMILY(UNDER20DU/AC)       du         590.0     6726.     4722.
4558          TOTAL                                                 10766.     7234.

4560   4112   RIGHT-OF-WAY                     acre        15.2        0.        0.
4560   6806   ELEMENTARY SCHOOL                site         1.0     2119.     1185.
4560   7601   ACTIVE PARK                      acre        24.2     1612.     1061.
4560   9101   INACTIVE USE                     acre       145.5        0.        0.
4560   9710   MULTI-FAMILY(UNDER20DU/AC)       du        3754.0    42796.    30045.
4560          TOTAL                                                 46526.    32291.

4561    101   SINGLE FAMILY                    du         765.0     9639.     6726.
4561   4112   RIGHT-OF-WAY                     acre         3.8        0.        0.
4561   6806   ELEMENTARY SCHOOL                site         2.0     4237.     2370.
4561   7601   ACTIVE PARK                      acre        20.7     1379.      907.
4561   9101   INACTIVE USE                     acre       166.0        0.        0.
4561   9707   L-R OFF(KSF-98;ZN4561,4578)      ksf         98.0     2156.     1653.

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       ---------------------- Land Use ----------------------   -----Trips-----
Zone   Code   Name                             Type     Amount    Person Vehicle

4561   9710   MULTI-FAMILY(UNDER20DU/AC)       du        2025.0    23085.    16207.
4561   9733   COMMUNITY COMMERCIAL (KSF)       ksf         47.0     4704.     3329.
4561          TOTAL                                                 45201.    31192.

4562   4112   RIGHT-OF-WAY                     acre        13.4        0.        0.
4562   7601   ACTIVE PARK                      acre        39.4     2624.     1727.
4562   9101   INACTIVE USE                     acre        54.3        0.        0.
4562   9717   INDUSTRIAL PARK(KSF)             ksf       1178.9    23579.    19329.
4562   9725   SENIOR HIGH SCHOOL(STUDENTS)     stu       2400.0     9120.     4115.
4562          TOTAL                                                 35323.    25172.

4563   4112   RIGHT-OF-WAY                     acre         4.9        0.        0.
4563   9735   IBT-WAREHOUSE (KSF)              ksf       1001.5     6109.     4993.
4563   9736   IBT-BUSINESS PARK(KSF)           ksf        667.6    13353.    10946.
4563   9737   IBT-INDUSTRIAL PARK(KSF)         ksf       1001.5     9915.     8013.
4563   9738   IBT-MANUFACTURING (KSF)          ksf        333.8     1669.     1349.
4563   9758   IBT-OFFICE(KSF-333;ZN 4563)      ksf        333.8     5441.     4171.
4563          TOTAL                                                 36487.    29472.

4564   4112   RIGHT-OF-WAY                     acre         3.4        0.        0.
4564   9101   INACTIVE USE                     acre        38.0        0.        0.
4564   9735   IBT-WAREHOUSE (KSF)              ksf        702.9     4287.     3504.
4564   9736   IBT-BUSINESS PARK(KSF)           ksf        468.6     9372.     7683.
4564   9737   IBT-INDUSTRIAL PARK(KSF)         ksf        702.9     6958.     5624.
4564   9738   IBT-MANUFACTURING (KSF)          ksf        234.3     1171.      947.
4564   9754   IBT-OFFICE(KSF-234;ZN 4564)      ksf        234.3     4170.     3196.
4564          TOTAL                                                 25959.    20954.

4565   4112   RIGHT-OF-WAY                     acre        19.5        0.        0.
4565   9735   IBT-WAREHOUSE (KSF)              ksf       1035.5     6317.     5163.
4565   9736   IBT-BUSINESS PARK(KSF)           ksf        690.3    13807.    11318.
4565   9737   IBT-INDUSTRIAL PARK(KSF)         ksf       1035.5    10252.     8285.
4565   9738   IBT-MANUFACTURING (KSF)          ksf        345.2     1726.     1395.
4565   9756   IBT-OFFICE(KSF-345;ZN 4565)      ksf        345.2     5592.     4286.
4565          TOTAL                                                 37692.    30447.
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4566    4112   RIGHT-OF-WAY                  acre        15.2        0.        0.
4566    9735   IBT-WAREHOUSE (KSF)           ksf        844.2     5150.     4209.
4566    9736   IBT-BUSINESS PARK(KSF)        ksf        562.8    11256.     9227.
4566    9737   IBT-INDUSTRIAL PARK(KSF)      ksf        844.2     8358.     6754.
4566    9738   IBT-MANUFACTURING (KSF)       ksf        281.4     1407.     1137.
4566    9755   IBT-OFFICE(KSF-282;ZN 4566)   ksf        281.4     4784.     3667.
4566           TOTAL                                             30954.    24995.

4567    4112   RIGHT-OF-WAY                  acre         9.0        0.        0.
4567    9733   COMMUNITY COMMERCIAL (KSF)    ksf         95.4     9540.     6750.
4567    9735   IBT-WAREHOUSE (KSF)           ksf        208.9     1274.     1042.
4567    9736   IBT-BUSINESS PARK(KSF)        ksf        139.3     2785.     2283.
4567    9737   IBT-INDUSTRIAL PARK(KSF)      ksf        208.9     2068.     1671.
4567    9738   IBT-MANUFACTURING (KSF)       ksf         69.6      348.      281.
4567    9746   IBT-OFFICE(KSF-66.7;ZN 4550)  ksf         69.6     1685.     1292.
4567           TOTAL                                             17700.    13319.

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          ---------------------- Land Use ----------------------  -----Trips-----
Zone    Code   Name                          Type      Amount    Person Vehicle

4569    4112   RIGHT-OF-WAY                  acre        24.0        0.        0.
4569    9715   LIGHT INDUSTRY LRG IP(KSF)    ksf       1086.8    10760.     8696.
4569           TOTAL                                             10760.     8696.

4570    4112   RIGHT-OF-WAY                  acre        11.0        0.        0.
4570    9715   LIGHT INDUSTRY LRG IP(KSF)    ksf       1287.4    12745.    10301.
4570           TOTAL                                             12745.    10301.

4578     101   SINGLE FAMILY                 du         435.0     5481.     3825.
4578    4112   RIGHT-OF-WAY                  acre         3.8        0.        0.
4578    7601   ACTIVE PARK                   acre        13.6      906.      596.
4578    9101   INACTIVE USE                  acre       239.4        0.        0.
4578    9707   L-R OFF(KSF-98;ZN4561,4578)   ksf         98.0     2156.     1653.
4578    9710   MULTI-FAMILY(UNDER20DU/AC)    du        1150.0    13110.     9204.
4578    9733   COMMUNITY COMMERCIAL (KSF)    ksf         47.0     4704.     3329.
4578           TOTAL                                             26357.    18606.

4580    4112   RIGHT-OF-WAY                  acre         9.4        0.        0.
4580    9101   INACTIVE USE                  acre         5.0        0.        0.
4580    9715   LIGHT INDUSTRY LRG IP(KSF)    ksf         83.0      822.      664.
4580    9733   COMMUNITY COMMERCIAL (KSF)    ksf        352.2    35218.    24918.
4580           TOTAL                                             36040.    25582.

4581    4112   RIGHT-OF-WAY                  acre        11.0        0.        0.
4581    9715   LIGHT INDUSTRY LRG IP(KSF)    ksf       2156.4    21349.    17254.
4581           TOTAL                                             21349.    17254.

4584    4112   RIGHT-OF-WAY                  acre        20.0        0.        0.
4584    9715   LIGHT INDUSTRY LRG IP(KSF)    ksf         65.3      647.      523.
4584    9733   COMMUNITY COMMERCIAL (KSF)    ksf        158.5    15851.    11215.
4584    9735   IBT-WAREHOUSE (KSF)           ksf        177.1     1081.      883.
4584    9736   IBT-BUSINESS PARK(KSF)        ksf        118.1     2362.     1936.
4584    9737   IBT-INDUSTRIAL PARK(KSF)      ksf        177.1     1754.     1417.
4584    9738   IBT-MANUFACTURING (KSF)       ksf         59.0      295.      239.
4584    9745   IBT-OFFICE(KSF-59.0;ZN 4584)  ksf         59.0     1470.     1127.
4584           TOTAL                                             23460.    17340.
```

```
♀                           OTAY MESA Final 2030 3B (.5 FAR)
                         trip generation and land use by zone           page   7

         ----------------------- Land Use -----------------------   -----Trips-----
Zone    Code     Name                               Type      Amount   Person Vehicle

4586    4112     RIGHT-OF-WAY                       acre         7.1       0.       0.
4586    9101     INACTIVE USE                       acre       257.7       0.       0.
4586    9734     HEAVY INDUSTRY (KSF)               ksf       1887.7    9438.    7803.
4586             TOTAL                                                  9438.    7803.

4587    4112     RIGHT-OF-WAY                       acre        10.9       0.       0.
4587    9734     HEAVY INDUSTRY (KSF)               ksf       3039.0   15195.   12563.
4587             TOTAL                                                 15195.   12563.

4588    4112     RIGHT-OF-WAY                       acre         6.1       0.       0.
4588    9740     CROSS BORDER FACILITY (PASS)       pass     17225.0   48230.   31205.
4588    9741     CROSS BORDER FAC-HOTEL(RM)         room       300.0    4860.    2996.
4588    9742     CROSS BORDER FAC-INDPRK(KSF)       ksf        280.0    4088.    3351.
4588    9743     CROSS BORDER FAC-GAS (PUMP)        pump        12.0    2466.    1790.
4588    9744     CROSS BORDER FAC-RETAIL(KSF)       ksf         78.5    4420.    3127.
4588    9752     IBT-OFFICE(KSF-270;ZN 4588)        ksf        269.9    4643.    3559.
4588    9759     IBT-WAREHOUSE(KSF-ZN4588)          ksf        530.0    3233.    2643.
4588    9760     IBT-BUSINESS PARK(KSF-4588)        ksf        353.4    7068.    5794.
4588    9761     IBT-INDUST PARK(KSF-4588)          ksf        530.0    5247.    4241.
4588    9762     IBT-MANUFACTURING(KSF-4588)        ksf        176.7     883.     714.
4588             TOTAL                                                 85138.   59419.

4589    9101     INACTIVE USE                       acre        53.0       0.       0.
4589    9735     IBT-WAREHOUSE (KSF)                ksf        300.2    1831.    1497.
4589    9736     IBT-BUSINESS PARK(KSF)             ksf        200.2    4003.    3282.
4589    9737     IBT-INDUSTRIAL PARK(KSF)           ksf        300.2    2972.    2402.
4589    9738     IBT-MANUFACTURING (KSF)            ksf        100.1     500.     404.
4589    9748     IBT-OFFICE(KSF-100;ZN 4589)        ksf        100.1    2192.    1680.
4589    9771     FIRE OR POLICE STATION             acre        10.9     305.     225.
4589             TOTAL                                                 11804.    9490.

4590    4112     RIGHT-OF-WAY                       acre        24.0       0.       0.
4590    9735     IBT-WAREHOUSE (KSF)                ksf       1078.1    6576.    5375.
4590    9736     IBT-BUSINESS PARK(KSF)             ksf        718.7   14375.   11784.
4590    9737     IBT-INDUSTRIAL PARK(KSF)           ksf       1078.1   10673.    8626.
4590    9738     IBT-MANUFACTURING (KSF)            ksf        359.4    1797.    1452.
4590    9757     IBT-OFFICE(KSF-359;ZN 4590)        ksf        359.4    5786.    4435.
4590             TOTAL                                                 39207.   31672.

4606    4001     OMPOE IN/OUT LADEN(TRUCKS)         truck     2000.0   10600.    8096.
4606             TOTAL                                                 10600.    8096.

4607    4002     OMPOE IN/OUT UNLADEN(TRUCKS)       truck     4000.0   21200.   16192.
4607             TOTAL                                                 21200.   16192.

4608    4112     RIGHT-OF-WAY                       acre        22.0       0.       0.
4608    9101     INACTIVE USE                       acre        44.0       0.       0.
4608    9710     MULTI-FAMILY(UNDER20DU/AC)         du         145.0    1653.    1160.
4608    9715     LIGHT INDUSTRY LRG IP(KSF)         ksf        108.5    1074.     868.
4608    9731     NEIGHBORHOOD COMMERCIAL(KSF)       ksf         35.9    6095.    4312.
4608    9734     HEAVY INDUSTRY (KSF)               ksf       1420.9    7105.    5874.
4608             TOTAL                                                 15926.   12215.
```

```
                      OTAY MESA Final 2030 3B (.5 FAR)
                   trip generation and land use by zone              page 8

        ---------------------- Land Use ----------------------   -----Trips-----
Zone    Code    Name                              Type     Amount    Person Vehicle

4609    9720    TRUCK STORAGE (WRHSGSTRG)         acre       30.0     1125.     920.
4609    9726    COMMERCIAL AIRPORT (OM/FLT)       flt       682.0     2114.    1368.
4609    9733    COMMUNITY COMMERCIAL (KSF)        ksf       182.9    18290.   12941.
4609    9763    COMMERCIAL OFFICE(BRWN FLD)       ksf       165.9     3202.    2454.
4609    9764    HOTEL (BRWN FLD)                  room      270.0     4374.    2697.
4609    9765    GAS STATION (BRWN FLD)            ksf         3.2     4311.    3130.
4609    9766    FAST FOOD REST (BRWN FLD)         ksf        14.3    14098.    9975.
4609    9767    HIGH T/O REST (BRWN FLD)          ksf        15.8     2861.    2025.
4609    9769    PARK & RIDE (BRWN FLD)            acre        0.7      389.     297.
4609            TOTAL                                                50766.   35806.

4610    4112    RIGHT-OF-WAY                      acre       23.3        0.       0.
4610    9101    INACTIVE USE                      acre        1.6        0.       0.
4610    9710    MULTI-FAMILY(UNDER20DU/AC)        du        110.0     1254.     880.
4610    9725    SENIOR HIGH SCHOOL(STUDENTS)      stu      2400.0     9120.    4115.
4610            TOTAL                                                10374.    4995.

4611    7601    ACTIVE PARK                       acre        5.8      386.     254.
4611    9101    INACTIVE USE                      acre       23.8        0.       0.
4611    9710    MULTI-FAMILY(UNDER20DU/AC)        du        265.0     3021.    2121.
4611            TOTAL                                                 3407.    2375.

                                                          12aug10/14:44:05/tgm.pr
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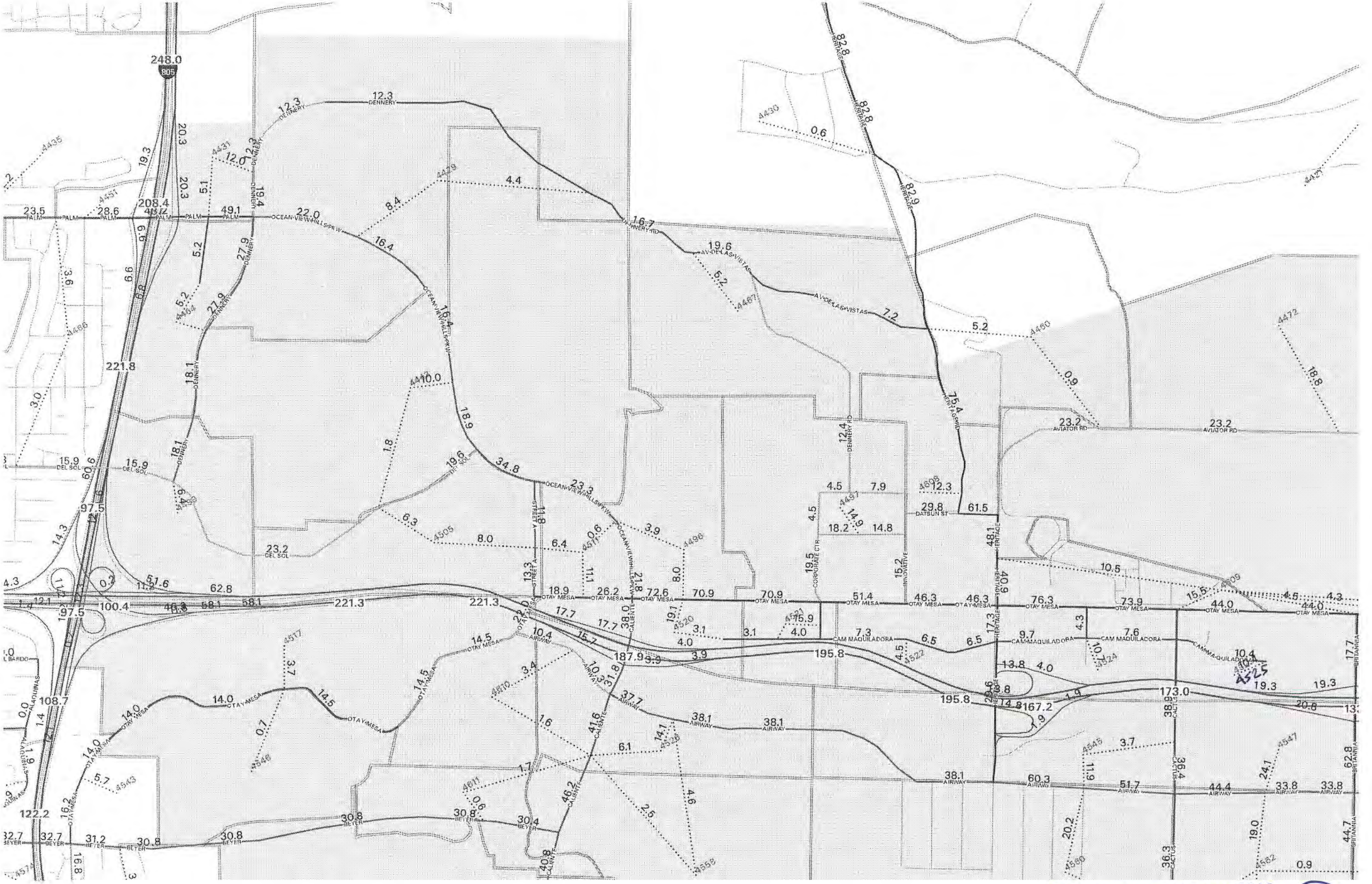
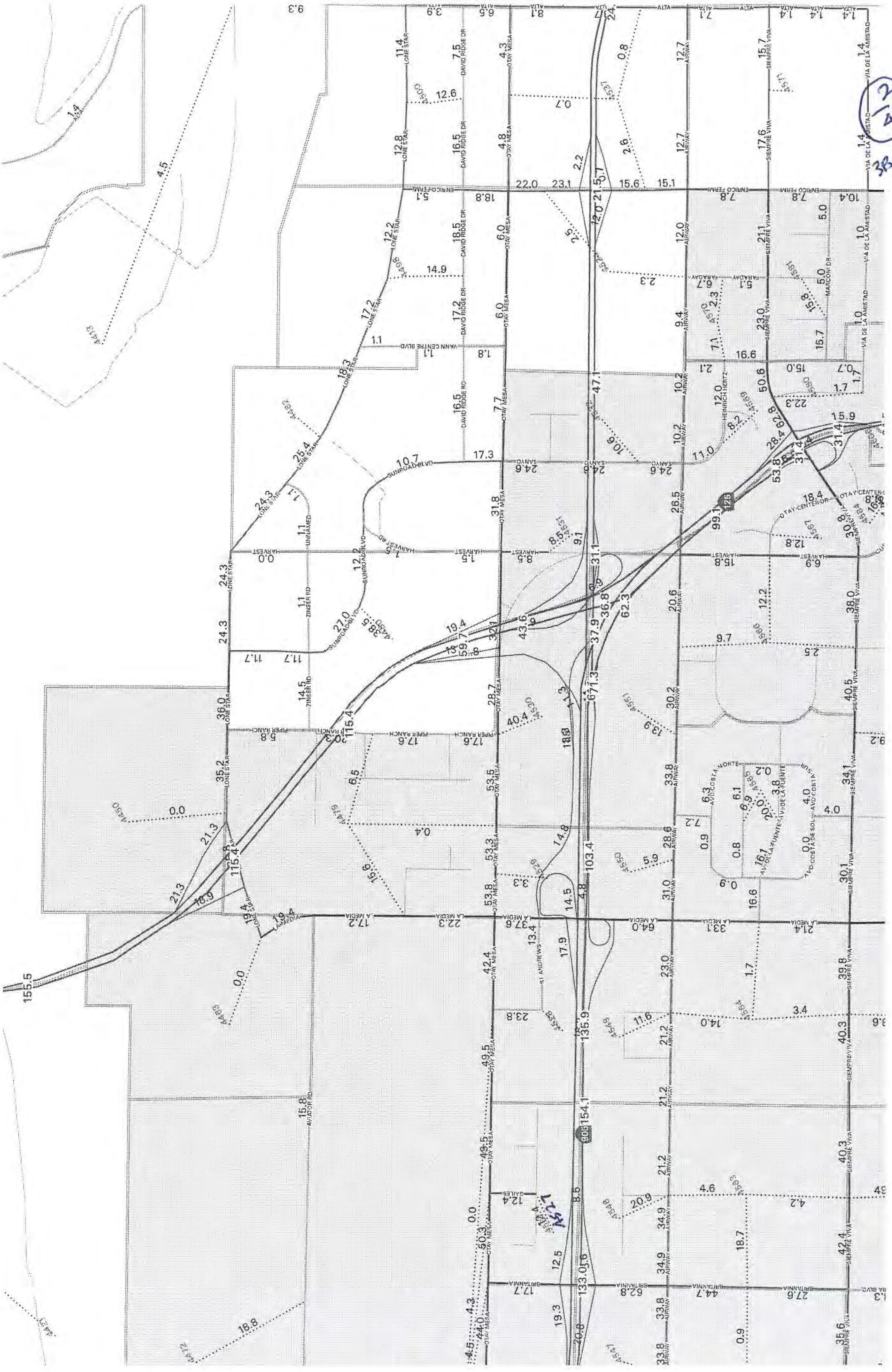


3B WITHOUT LA MEDIA
READABLE VOLUMES & TAZs

1/4

3BNLM
TAZ



2/4

3B NLM TAZ

A527

REVISED OTAY MESA 3B - 2030 Street Network

OTAY MESA

SANDAG Series 11
2030 Revenue Constraint Network

Legend

- ╱╲ Freeway
- ╱╲ Prime
- ╱╲ Major
- ╱╲ Collector
- ╱╲ Local Collector
- ╱╲ Rural Collector
- ╱╲ Rural Light Collector
- ╱╲ Local
- ╱╲ Ramp

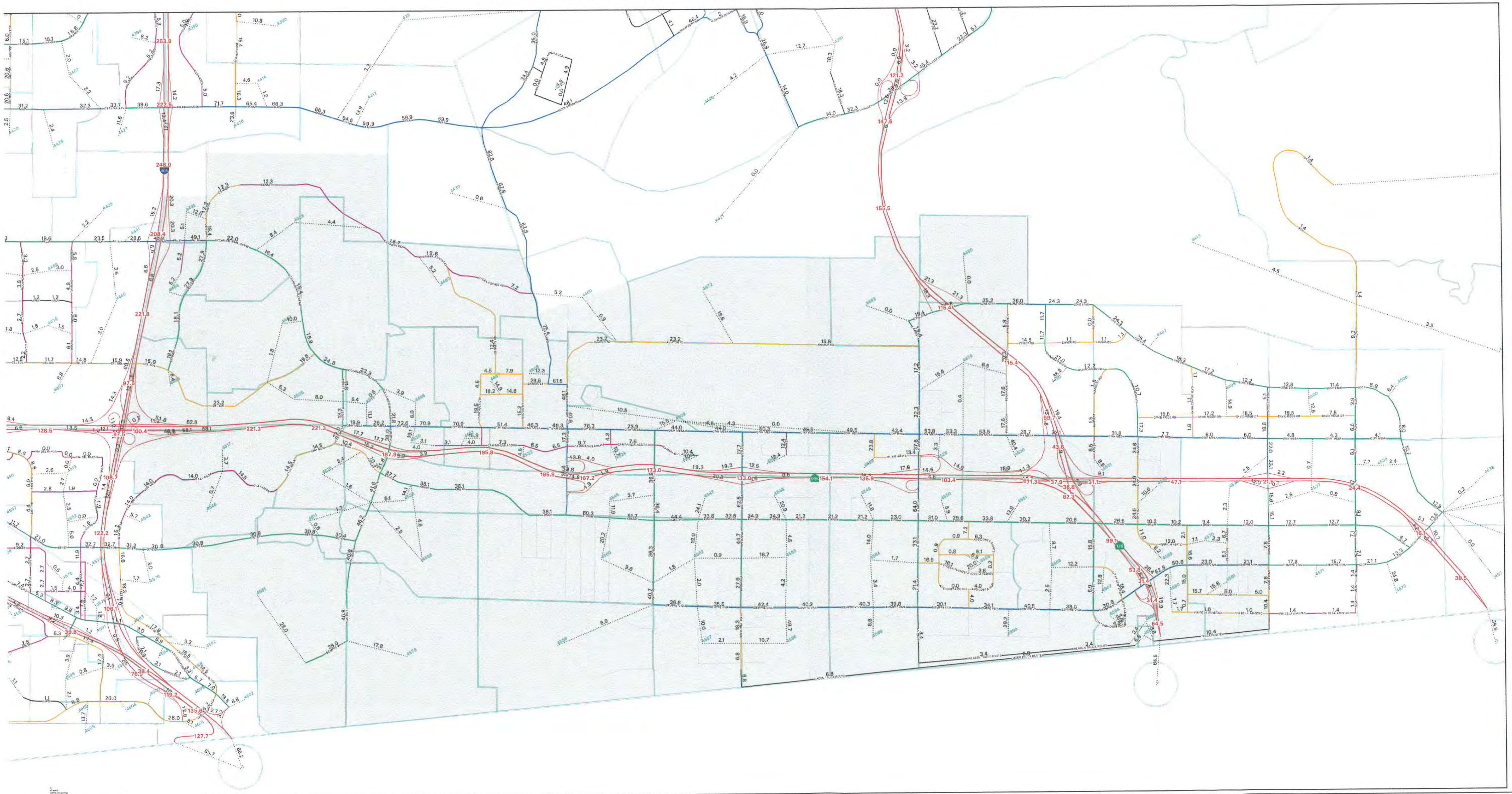
- 🚦 Signal
- ■ All-Way Stop
- ● Stop

Feet
0 800 1,600
0 96 288 480
Meters

N

September 23, 2010

DRAFT - REVISED OTAY MESA CPU 2030 3B ADT PLOT



SANDAG Series 11
2030rc Network

Otay Mesa CPU Study

With .5 FAR LU
8L Toll for SR-125
& no La Media connection

Legend

- Freeway
- Prime
- Major
- Collector
- Local Collector
- Rural Collector
- Rural Light Collector
- Local
- Ramp

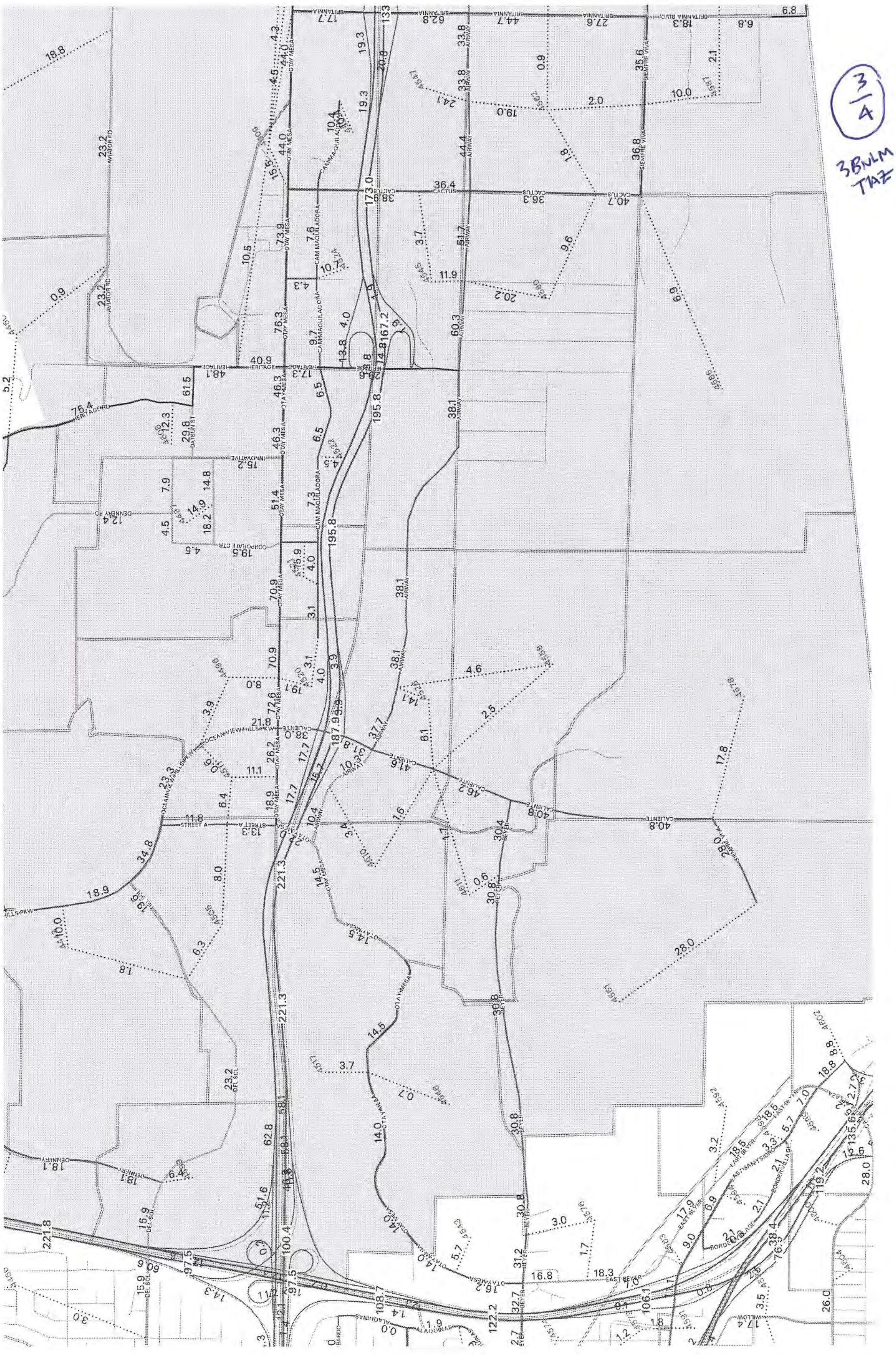
Unadjusted Volumes (1000s)

Freeway Unadjusted Volumes (1000s)

Feet
0 800 1,600
0 96 288 480
Meters

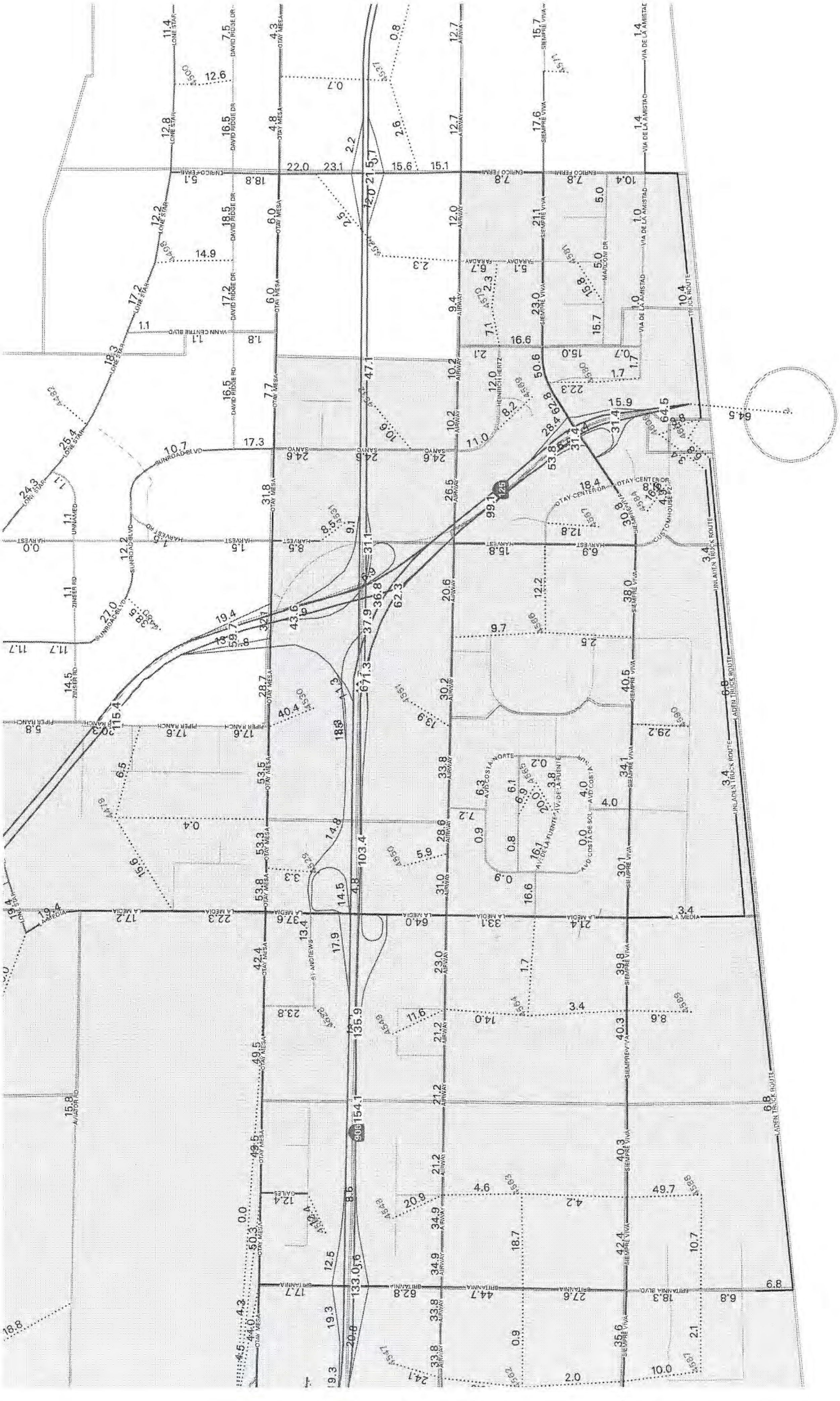
N

July 26, 2010


BRITANNIA
BRITANNIA BLVD
OTAY MESA
AIRWAY
SIEMPRE VIVA
CACTUS
CAM MAQUILADORA
HERITAGE
HERITAGE RD
AVIATOR RD
DATSUN ST
INNOVATIVE
DENNERY RD
CORPORATE CTR
CALIENTE
OCEANVIEW HILLS PKWY
STREET A
BEYER
DEL SOL
DENNERY
EAST BEYER
EAST SAN YSIDRO
BORDER VILLAGE
WILLOW
ALAQUINAS
BARDO
221.3
195.8
187.9
173.0
167.2
122.2
108.7
106.1
100.4
97.5
76.3
75.4
72.6
70.9

3/4

3BNLM TAZ


LONE STAR
DAVID RIDGE DR
OTAY MESA
AIRWAY
SIEMPRE VIVA
VIA DE LA AMISTAD
ENRICO FERMI
FARADAY
MARCONI DR
VANN CENTRE BLVD
HEINRICH HERTZ
TRUCK ROUTE
SANYO
SUNROAD BLVD
HARVEST
UNNAMED
ZINSER RD
OTAY CENTER DR
CUSTOMHOUSE PZ
UNLADEN TRUCK ROUTE
LADEN TRUCK ROUTE
PIPER RANCH
AVD COSTA NORTE
AVD DE LA FUENTE
AVD COSTA DE SOL
LA MEDIA
ST ANDREWS
AVIATOR RD
CAILES
BRITANNIA
BRITANNIA BLVD
125
905
64.5

4/4

3BNLM TAZ

Table A.3 – Phased Highway Projects - Revenue Constrained Plan (Continued)

ADD MANAGED LANES NORTH OF SR-905

Year Built By	Freeway	From	To	Existing	Improvements	($ Millions - 2010 Dollars)	
						Cost	Cumulative Cost
2020	SR 94/ SR 125	South to East (Freeway Connector)				$ 139	$ 7,342
2030	I-5	SR 56	Manchester Ave	8F+2HOV	10F+4ML	$ 655	$ 7,997
2030	I-5	Palomar St	SR 15	8F	8F+2ML	$ 200	$ 8,197
2030	I-5	I-5/I-805 Merge	SR 56	8F/14F+2HOV	8F/14F+4ML	$ 40	$ 8,237
2030	I-5	Manchester Ave	Palomar Airport Rd	8F+2HOV[2]	10F+4ML	$ 1,230	$ 9,467
2030	I-5/SR 56	West to North (Freeway Connector)				$ 65	$ 9,532
2030	I-5/SR 56	South to East (Freeway Connector)				$ 120	$ 9,652
2030	I-15/SR 78	East to South and North to West (HOV Connectors)				$ 105	$ 9,757
2030	I-805	SR 905	Palomar St	8F	8F+4ML	$ 350	$ 10,107
2030	I-805	SR 15	Mission Valley	8F	8F+4ML	$ 230	$ 10,337
2030	I-805	Mission Valley Viaduct	SR 52	8F/10F	8F/10F+4ML	$ 637	$ 10,974
2030	SR 67	Mapleview St	Dye Rd	2C/4C	4C	$ 570	$ 11,544
2030	SR 94/ SR 125	West to North (Freeway Connector)				$ 180	$ 11,724
2030	SR 125	SR 94	I-8	8F	10F	$ 215	$ 11,939
2030	SR 241	Orange County	I-5	4T	6T	$ 58	$ 11,997
2035	I-5	Palomar Airport Rd	SR 78	8F+2HOV[2]	8F+4ML	$ 1,003	$ 13,000
2035	I-5	SR 78	Vandegrift Blvd	8F	8F+4ML	$ 495	$ 13,495
2035	I-15/SR 94	South to West and East to North (HOV Connectors)				$ 80	$ 13,575
2035	SR 52	I-805	I-15	6F	6F+2ML	$ 223	$ 13,798
2040	I-5/SR 78	South to East and West to North (HOV Connectors)				$ 120	$ 13,918
2040	I-5/SR 78	North to East and West to South (HOV Connectors)				$ 120	$ 14,038
2040	I-5/SR 78	South to East (Freeway Connector)				$ 60	$ 14,098

[2] Project completed in two phases. See 2020 phased improvement.

2050 RTP

CALTRANS MOST RESTRICTIVE METER RATE

1/1

From: Douglas Hooper [douglas_hooper@dot.ca.gov]
Sent: Thursday, November 18, 2010 4:44 PM
To: sam@urbansystems.net
Subject: SR 905 ramp meter info to date

Good Afternoon Sam,

Please excuse my delay in getting back. These are the locations I have after discussing with my coworker:

EB 905
Brittania Blvd - 2 SOV lanes and 2 cars per green La Media Rd - same as above

WB 905
La Media Rd (SB) - 1 SOV and 1 HOV with 2 cars per green La Media Rd (NB) - same as above

For now I would assume the most restrictive cycling rate to be 15 sec./cycle for all the onramps.
Another one of my coworkers will be gone through this month and could ask more details then if needed.

Hope this info will suffice,

Douglas Hooper
Traffic Operations
Ramp Metering and Congestion Monitoring
Office (858) 467 - 4329
Fax (858) 467 - 3042

1. 2 SOV LANES X 2 CARS PER GREEN PER LANE = 4 CARS PER GREEN CYCLE.
2. $\frac{\text{3600 SECONDS PER HOUR}}{\text{15 SECONDS PER CYCLE}}$ = 240 CYCLES PER HOUR
3. 240 CYCLES PER HOUR X 4 CARS PER GREEN CYCLE = 960 CARS PER HOUR METER RATE

1/2
KD

PEAK HOUR VOLUME DATA

Peak hour volume data consists of hourly volume relationships and data location. The hourly volumes are expressed as a percentage of the Annual Average Daily Traffic (AADT). The percentages are shown for both the AM and the PM peak periods.

The principle data described here are the K factor, the D factor and their product (KD). The K factor is the percentage of AADT during the peak hour for both directions of travel. The D factor is the percentage of the peak hour travel in the peak direction. KD multiplied with the AADT gives the one way peak period directional flow rate or the design hourly volume (DHV). The design hourly volume is used for either Operational Analysis or Design Analysis. Refer to the 2000 Highway Capacity Manual for more details.

Following is a glossary of terms used in this listing of peak hour volume data:

Dir	Indicates direction of travel for peak volume
AADT	Annual Average Daily Traffic in vehicles per day (vpd).
AM Peak	Represents the morning peak period for traffic analysis
CS	Control Station Number, Caltrans identification number for monitoring site.
CO	County abbreviation used by Caltrans
D	D factor. The percentage of traffic in the peak direction during the peak hour. Values in this book are derived by dividing the measured PHV by the sum of both directions of travel during the peak hour.
DAY	Day of week for the peak volume.
DDHV	The directional design hour volume, in vehicles per hour (vph) DDHV=AADTxKxD. See equation (8-1) on page 8-11 of the 2000 Highway Capacity Manual.
DI	Caltrans has twelve transportation districts statewide. This abbreviation identifies the district in which the count station is located.
HR	The ending time for the peak hour volume listed. The volume observed fro 1 to 2 would be recorded as 2.

OTM32420
09/13/2010
13:46:27

CALTRANS TRAFFIC VOLUMES
LATEST TRAFFIC YEAR SELECTED
PEAK HOUR VOLUME DATA

										AM PEAK								PM PEAK					
									1 WAY	%	%	%					1 WAY	%	%	%			
DI	RTE	CO	PRE	PM	CS	LEG	YR	Dir					HR	DAY	MNTH	Dir					HR	DAY	MNTH
04	780	SOL		2.955	339	A	07	E	3084	8.74	62.38	5.45	7	THU	SEP	W	2773	8.84	55.44	4.9	16	THU	SEP
11	805	SD		.647	922	A	09	S	2521	6.4	67.53	4.32	9	SAT	OCT	S	3158	8.39	64.5	5.41	17	FRI	OCT
11	805	SD		5.542	684	O	09	N	5901	7	54.13	3.79	7	WED	JAN	S	6937	7.69	57.96	4.45	15	WED	SEP
11	805	SD		8.854	944	A	09	N	9093	7.09	64.04	4.54	7	WED	APR	S	9064	7.64	59.19	4.52	17	MON	MAY
11	805	SD		11.10	925	B	09	N	9224	7.04	66.59	4.69	7	TUE	MAY	S	9048	7.78	59.08	4.6	15	FRI	OCT
11	805	SD		13.51	926	B	09	N	10032	7.11	65.32	4.64	7	WED	JUN	S	9990	7.86	58.79	4.62	15	FRI	APR
11	805	SD		14.46	966	B	09	S	10631	7.34	66.42	4.88	7	TUE	SEP	N	10402	7.96	59.95	4.77	15	FRI	JUN
11	805	SD		16.43	927	B	09	N	8515	7.43	67.23	4.99	7	THU	MAR	S	9389	8.45	65.19	5.51	16	THU	OCT
11	805	SD		17.65	928	A	09	N	11114	8.25	69.5	5.73	7	WED	MAY	S	10864	8.49	66.03	5.6	17	WED	MAY
11	805	SD		23.65	929	B	09	N	7708	7.3	58.87	4.3	7	MON	JUN	S	8514	8	59.34	4.75	16	THU	MAY
11	805	SD		24.44	683	X	09	N	9382	7.87	64.16	5.05	7	FRI	AUG	S	8478	7.63	59.78	4.56	16	THU	MAR
11	805	SD		28.50	930	B	09	S	7753	8.12	64.93	5.27	8	WED	NOV	N	6980	7.82	60.72	4.75	17	TUE	MAY
04	880	SCL		1.25	300	B	08	N	6889	7.62	58.69	4.47	8	TUE	JUL	S	7135	8.2	56.52	4.63	17	WED	APR
04	880	ALA		26.61	129	A	08	S	7626	6.65	51.63	3.43	6	MON	JUN	N	7697	6.58	52.67	3.47	14	WED	JUN
11	905	SD		3.207	932	A	09	W	2342	8.92	54.75	4.88	7	WED	DEC	E	2536	9.57	55.23	5.29	16	THU	SEP
11	905	SD		5.164	942	A	09	E	2848	7.26	69.62	5.06	7	THU	APR	W	3188	9.62	58.87	5.66	16	FRI	FEB
11	905	SD		11.60	125	B	09	W	1196	6.69	59.12	3.95	11	TUE	OCT	E	1615	8.33	64.06	5.34	17	FRI	SEP

"D" USE 60/40
"K" USE 8%

I=805 PEAK HOUR & DIRECTIONAL SPLIT

KD
N/N

From: Huffman, Victoria [VHuffman@sandiego.gov]
Sent: Wednesday, January 26, 2011 5:51 PM
To: Lisa@urbansystems.net; sam@urbansystems.net
Cc: Gonsalves, Ann
Subject: Possible ADT Adjustments

1/7
3BNLM
ADJ.

Hi Sam,

Here's the list of TAZs with zone connector loadings that might require some segment ADT adjustment:

Adopted Community Plan: (SEE APPENDIX B)

4561
4586
4560
4547
4587
4588
4567
4569
4532
4497
4608 (loading okay but assume loading point is signalized as this would reduce tremendous number of U-turns at Datsun/Otay Valley Road)

Scenario 3B (both with and without La Media Rd):

(SEE ATTACHED FIGURE 7-1 WITH AGREED TO CHANGES)

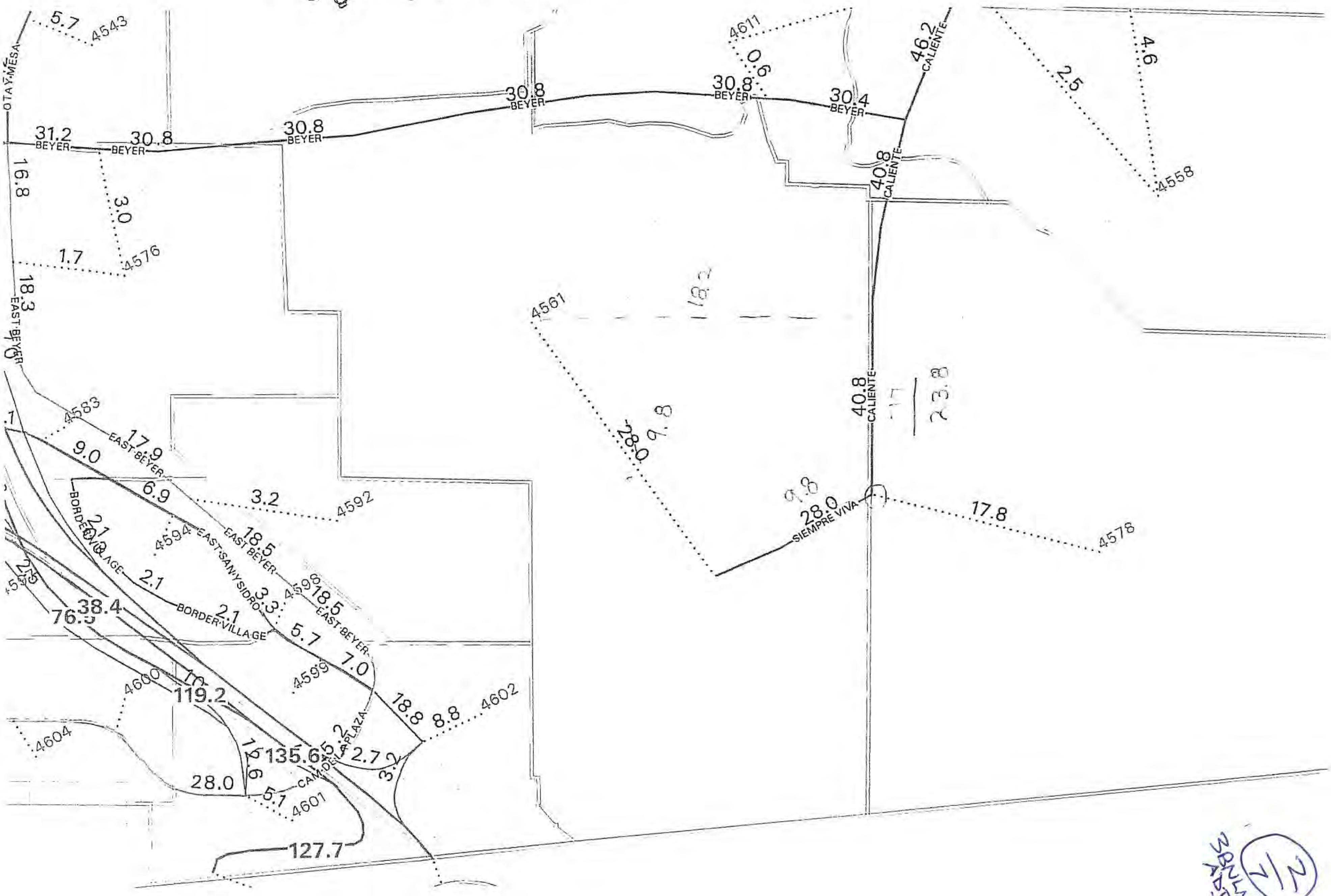
4561
4586
4587
4560
4547
4497
4569
4532
4587
4608 (loading okay but assume loading point is signalized)(DONE; NO CHANGE TO ADT TO THE NORTH)

As I also mentioned to you on the phone today, there are some other circulation element streets that are not shown in the forecasts which may need to be added to the proposed circulation element figures. I'll send you a figure showing these when I'm back in the office.(DONE)

Thanks,
Victoria

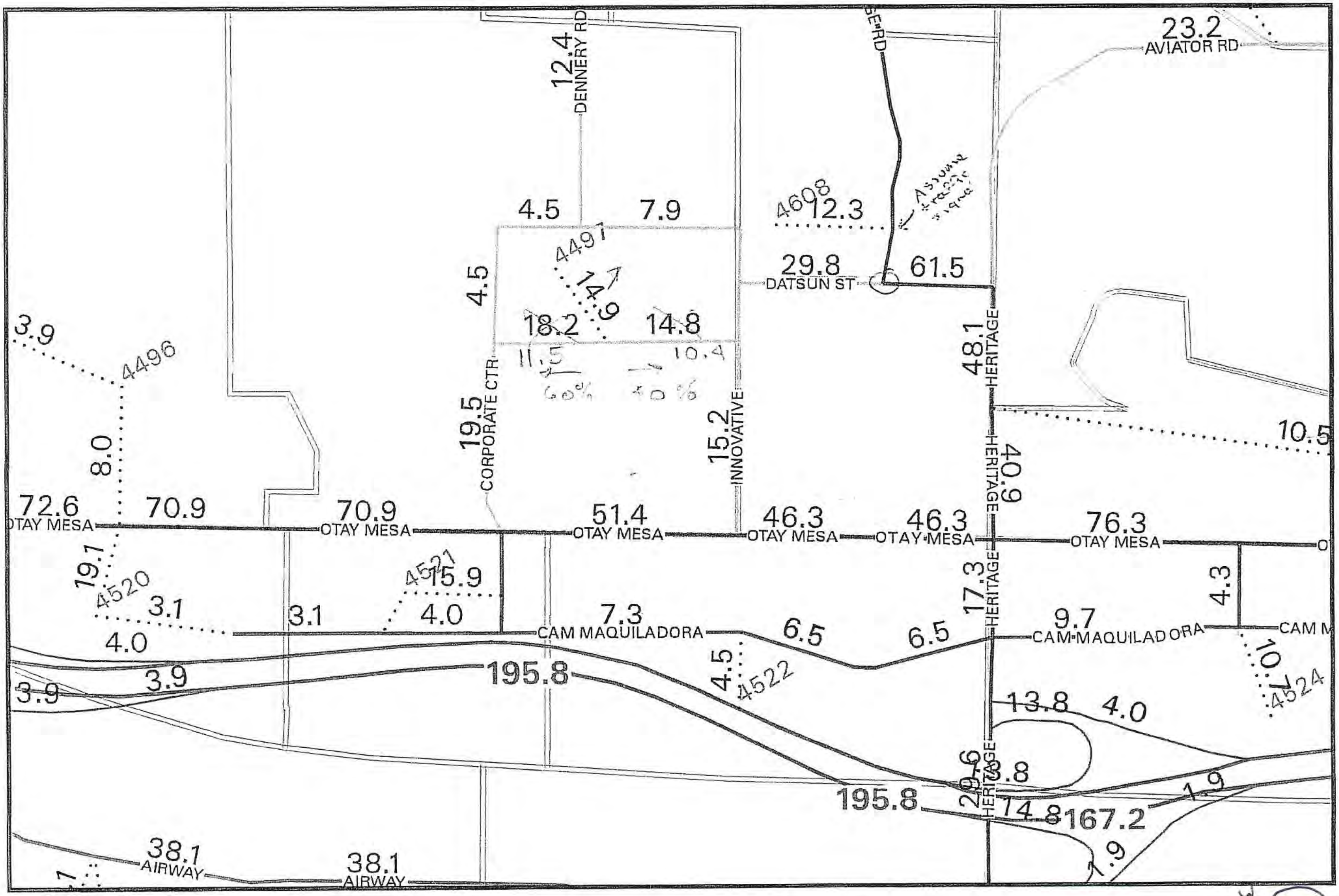
2/1/11

Scenario w/o La Media 3B



2/7
3BNLM ADJ.

2/1/11



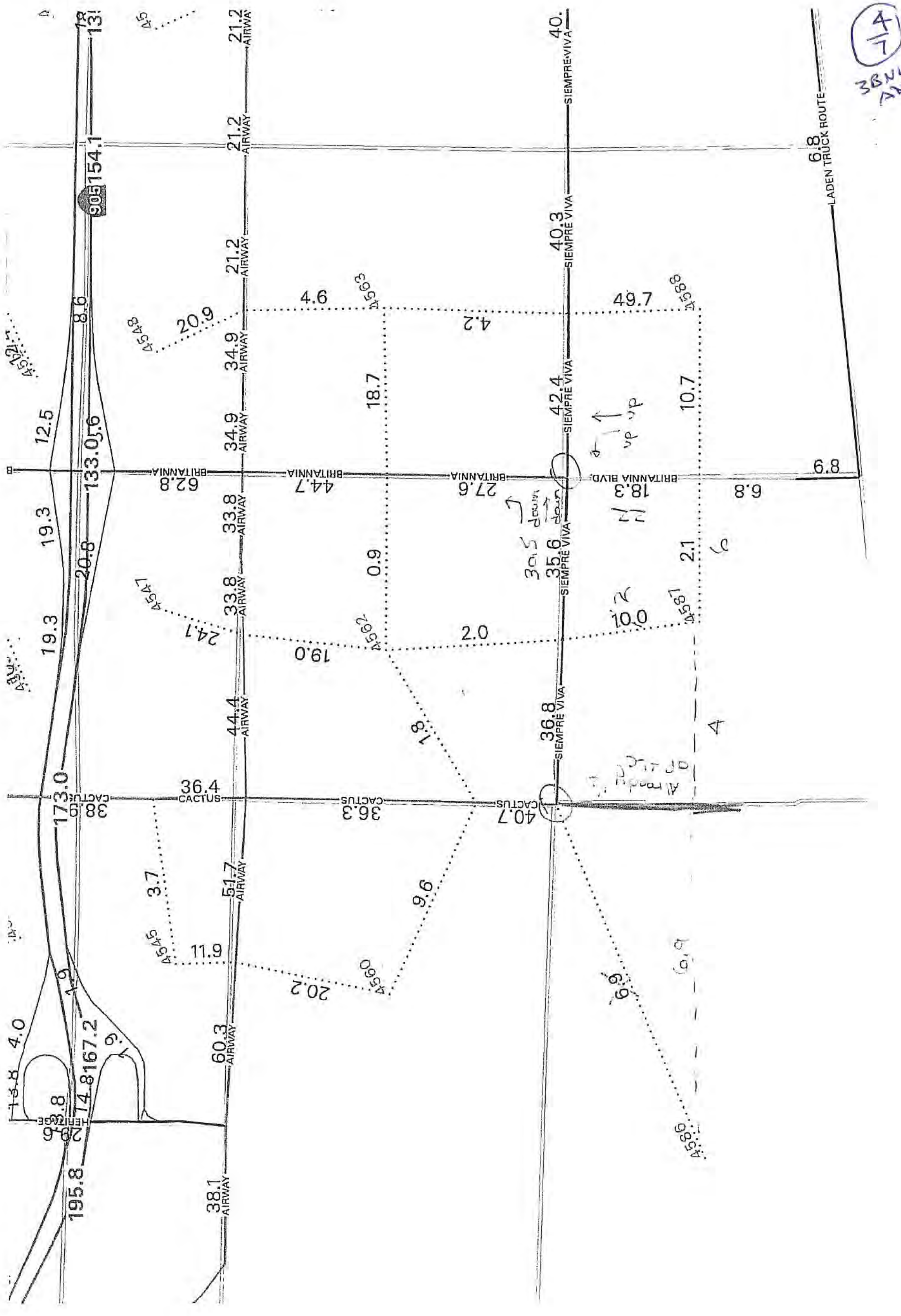
3/7

3B NLM ADJ.

11/1/11

4/7

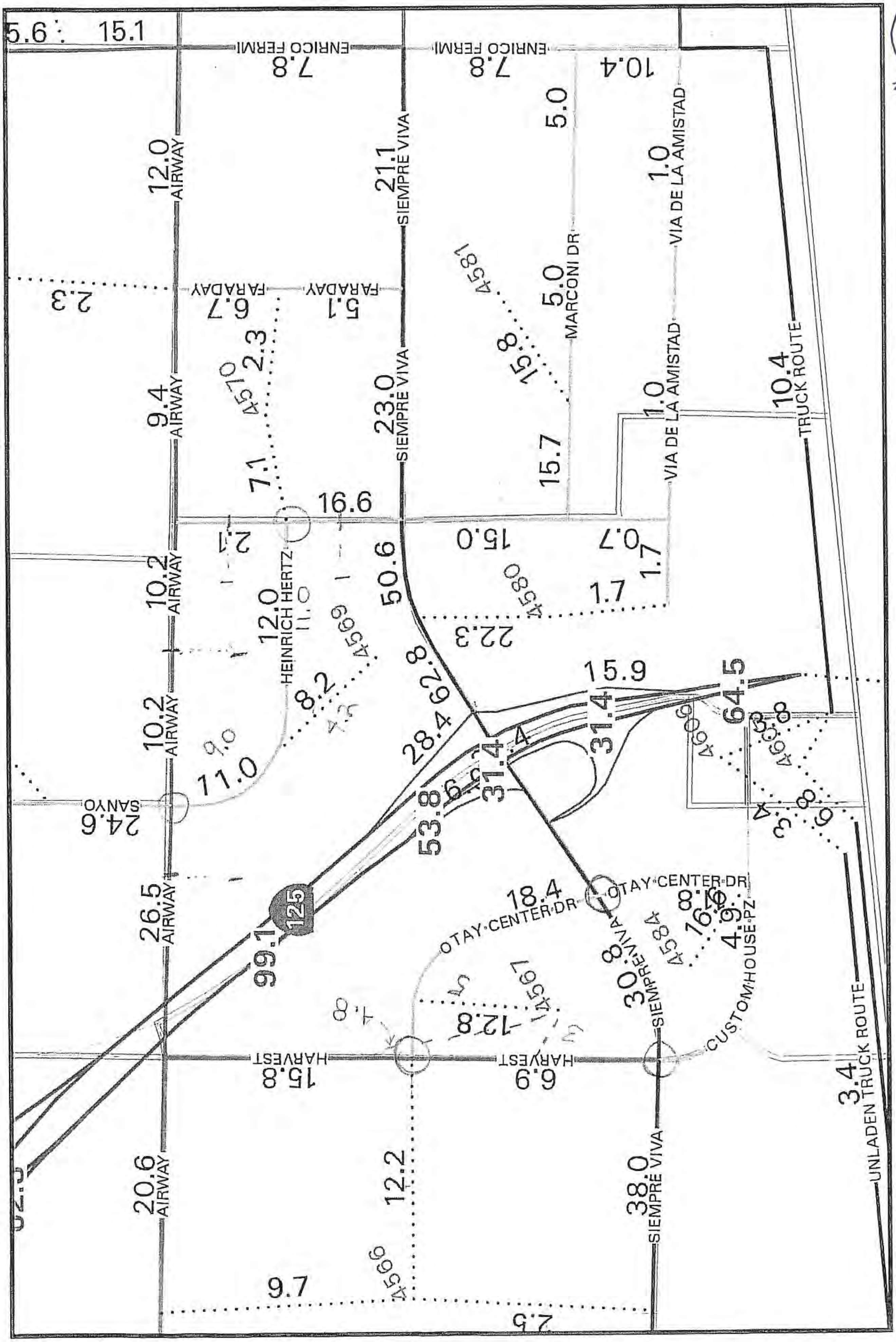
3BNLM ADJ



2/1/11

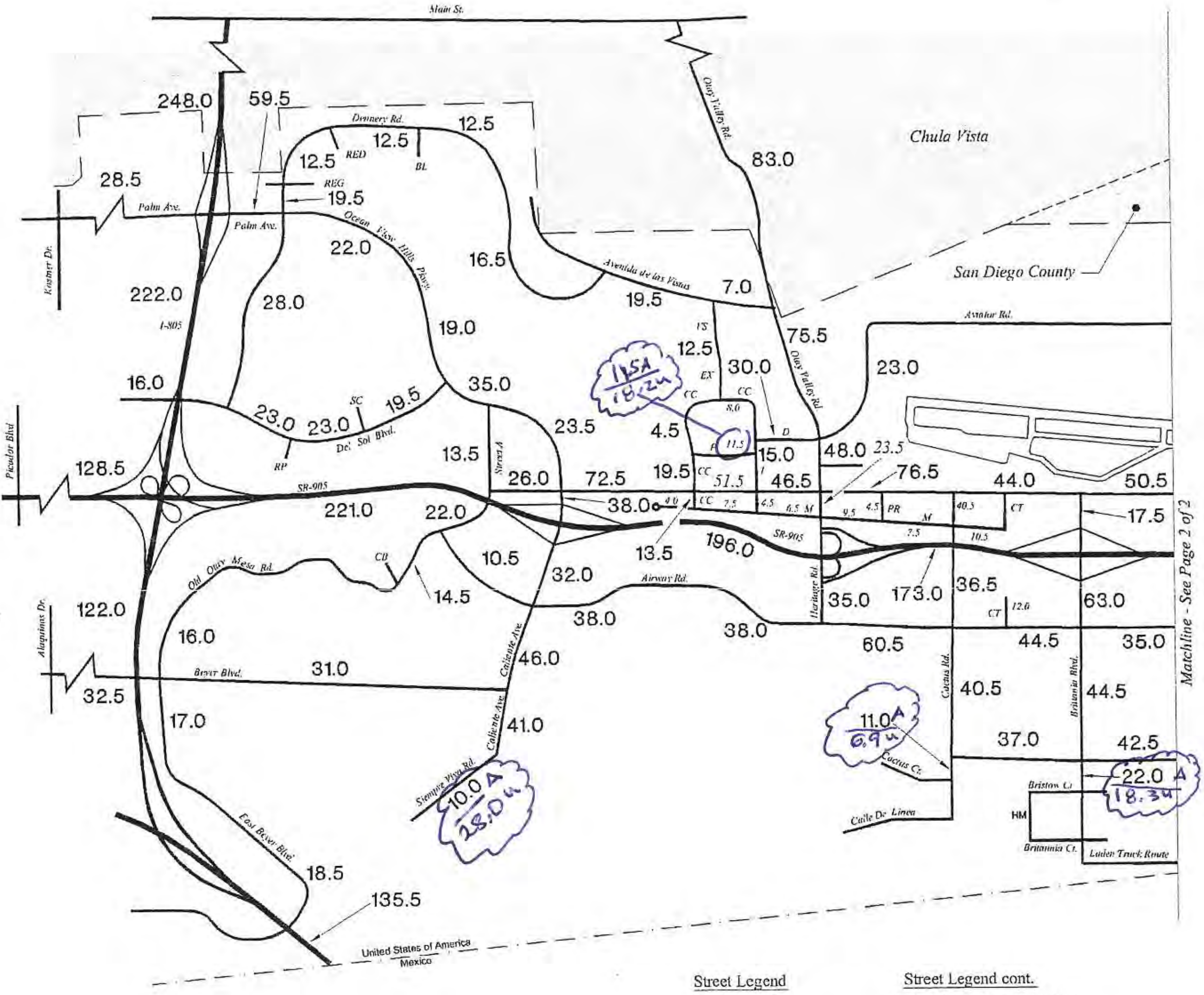
5/7

3B NLM ADJ.



6/7
3B NLM ADJ.

Page 1 of 2



LEGEND

XXX.X = Alternative 3B Without La Media Rd. (7-26-10 Run Date, Series 11)
(ADT Shown In Thousands)

— — = City of San Diego Boundary

Street Legend
D = Datsun Dr.
P = Progressive Ave.
CC = Corporate Center Dr.
I = Innovative Dr.
M = Camino Maquiladora
PR = Pacific Rim Ct.
EX = Exposition Way
CT = Continental St.
HM = Hixson Mesa Way

Street Legend cont.
VS = Vista Santo Domingo
REG = Regatta Ln.
RED = Red Coral Ln.
BL = Black Coral Ln.
CB = Crescent Bay Dr.
SC = Surf Crest Dr.
RP = Riviera Pointe St.

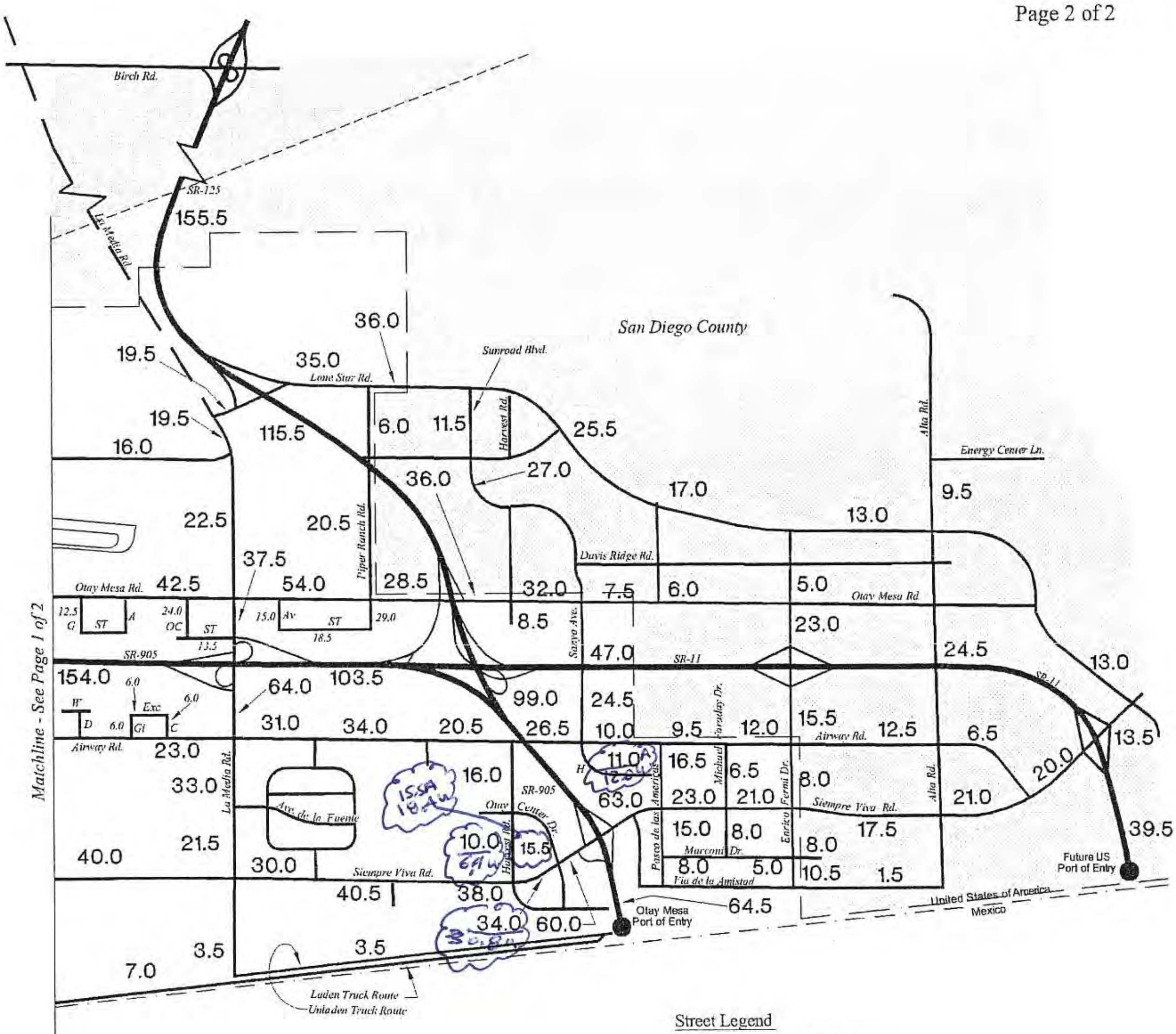
N
NO SCALE

FIGURE 7-1

Scenario 3B Without La Media Road Average Daily Traffic

7/7
3B NLM ADJ.

Page 2 of 2



Street Legend
OC = Otay Mesa Ctr. Rd.
G = Gailes Blvd.
A = Ailsa Ct.
ST = St. Andrews Ave.
H = Heinrich Hertz Dr.
C = Centurion St.
Gi = Gigantic St.
Exc = Excellante St.
Av = Avenida Costa Azul
W = Waterville Rd.
D = Dublin Dr.

N
NO SCALE

LEGEND
XXX.X = Alternative 3B Without La Media Rd. (7-26-10 Run Date, Series 11)
(ADT Shown In Thousands)
— — = City of San Diego Boundary

FIGURE 7-1

Scenario 3B Without La Media Road Average Daily Traffic

URBAN SYSTEMS ASSOCIATES, INC.
PLANNING & TRAFFIC ENGINEERING, MARKETING & PROJECT SUPPORT
CONSULTANTS TO INDUSTRY AND GOVERNMENT

E-MEMO

1/10

TURNS

ATTN: *Victoria Huffman, Associate Traffic Engineer, DSD – City of San Diego*

E-Mail: ▼ *vhuffman@sandiego.gov*

FROM: *Sam P. Kab, II*

TOTAL PAGES (Including Cover): 3+7Attachments

DATE: *October 29, 2010*

TIME: *9:44:48 AM*

JOB NUMBER: *001309*

SUBJECT: ***OMCPU Intersection Peak Hour Turn Volumes (3B Without La Media Rd.)***

As you requested, provided below is a description of the methods used to estimate Horizon Year peak hour turn volumes at the five intersections you selected; and worksheets showing peak hour directional splits and percentages.

Otay Mesa Road / Heritage Road

The existing peak hour flow on Otay Mesa Road at the west end of the community between I-805 and Heritage Road is shown in **Attachment 1**. The directional split is approximately 33:67 (WB: EB) and the peak hour is 7% of ADT in the AM peak. The PM peak split is approximately 63:37 (WB: EB) and the peak is 9% of ADT. Once the Otay Mesa Community builds out with more residential and commercial uses, the directional splits and peak hour percentage are likely to be 60:40 and between 7% and 12%. These volumes were used to estimate peak hour flows on the west approach, then distributed logically (proportional to ADT) at the intersection to add up to the directional flow at the other approaches. However, the high volume on Otay Mesa Road east of heritage Road (76,500 ADT) compared to the other approaches makes it difficult to maintain the desired peak hour percentages so that the north and south legs are higher than 10%. The Heritage Road south leg is expected to have a high peak hour percentage since the leg extends through the SR-905 interchange. **Attachment 2** shows the resulting split and peak hour percentages at each leg of the intersection.

10/29/10

Caliente Avenue / SR-905 WB Ramps

2/10
THURS

This interchange serves the Ocean View Hills residential uses to the north, future residential uses to the south (40,000 ADT from Otay Mesa South), the high volumes of industrial / commercial traffic on Otay Mesa Road, and through traffic on Airway Road to the east. These mixed uses should result in a relatively equal inbound / outbound peak flow and an approximately 10% of ADT peak hour flow.

Attachment 3 shows the full interchange with roadway and ramp ADT, and a tabulation of peak hour flows by direction. The tabulation shows the resulting peak hour flows to be approximately 10% of ADT and approximately 50/50 north south directional split on Caliente Avenue. The ramp volumes (shown on the forecast plot) are also approximately 10% of ADT. The off-ramp volumes are split north – south approximately in the same proportion as the ADT volumes on Caliente Avenue to the north and to the south of the interchange (38,000 ADT north: 32,000 ADT south / 54:46).

Britannia Blvd. / SR-905 WB Ramps

This location requires an overall volume comparison at the entire interchange. This location is unusual since the Britannia Blvd. volume south of the interchange is high (63,000 ADT) while low (17,000 ADT) north of the interchange. This interchange serves the industrial business park, IBT, CBF, and commercial uses south and east of the interchange, with very little residential uses. The westbound off-ramp also serves 700 peak hour laden truck equivalents that use Britannia Blvd. southbound to the Caltrans truck road parallel to the border. For these reasons, the peak hour percentages is estimated to be higher, approximately 12%, rather than 10% or so for a more mixed-use community access road. **Attachment 4** shows a summary of peak hour splits and percentages. **Attachment 5** shows ramp volumes at a typical high volume ramp that has a high AM peak hour and a low PM peak hour percentage(similar to these interchange ramps).

Otay Mesa Road / La Media Road

This intersection is the main cross-roads for the eastern portion of the community, with the SR-125 / Lonestar Road, Otay Mesa Road / SR-125, and La Media Rd / SR-905 interchange nearby. Therefore, high peak hour percentages are expected and an approximately 60 / 40 directional split. The north leg, La Media Road leading

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to the SR-125 / Lonestar Road interchange, functions as an extension of the Lonestar Road interchange ramps and therefore has a high peak hour percentage (20% AM, 14% PM). It should be noted that the land use assumed for the southwest quadrant of this intersection is "Community Commercial" with 37, 500 loaded trips. These commercial trips, balanced in / out, tend to balance out the peaks through the intersection.

3/10

TURNS

Attachment 6 shows the splits and peak percentages.

Britannia Blvd./ Siempre Viva Rd.

The south leg of this intersection currently has industrial cul-de-sac access. The forecast plot also has centroid connectors for the TAZ's each side of the road loading approximately 12,800 ADT. Peak hour trips have been assumed into / out of these TAZ's. The southbound unladen truck route has 700 peak hour truck equivalents added in. The nearby CBF has peak hour trips included that are more balanced than the typical industrial / office uses, so directional splits are closer to 45:55 along Siempre Viva Blvd.

Attachment 7 shows the splits and peak hour percentages.

Please review these locations and let me know of any adjustments to incorporate into the final report.

Cc: Kelly Broughton
Theresa Millette

10/29/10

ATTACHMENT 1 EXISTING

Page 2 of 3

A/10 TURNS

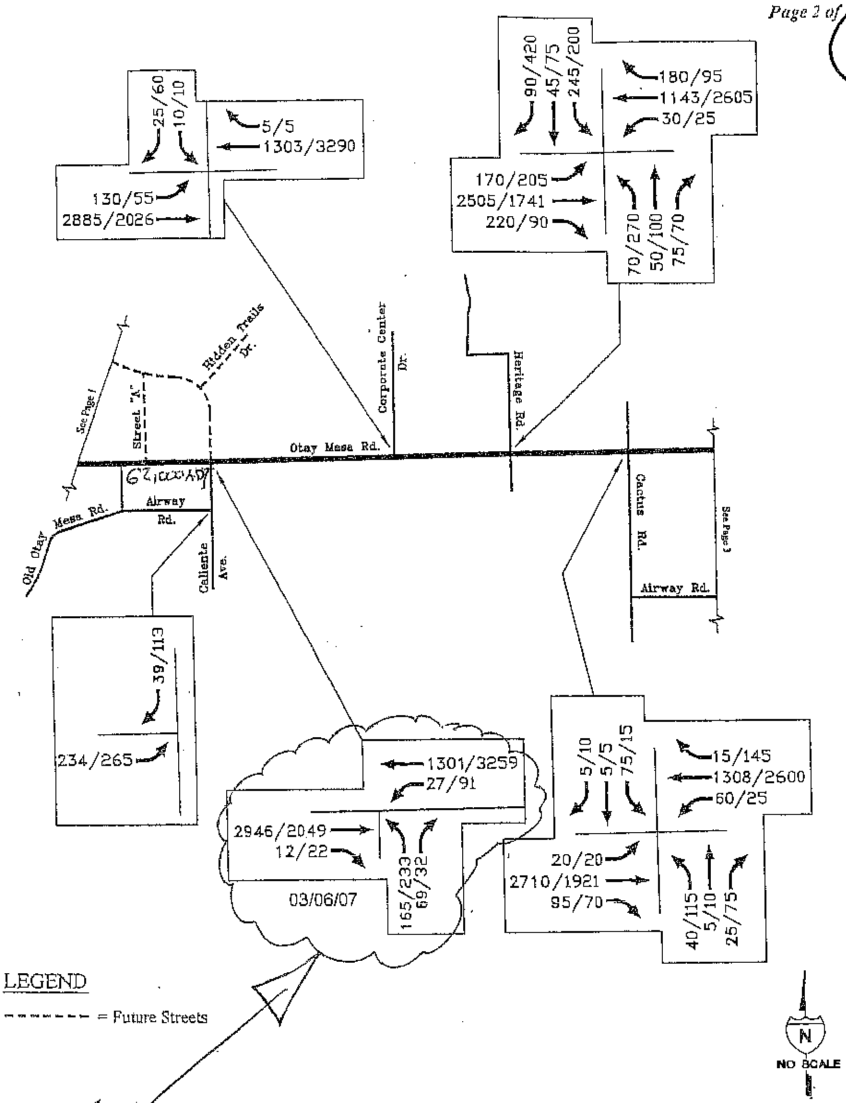


FIGURE 3-3

Existing AM / PM Peak Hour Traffic

EXISTING DIRECTIONAL SPLITS & PEAK HOUR PERCENTAGES

	AM		PM	
WB	1,466	33%	3,492	63%
EB	2,958	67%	2,071	37%
TOTAL	4,424		5,563	
$\frac{4,424}{62,000 ADT}$		7.1%	$\frac{5563}{62,000 ADT}$	9%

10/29/10

ATTACHMENT 2

HERITAGE/OTAY MESA

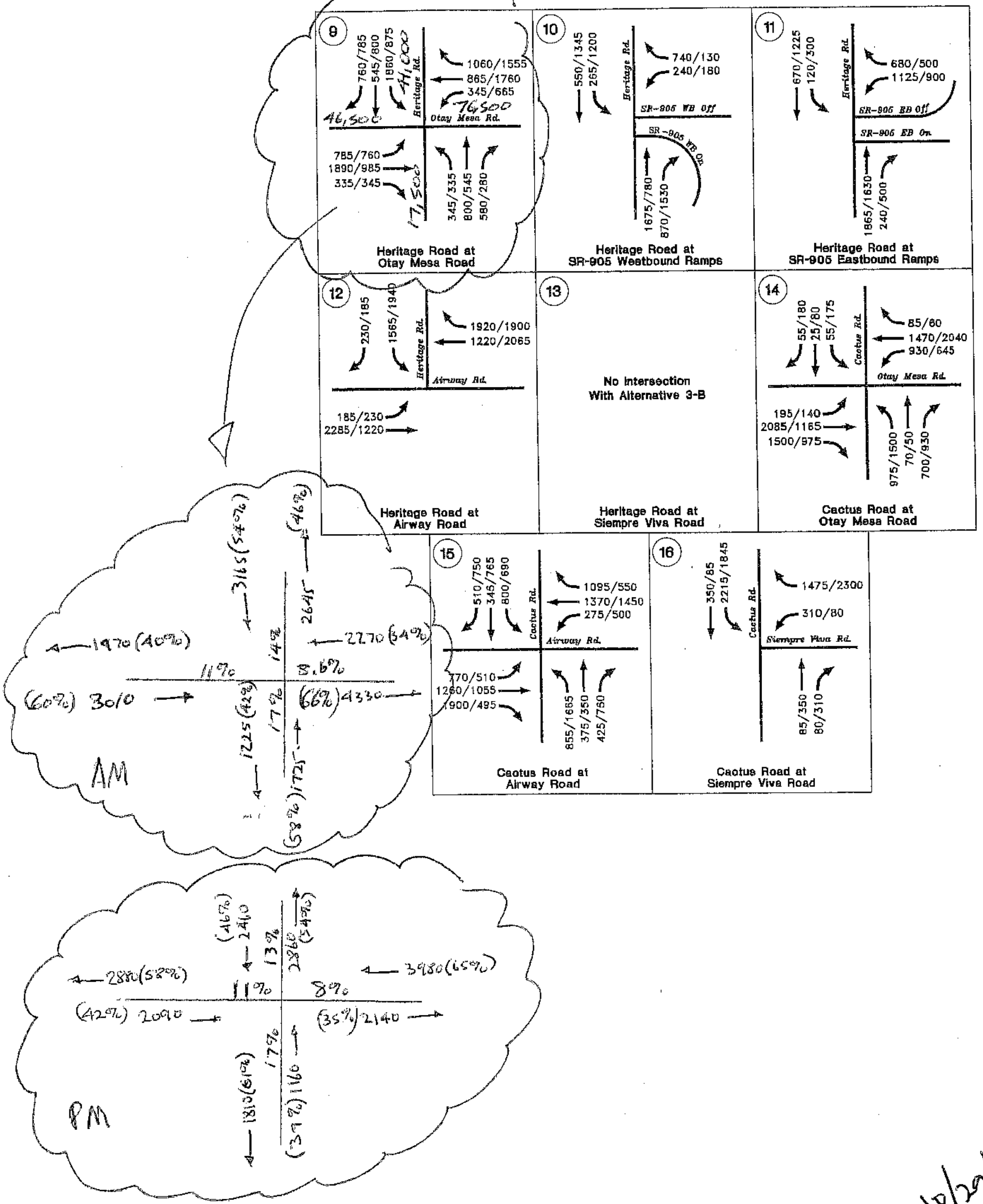
ATTACHMENT 9

9/10

TURNS

Horizon Year AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



10/29/10

ATTACHMENT 3

CALIENTE AVE/SR-905

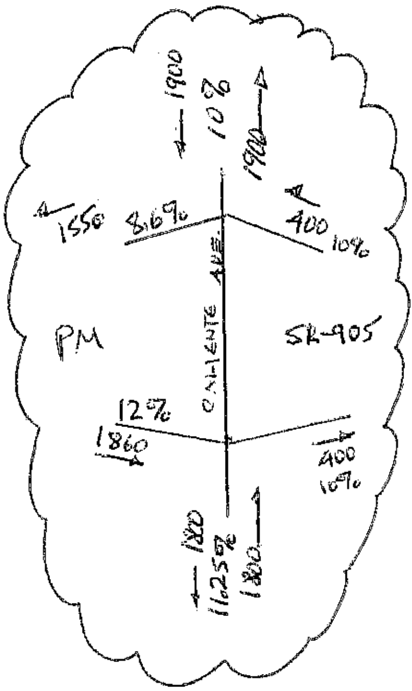
ATTACHMENT 9

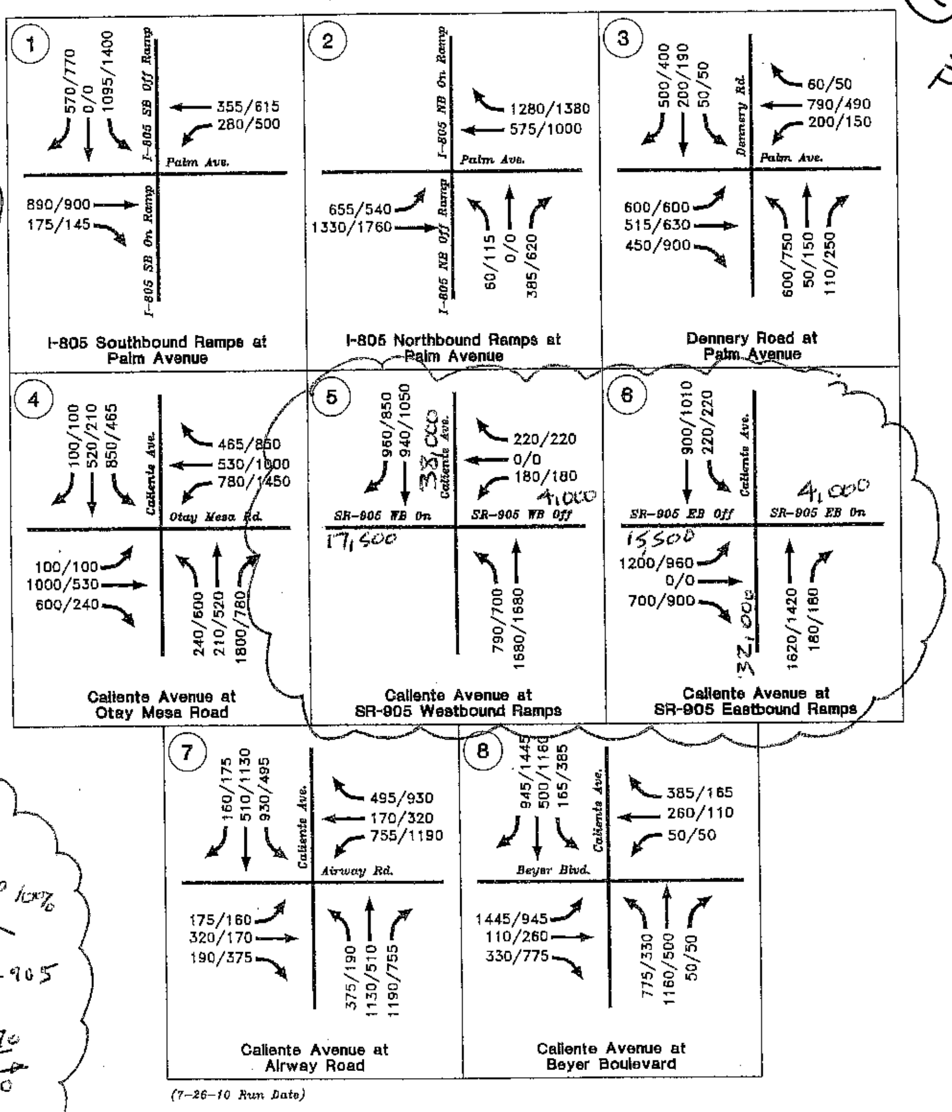
Horizon Year AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road

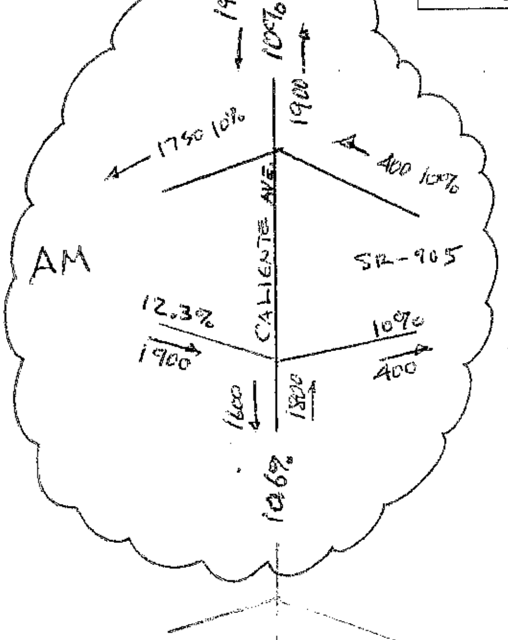
6/10

TURNS





(7-26-10 Run Date)



10/29/10

ATTACHMENT A

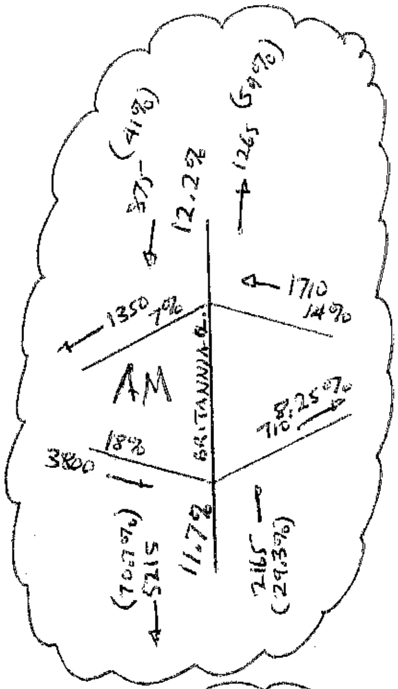
BRITANNIA/SR-905 RAMPS

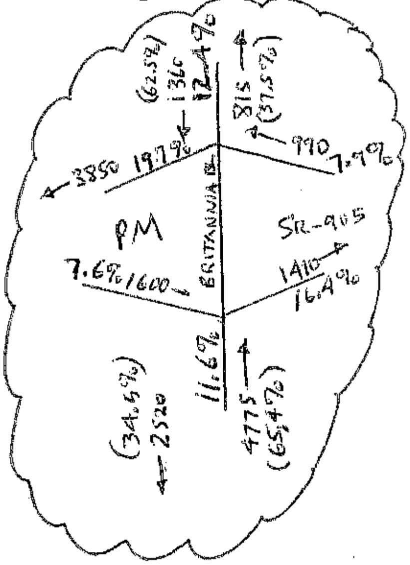
ATTACHMENT 9

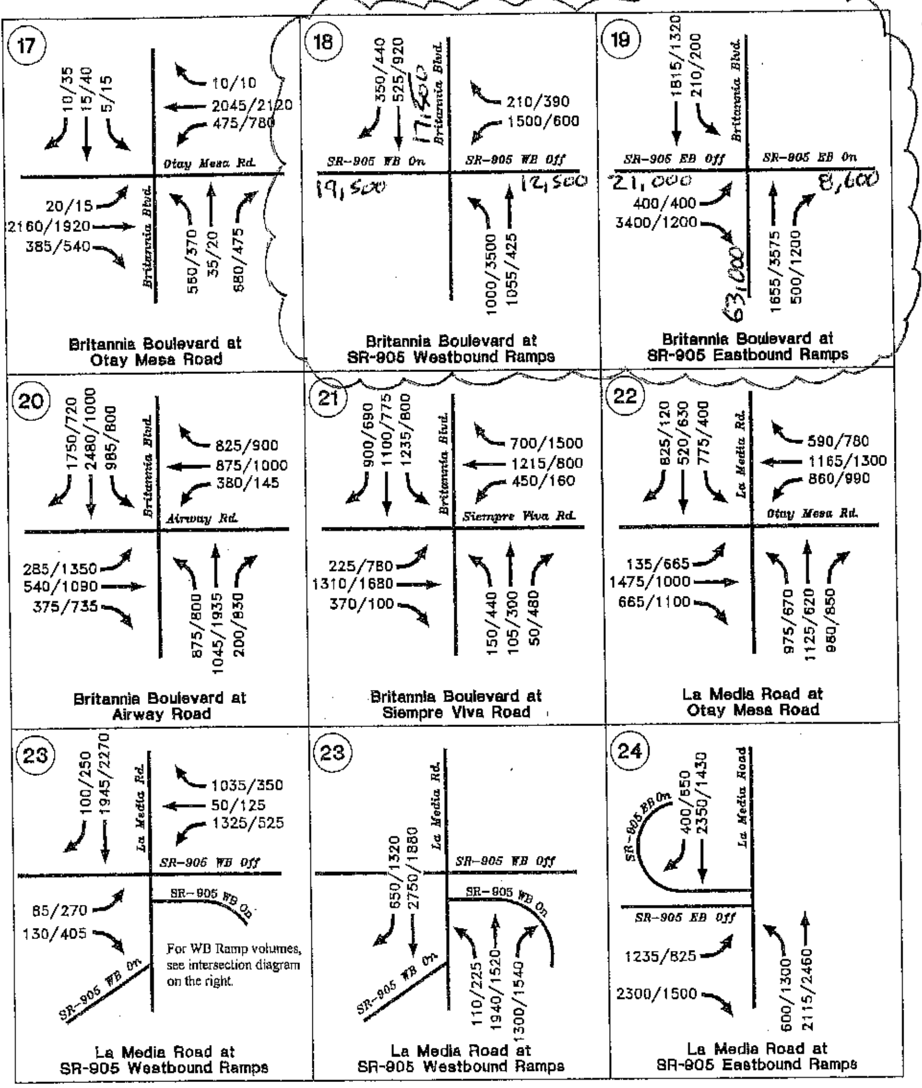
Horizon Year AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road

7/10 TURNS







17 Britannia Boulevard at Otay Mesa Road

18 Britannia Boulevard at SR-905 Westbound Ramps

19 Britannia Boulevard at SR-905 Eastbound Ramps

20 Britannia Boulevard at Airway Road

21 Britannia Boulevard at Siempre Viva Road

22 La Media Road at Otay Mesa Road

23 La Media Road at SR-905 Westbound Ramps

For WB Ramp volumes, see intersection diagram on the right.

23 La Media Road at SR-905 Westbound Ramps

24 La Media Road at SR-905 Eastbound Ramps

10/29/10

ATTACHMENT 5
RAMP % EXAMPLE

05/21/2009
14:40:57

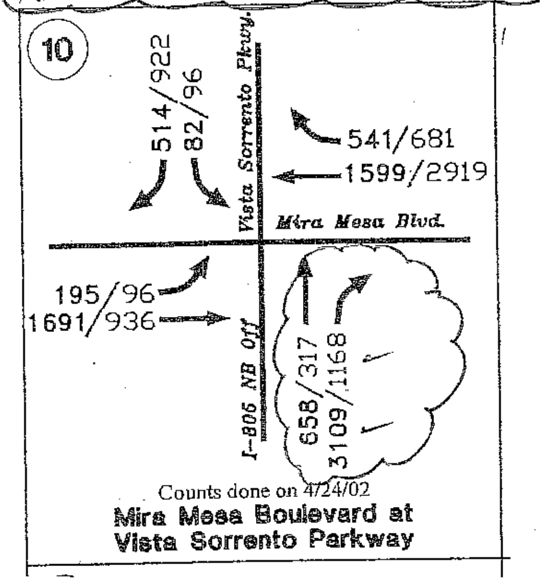
CALTRANS TRAFFIC VOLUMES

PRINT FILE FOR RAMP AADT

11-SD-805

P P	POST MILE	P S	DESCRIPTION	1999 ADT	2000 ADT	2001 ADT	2002 ADT	2003 ADT	2004 ADT	2005 ADT	2006 ADT	2007 ADT	2008 ADT
	023.964		SB OFF TO RTE. 52	25200			26500			24900	24600		24100
	024.275		NB OFF TO GOVERNOR DR	5600			5700			5500	5600		4550
	024.331		SB ON FROM GOVERNOR DRIVE	6000			6400			6300	6400		5300
	024.598		NB ON FROM GOVERNOR DRIVE	2900			3250			3650	3550		3000
	024.644		SB 805 OFF TO GOVERNOR DR										2800
	024.664		SB OFF TO GOVERNOR DRIVE	2700						3300	3200		
	025.126		NB OFF TO NOBEL DRIVE							10800	11100		10800
	025.250		SB ON FR NOBEL DRIVE							8000	8100		8600
	025.570		SB ON FRLA JOLLA/MIRAMAR	22600						18000	18200		16500
	025.639		NB OFF TO MIRAMAR & LJVD	23500						16400	16800		15900
	025.757		SB ON FR WB LA JOLLA VILLAG							9200			9000
	025.758		SB ON FR EB LA JOLLA VILLAG							8900			7700
	025.759		NB OFF TO EB MIRAMAR ROAD										7100
	025.760		NB OFF TO WB LA JOLLA VILL										9000
	026.106		NB ON FR EB LA JOLLA VILLAG										8900
	026.107		NB ON FROM WB MIRAMAR ROAD										6600
	026.108		SB OFF TO EB LA JOLLA VILLA							5100			4500
	026.109		SB OFF TO WB LA JOLLA VILLA							10100			
	026.228		SB OFF TO MIRAMAR & LJVD	13100			14000			14400	15100		15400
	026.315		NB ON FROM LA JOLLA/ MIRAMA	15100			15200			16200	15900		15000
	026.624		NB OFF TO EB MIRA MESA	24400			24800 ✓			25000	25500		17900
	026.954		SB ON FR EB SRRNTO VLY RD	4900			5200			4250	4300		3450

EXAMPLE SHOWING HIGH AM PEAK HOUR
AND A LOW PM PEAK HOUR PERCENTAGE



Counts done on 4/24/02
Mira Mesa Boulevard at Vista Sorrento Parkway

NB off AM 3767 / RAMP ADT 24,800 ≅ 15%

NB off PM 1485 / RAMP ADT 24,800 ≅ 6%

10/8
TURNS

10/29/10

ATTACHMENT 6

OTAY MESA RD / LA MEDIA RD

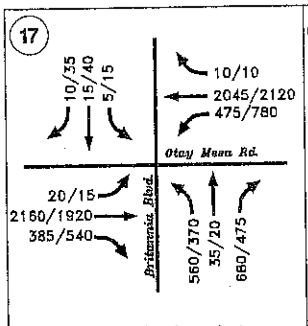
ATTACHMENT 9

Page 3 of 7

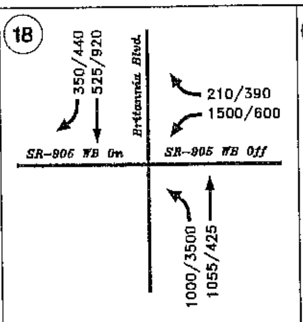
9/10 TURNS

Horizon Year AM/PM Peak Hour Traffic - Alternative 3-B

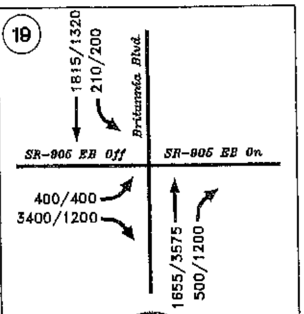
Without La Media Road



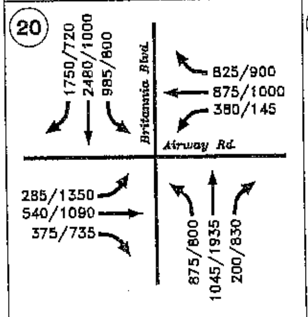
Britannia Boulevard at Otay Mesa Road



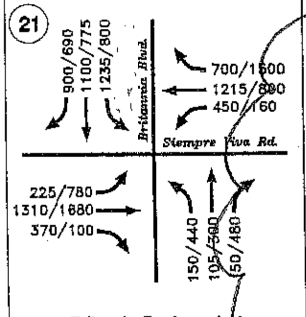
Britannia Boulevard at SR-905 Westbound Ramps



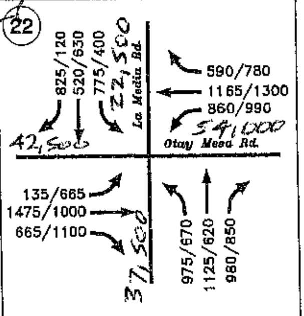
Britannia Boulevard at SR-905 Eastbound Ramps



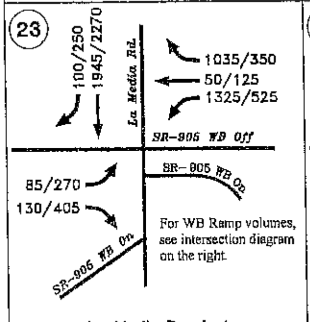
Britannia Boulevard at Airway Road



Britannia Boulevard at Siempre Viva Road

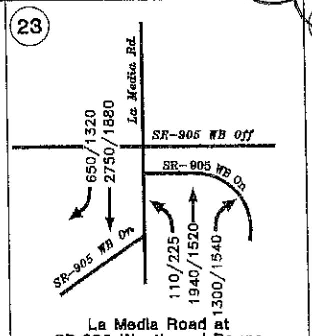


La Media Road at Otay Mesa Road

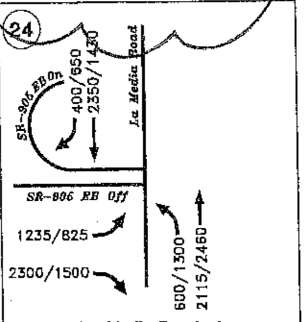


For WB Ramp volumes, see intersection diagram on the right.

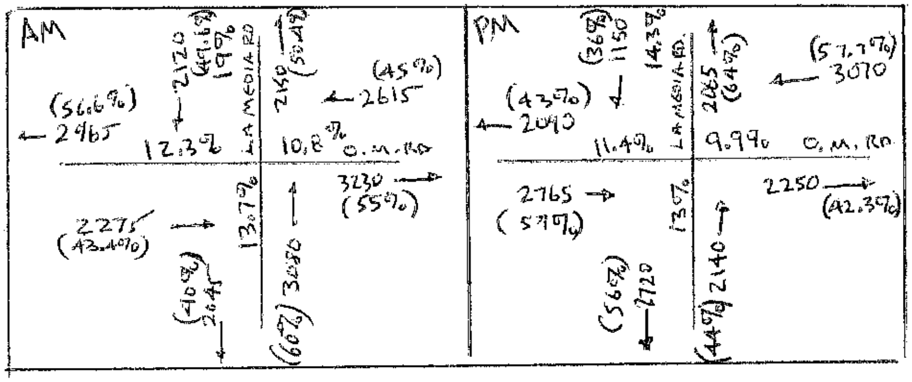
La Media Road at SR-905 Westbound Ramps



La Media Road at SR-905 Westbound Ramps



La Media Road at SR-905 Eastbound Ramps



10/29/10

ATTACHMENT 7

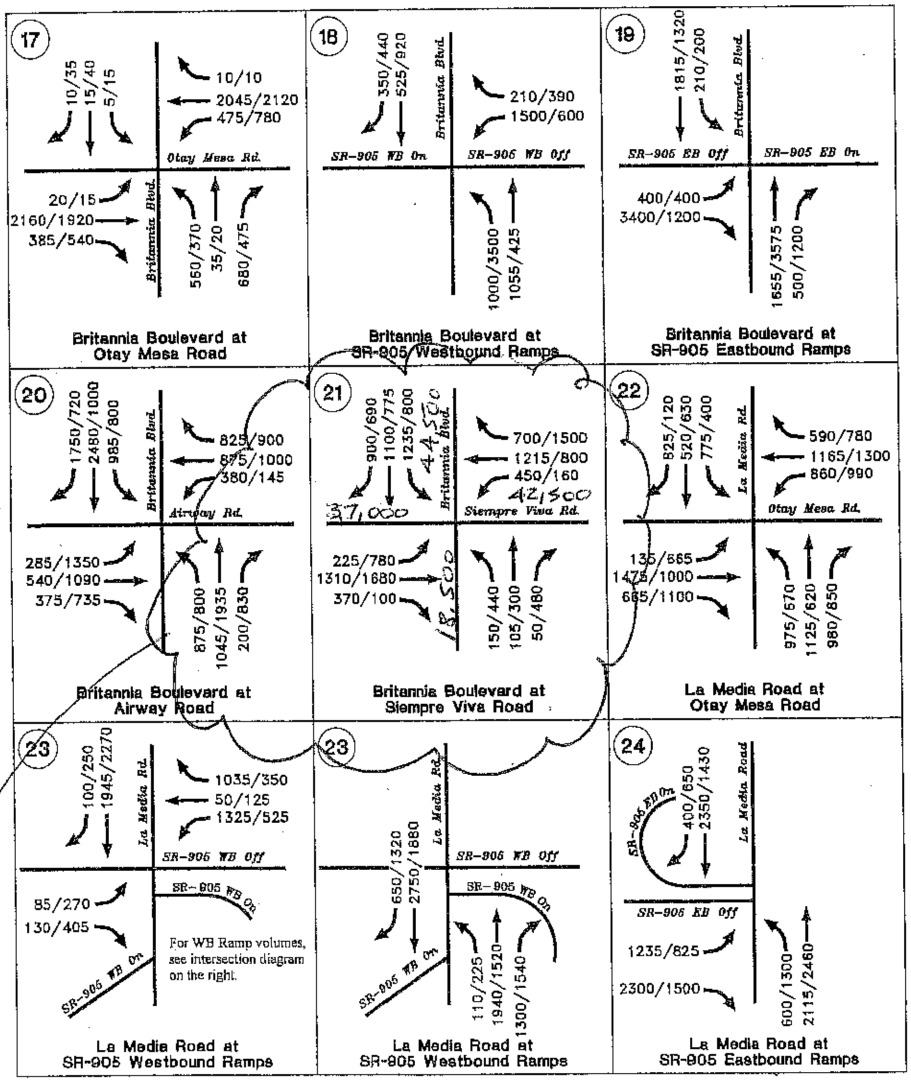
BRITANNIA/SIEMPRE VIVA

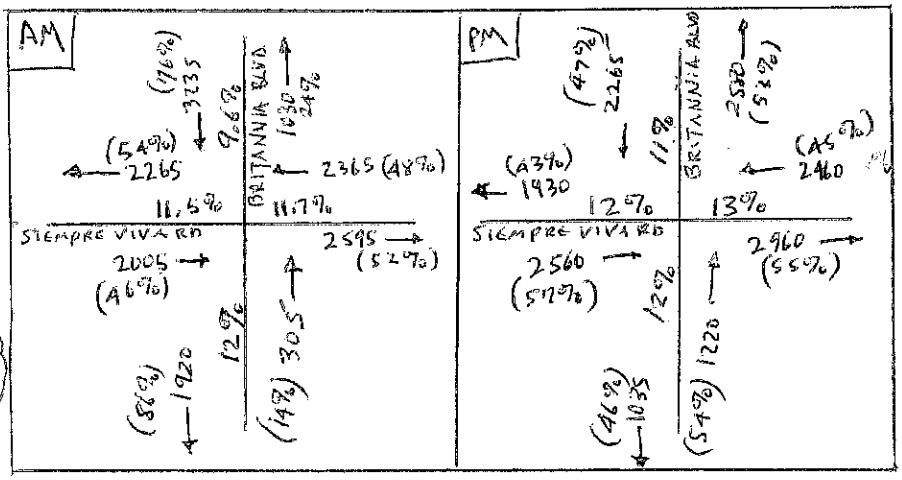
10/12 TURNS

ATTACHMENT 9

Horizon Year AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



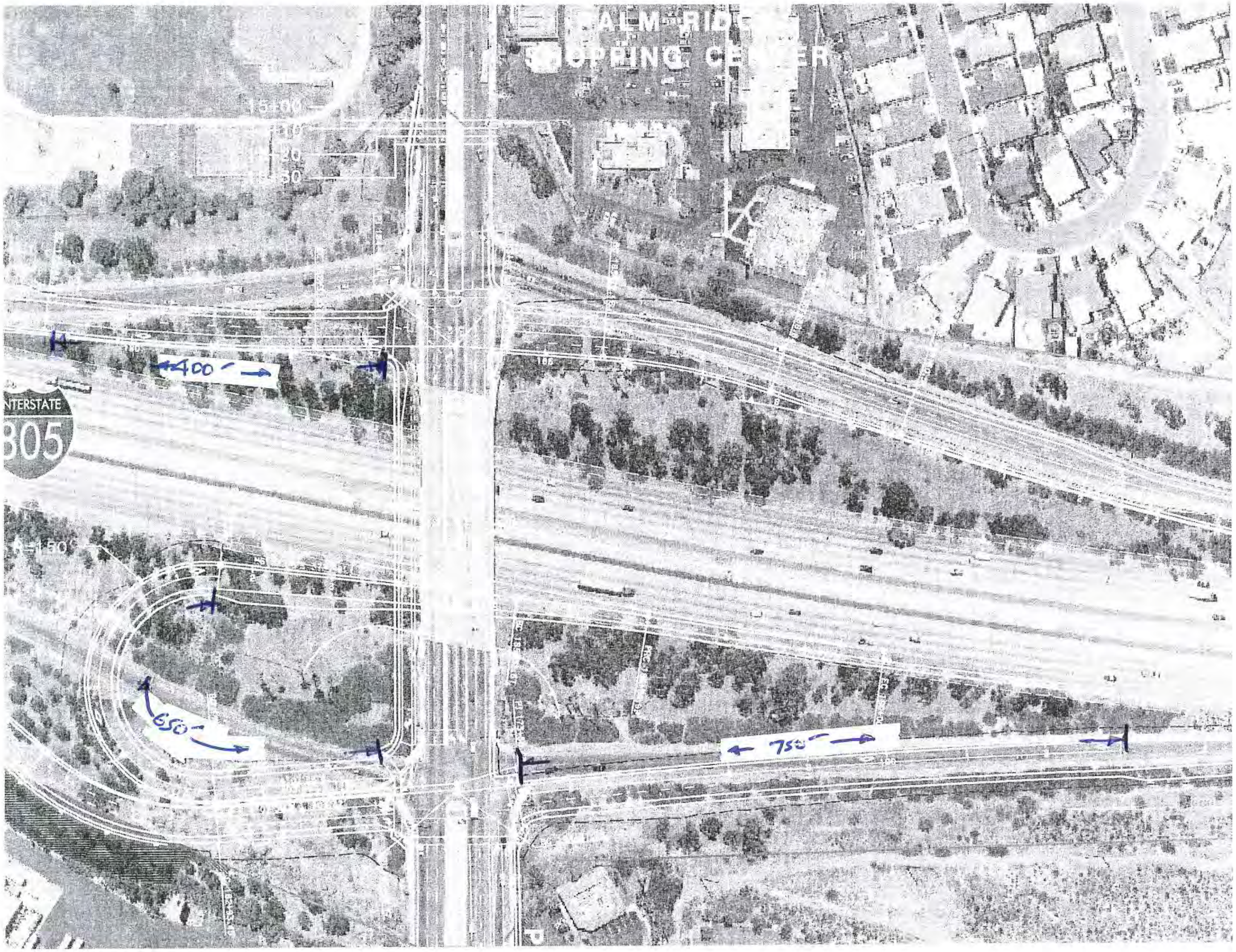


NOTE: S/B THROUGH INCLUDES 700 VPH TRUCK EQUIVALENTS, AM & PM.

10/29/10

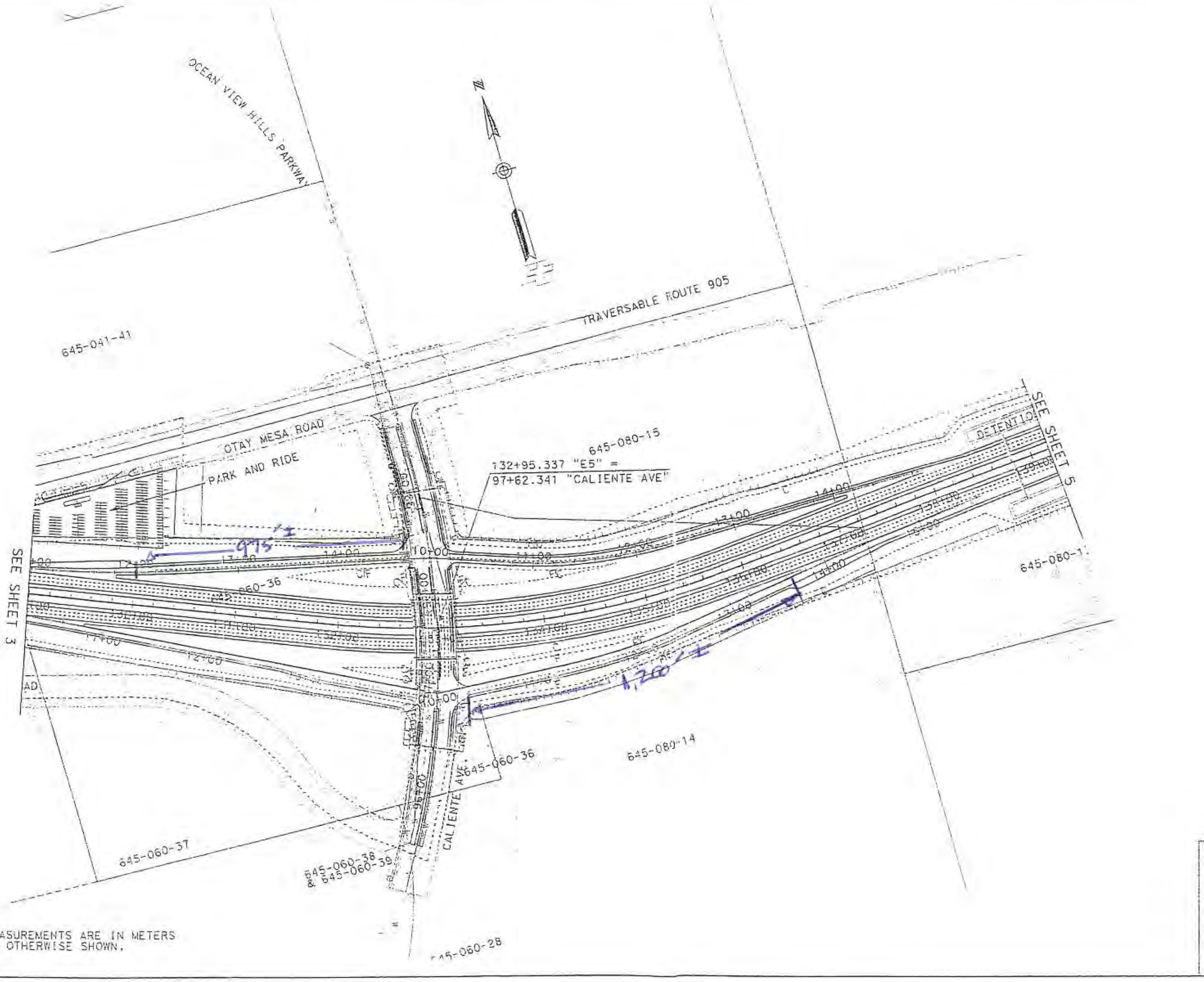
ON-RAMP LENGTHS

RAMP LOCATION	APPROXIMATE LENGTH OF RAMP
I-805/PALM AVE. NORTHBOUND (FROM EB)	650 FT.
I-805 / Palm Ave. Northbound (FROM WB)	750 ft.
I-805 / Plam Ave. Southbound	400 ft.
SR-905 / Caliente Ave. Westbound	800 ft.
SR-905 / Caliente Ave. Eastbound	1,200 ft.
SR-905 / Heritage Rd. Westbound	1,000 ft.
SR-905 / Heritage Rd. Eastbound	1,200 ft.
SR-905 / Britannia Blvd. Westbound	1,000 ft.
Sr-905 / Britannia Blvd. Eastbound	650 ft.
SR-905 / La Media Rd. Westbound	1,200 ft.
SR-905 / La Media Rd. Eastbound	1,000 ft.
SR-905 / Siempre Viva Rd. Northbound	800 ft.
SR-905 / Siempre Viva Rd. Southbound	660 ft.
SR-125 / Otay Mesa Rd. Northbound	1,000 ft.
SR-125 / Lone Star Rd. Northbound	1,000 ft.



2/8

GRAPHIC REVISED APRIL 12, 2004



NOTE: ALL MEASUREMENTS ARE IN METERS
UNLESS OTHERWISE SHOWN.

0 METER 100
0 FEET 300

11-SD-805, 905

**FREEWAY (PREFERRED) AND
TOLLWAY CENTRAL
ALIGNMENT ALTERNATIVES
MIDDLE SEGMENT**

SCALE 1:4000 SHEET 4 OF 25

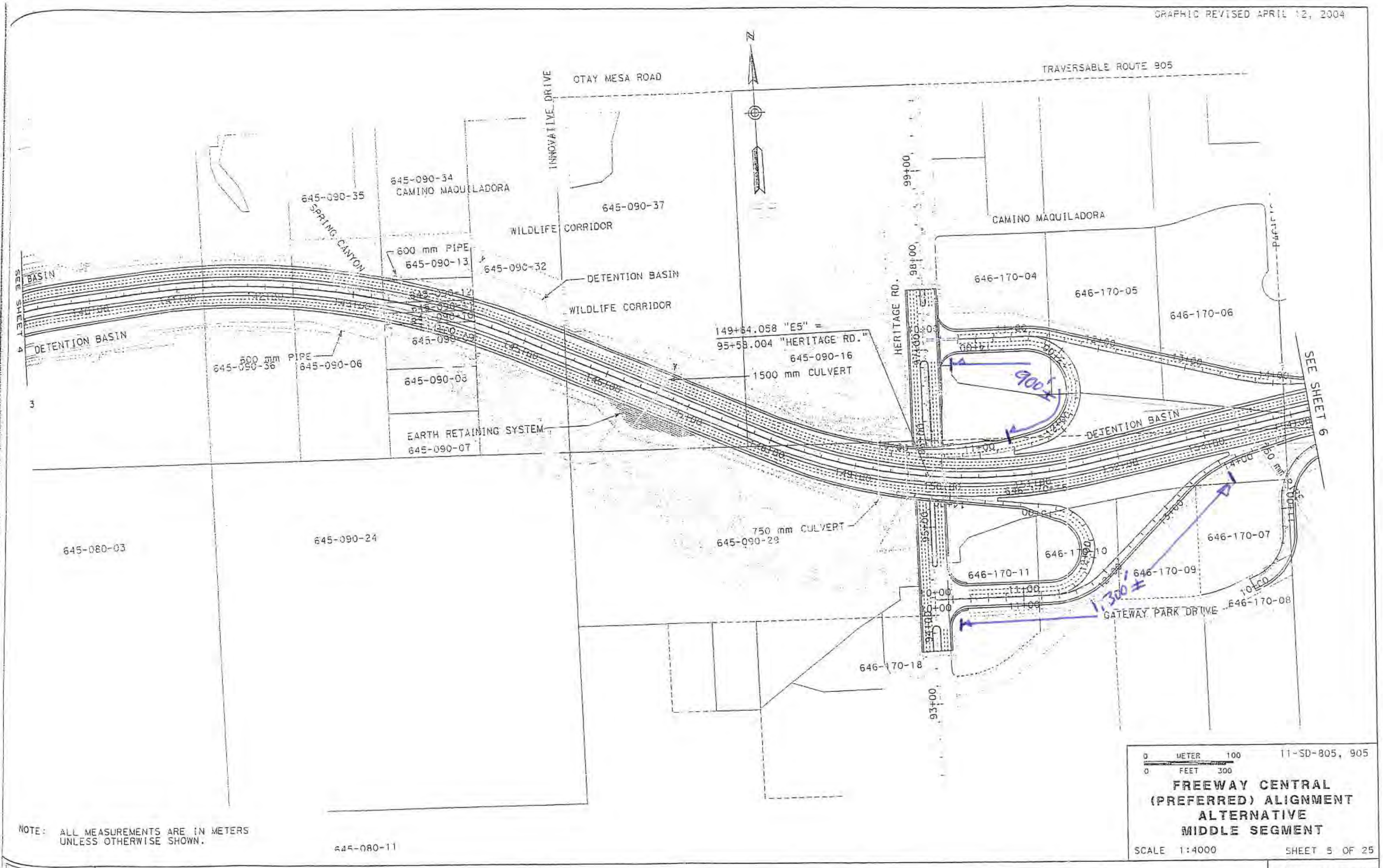
PROJECT FEATURES

ATTACHMENT
5

ESTIMATED RAMP LENGTHS

SR-905/CALIENTE AVE.

3/8



NOTE: ALL MEASUREMENTS ARE IN METERS UNLESS OTHERWISE SHOWN.

0 METER 100
0 FEET 300

11-SD-805, 905

FREEWAY CENTRAL
(PREFERRED) ALIGNMENT
ALTERNATIVE
MIDDLE SEGMENT

SCALE 1:4000 SHEET 5 OF 25

PROJECT FEATURES

ATTACHMENT
5

ESTIMATED RAMP LENGTHS

SR-905/HERITAGE RD.

GRAPHIC REVISED APRIL 12, 2004

NOTE: ALL MEASUREMENTS ARE IN METERS UNLESS OTHERWISE SHOWN.

0 METER 100 0 FEET 300	11-SD-805, 905

FREEWAY CENTRAL
(PREFERRED) ALIGNMENT
ALTERNATIVE
MIDDLE SEGMENT

SCALE 1:4000

SHEET 6 OF 25

905

PROJECT FEATURES

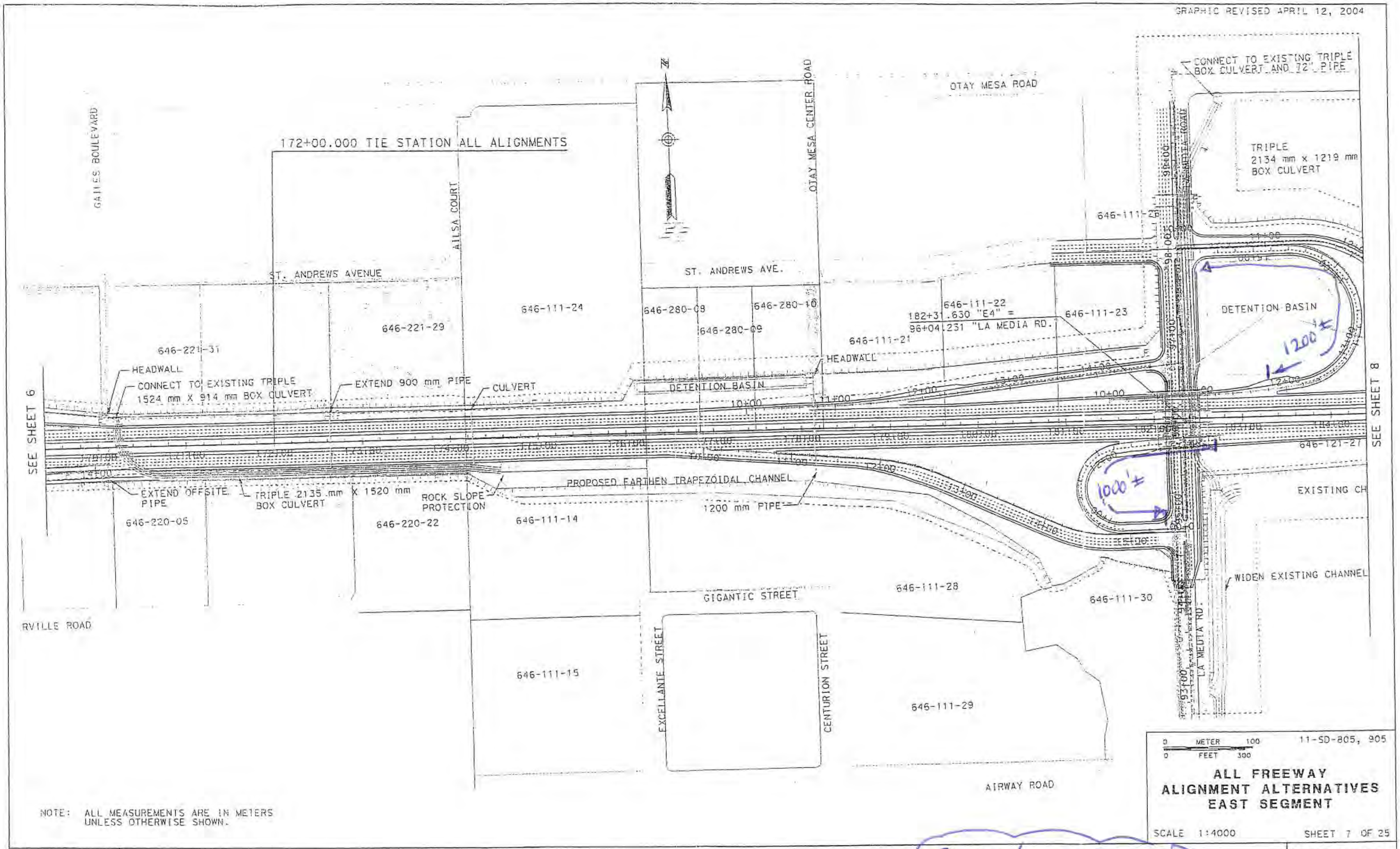
ESTIMATED RAMP LENGTHS

SR-905/BRITANNIA BLVD.

ATTACHMENT
5

8/15

GRAPHIC REVISED APRIL 12, 2004



NOTE: ALL MEASUREMENTS ARE IN METERS UNLESS OTHERWISE SHOWN.

11-SD-805, 905

ALL FREEWAY
ALIGNMENT ALTERNATIVES
EAST SEGMENT

SCALE 1:4000

SHEET 7 OF 25

905

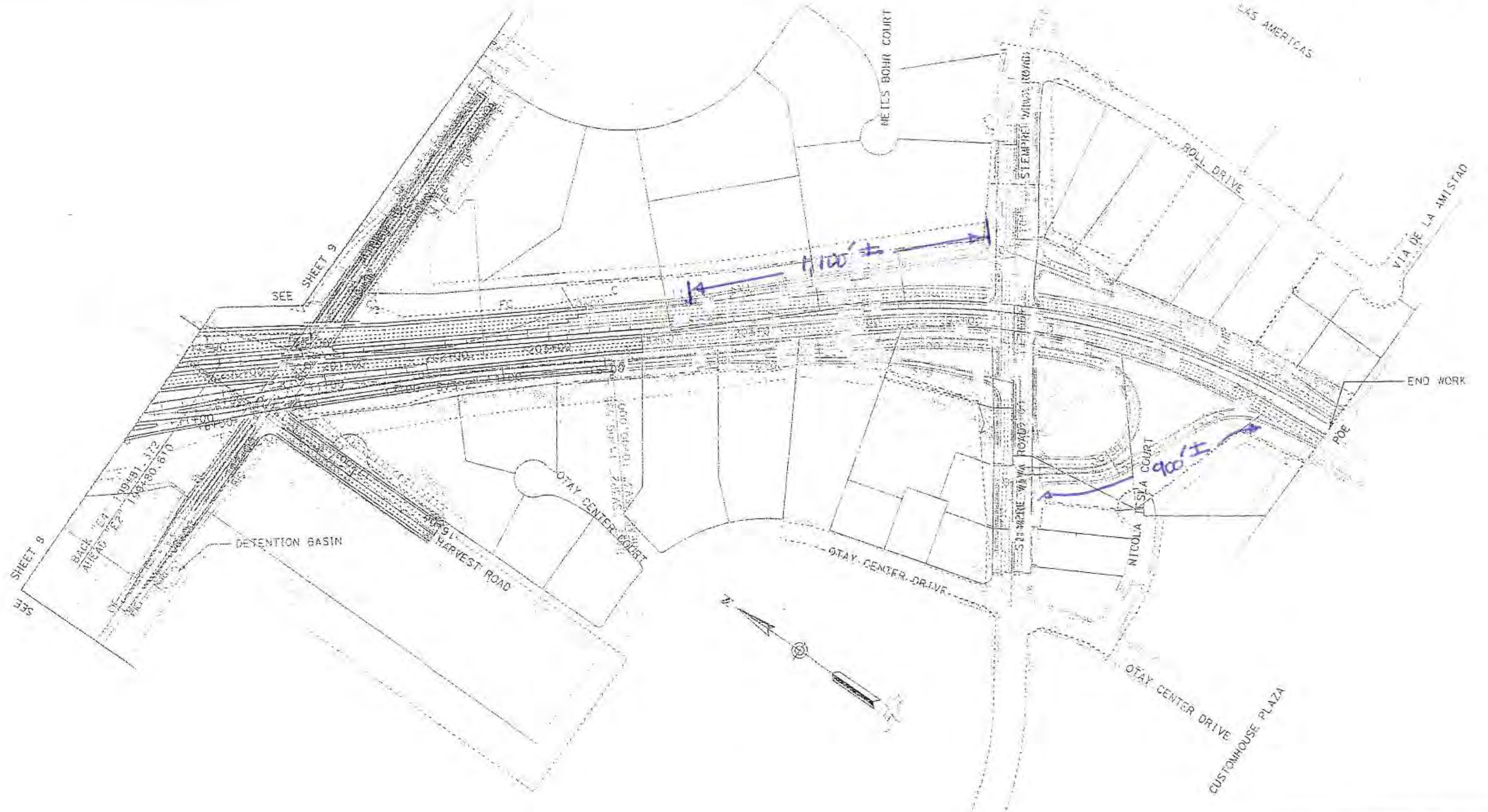
PROJECT FEATURES

SR-905/LA MEDIA RD

ATTACHMENT
5

6/8

GRAPHIC REVISED APRIL 12, 2004



NOTE: ALL MEASUREMENTS ARE IN METERS UNLESS OTHERWISE SHOWN.

0 METER 100
0 FEET 300

11-SD-805, 905

ALL FREEWAY AND TOLLWAY ALIGNMENT ALTERNATIVES EAST SEGMENT

SCALE 1:4000

SHEET 11 OF 25

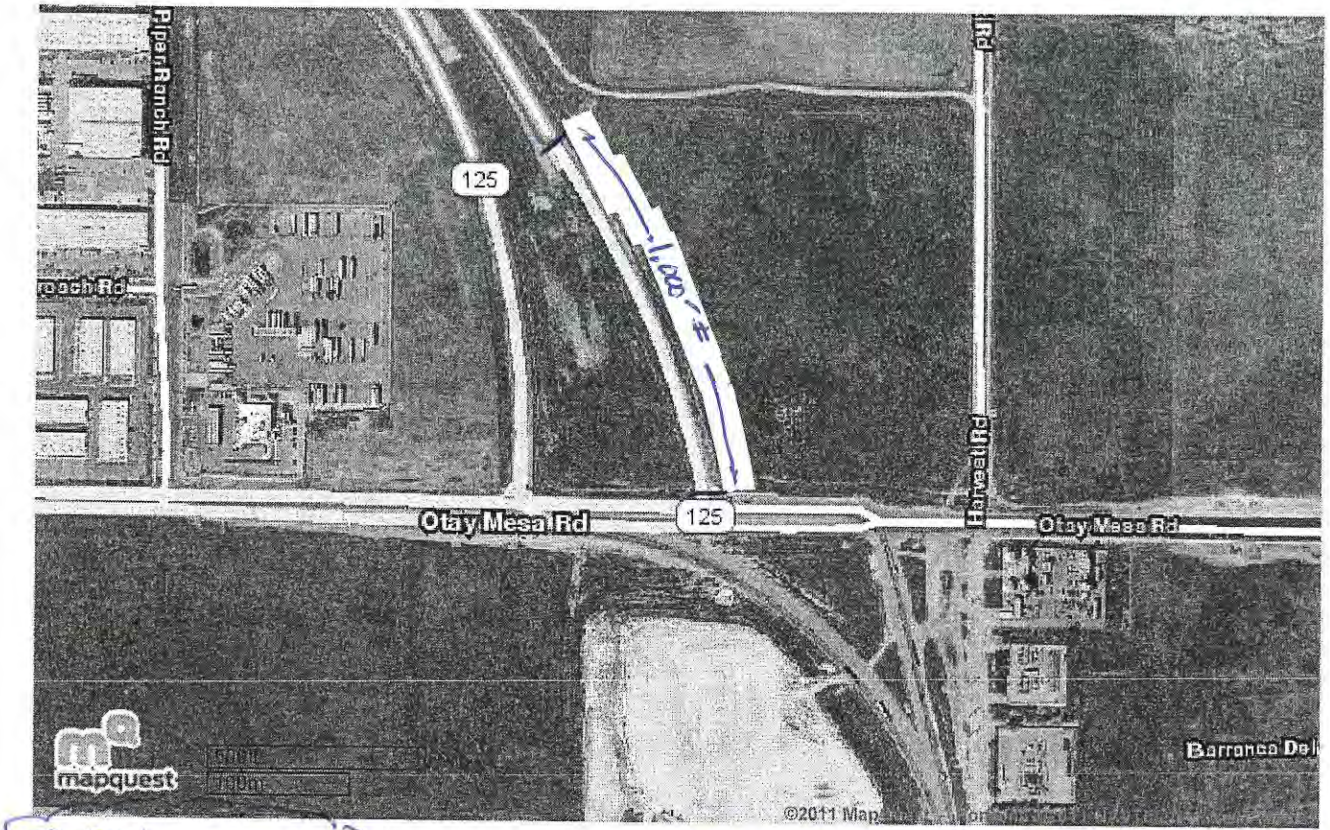
ATTACHMENT 5

PROJECT FEATURES

SR-905/SIEMPRE VIVA RD

ESTIMATED RAMP LENGTHS

1/8



SR-125/OTAY MESA RD.
N/B ON-RAMP LENGTH

NOTE: ALSO USE FOR SR-125/LONE STAR RD.

MITIGATION ASSUMPTIONS (APPENDIX D, ATTACHMENT 10)

The attached lane configurations show recommended mitigation at intersections. Intersection lane configurations without mitigation are assumed to be as shown in the City of San Diego Street Design Manual for the roadway classification at the intersection approaches.

The Design Manual requires widening for an additional 10 feet at approaches to intersecting four or six lane streets for a two lane left turn, and this additional width is not considered mitigation. Therefore, dual left turns are to be assumed at all four or six lane major and primary arterials, before mitigation, unless a supporting traffic study documents that a single left turn would be sufficient. Overlapping left-turn / right- turn phases are recommended at the high volume right turns during the traffic signal design stage.

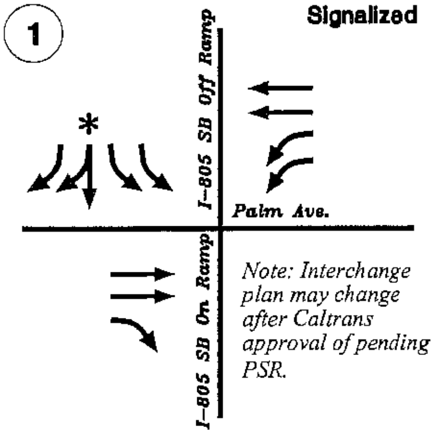
Separate single or dual right turn lanes at new intersections should be designed with appropriate right of way widths. At retrofit locations additional lanes have been reviewed for initial feasibility by on-site observations and aerial photography. In some cases additional right of way will be needed, but only during the design phase will the required widths be determined.

Improvements are recommended at the interchange ramps for SR-905 / Caliente Avenue, SR-905 / Future Heritage Road, SR-905 / Britannia Boulevard; SR-905 / La Media Rd.; SR-905 / Siempre Viva Road. Subsequent design requirements from Caltrans may change the recommended lane configurations.

APPENDIX D - ATTACHMENT 10

Buildout Recommended Lane Configurations - Alternative 3-B

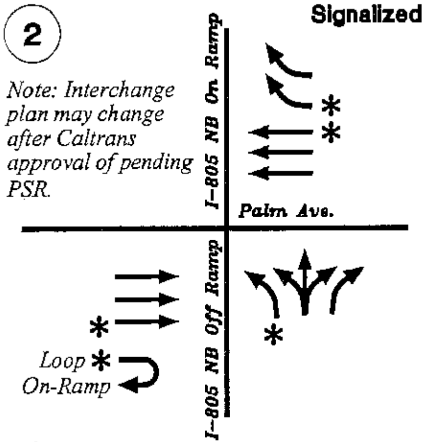
Without La Media Road



Note: Interchange plan may change after Caltrans approval of pending PSR.

Add SB shared TH/RT lane.

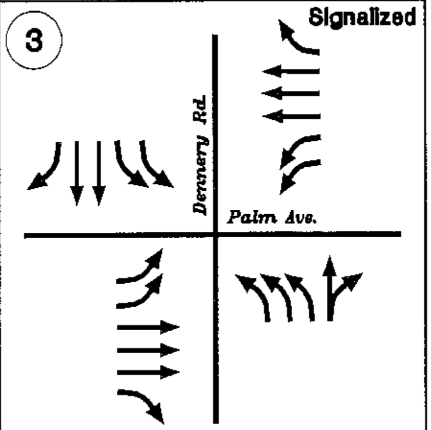
I-805 Southbound Ramps at Palm Avenue



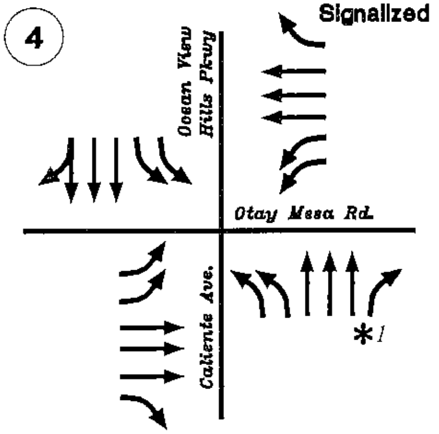
Note: Interchange plan may change after Caltrans approval of pending PSR.

* *Widen Overcrossing & NB off ramp*

I-805 Northbound Ramps at Palm Avenue

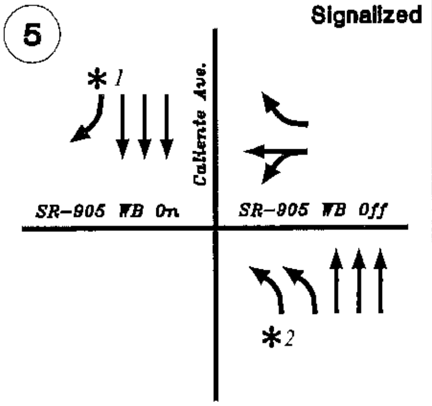


Dennery Road at Palm Avenue



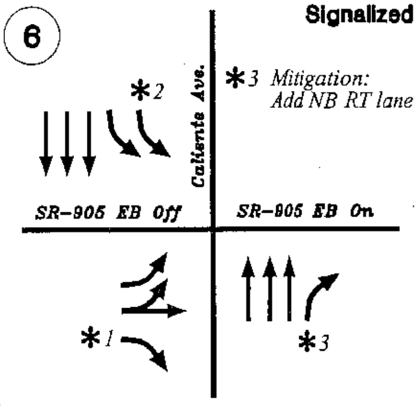
* *1 - Mitigation: Add NB RT lane*

Caliente Avenue at Otay Mesa Road



**1 Mitigation: Add SB RT lane*
**2 Widen for dual left turns*

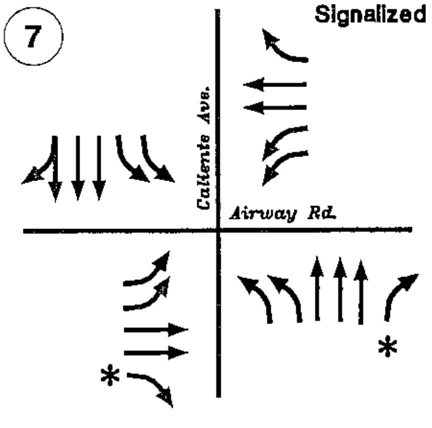
Caliente Avenue at SR-905 Westbound Ramps



**3 Mitigation: Add NB RT lane*

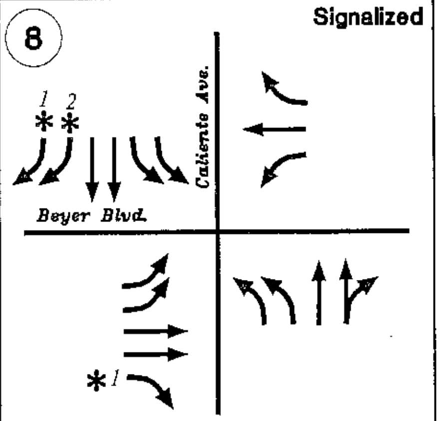
**1 Mitigation: Widen ramp for RT lane*
**2 Mitigation: Widen for SB dual left turns*

Caliente Avenue at SR-905 Eastbound Ramps



* *Mitigation: Add NB RT lane / EB RT lane*

Caliente Avenue at Airway Road



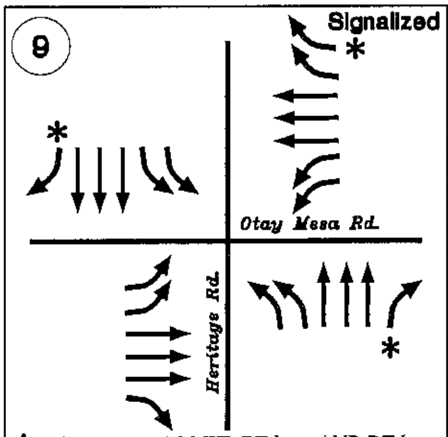
**1 Mitigation: Add SB & EB RT lanes*
**2 Restripe SB TH for RT lane*

Caliente Avenue at Beyer Boulevard

APPENDIX D - ATTACHMENT 10

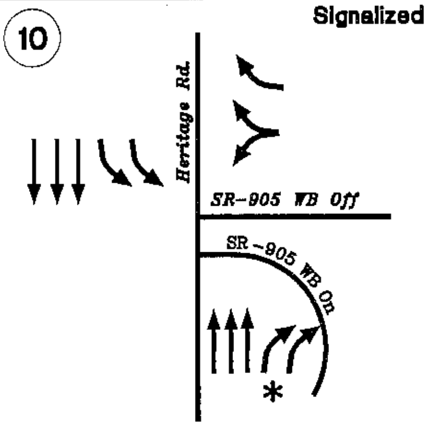
Buildout Recommended Lane Configurations - Alternative 3-B

Without La Media Road



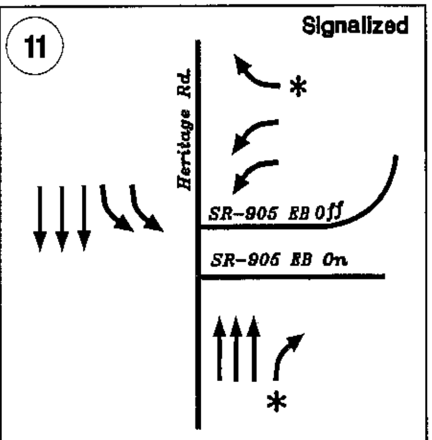
✱ *Mitigation: Add WB RT lane / NB RT lane SB RT lane*

Heritage Road at Otay Mesa Road



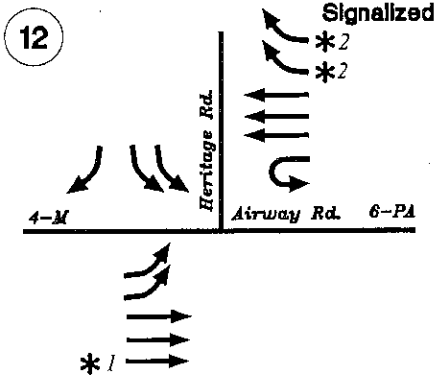
✱ *Mitigation: Add two NB RT lanes*

Heritage Road at SR-905 Westbound Ramps



✱ *Mitigation: Add NB & WB RT lane*

Heritage Road at SR-905 Eastbound Ramps



✱ *1 Begin 3rd EB Through lane West of Heritage Rd.*

✱ *2 Mitigation: Add WB RT lanes*

Heritage Road at Airway Road

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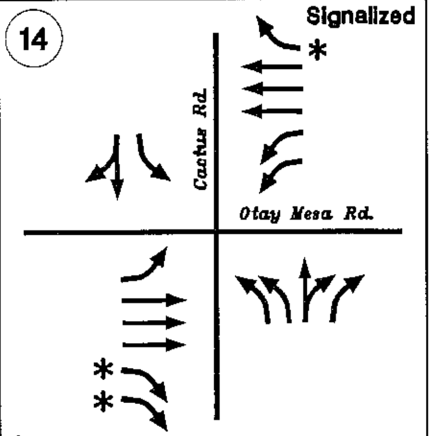
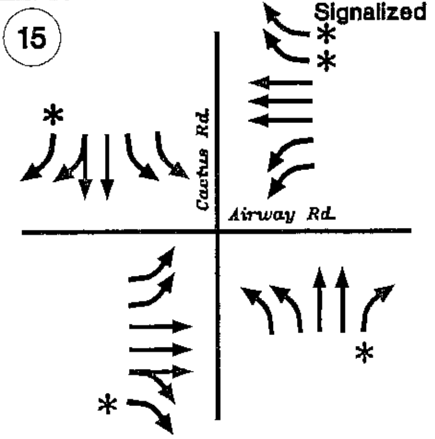
No Intersection With Alternative 3-B

Heritage Road at Siempre Viva Road



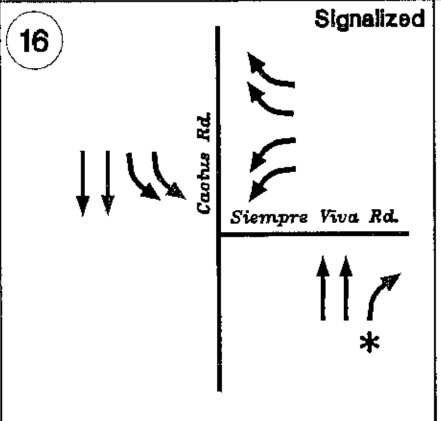
✱ *Mitigation: Add WB RT lane / EB RT lanes*

Cactus Road at Otay Mesa Road



✱ *Mitigation: Add SB, EB, NB, WB RT lanes*

Cactus Road at Airway Road



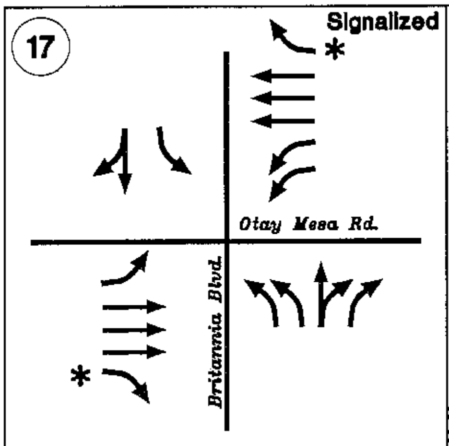
✱ *Mitigation: Add NB RT lane*

Cactus Road at Siempre Viva Road

APPENDIX D - ATTACHMENT 10

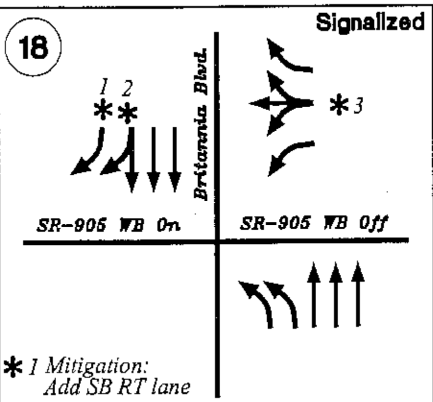
Buildout Recommended Lane Configurations - Alternative 3-B

Without La Media Road



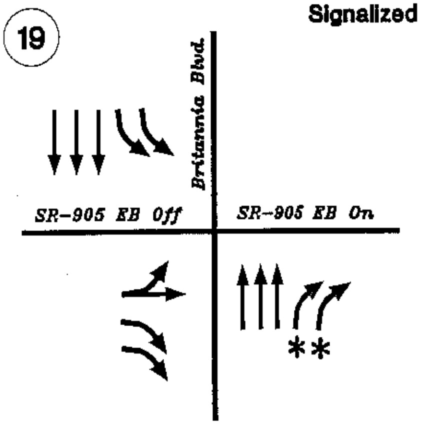
* *Mitigation: Add EB & WB RT lanes*

Britannia Boulevard at Otay Mesa Road



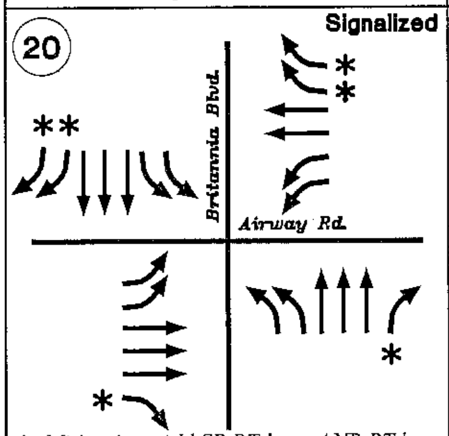
* *1 Mitigation: Add SB RT lane*
* *2 Mitigation: Restripe #3 lane as shown*
* *3 Mitigation: Restripe middle WB lane for LT-TH-RT*

Britannia Boulevard at SR-905 Westbound Ramps



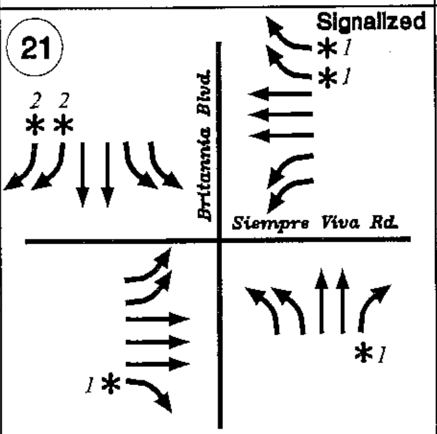
* *Mitigation: Add two NB RT lanes*

Britannia Boulevard at SR-905 Eastbound Ramps



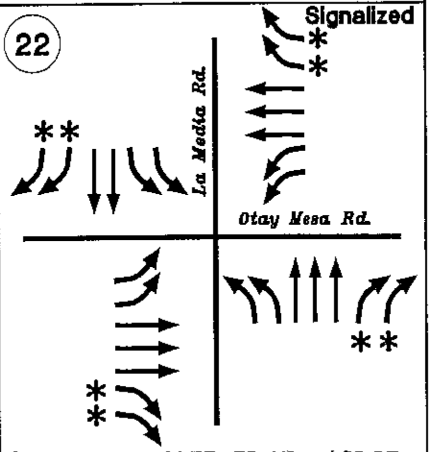
* *Mitigation: Add SB RT lanes / NB RT lane / WB RT lanes / EB RT lane*

Britannia Boulevard at Airway Road



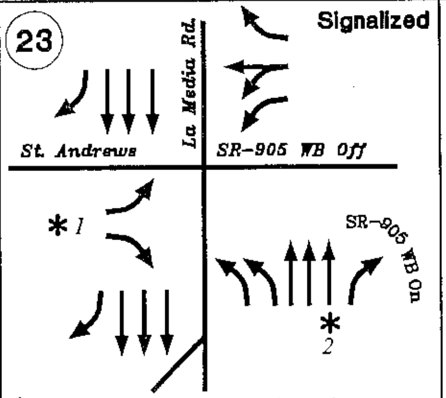
* *1 Mitigation: Add EB, WB, NB RT lanes*
* *2 Add SB RT lane. Restripe #3 lane for RT.*

Britannia Boulevard at Siempre Viva Road



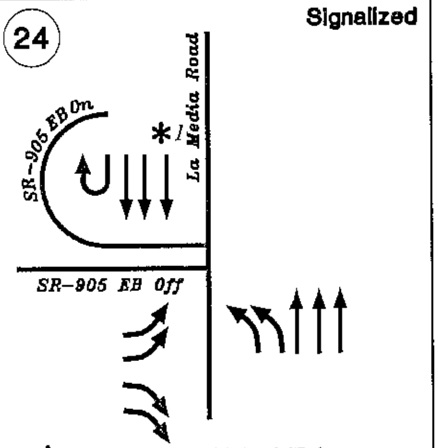
* *Mitigation: Add WB, EB, NB and SB RT lanes*

La Media Road at Otay Mesa Road



* *1 Mitigation: Delete EB through movement*
* *2 Restripe for 3rd NB TH lane*

La Media Road at SR-905 Westbound Ramps



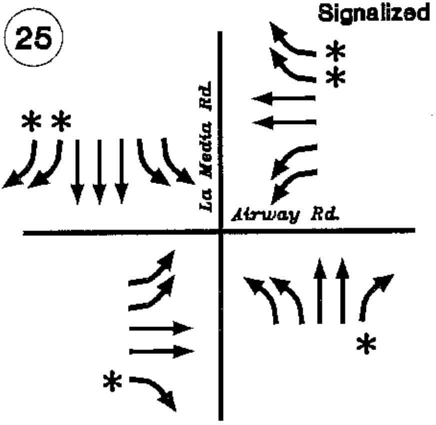
* *1 Mitigation: Add third SB lane*

La Media Road at SR-905 Eastbound Ramps

APPENDIX D - ATTACHMENT 10

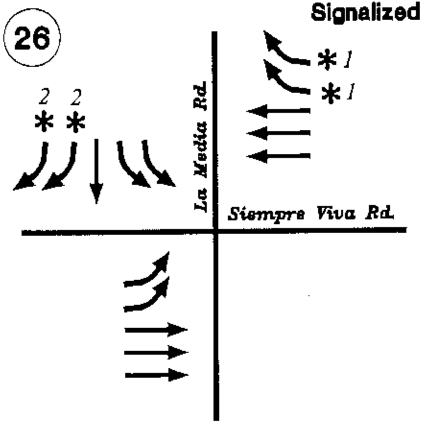
Buildout Recommended Lane Configurations - Alternative 3-B

Without La Media Road



✱ *Mitigation: Add NB, SB, EB, & WB RT lanes*

La Media Road at Airway Road



✱ 1 *Mitigation: Add WB RT lanes*
✱ 2 *Restripe SB for 2 RT lanes*

La Media Road at Siempre Viva Road

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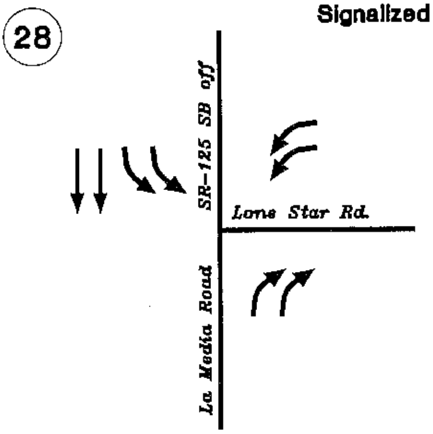
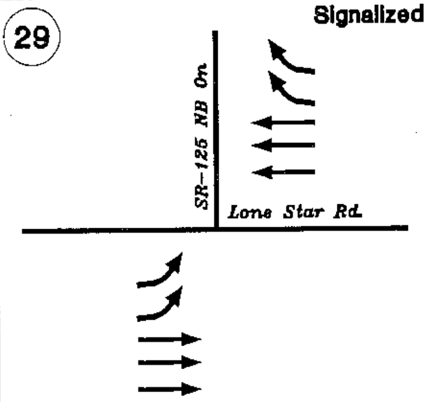
SEE INTERSECTION •28

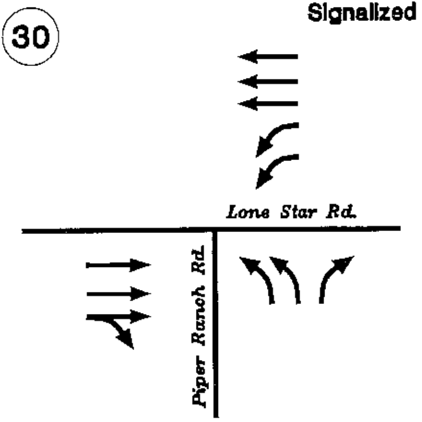
La Media Road at Lone Star Road



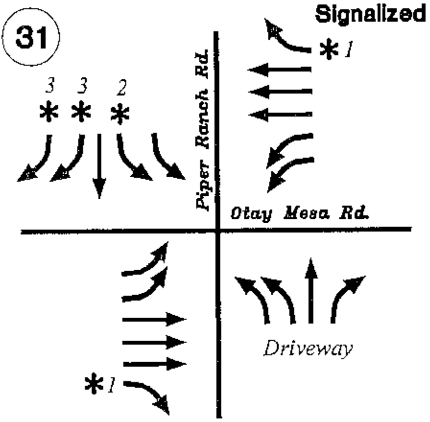
SR-125 Southbound Off Ramp at Lone Star Road



SR-125 Northbound On Ramp at Lone Star Road

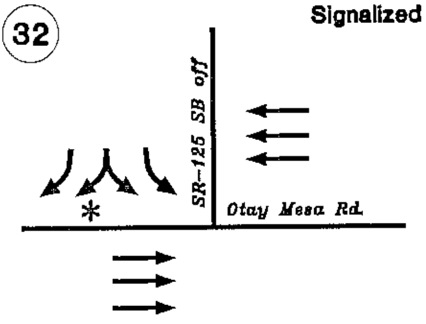


Piper Ranch Road at Lone Star Road



✱ 1 *Mitigation: Add WB & EB RT lanes*
✱ 2 *Mitigation: Restripe SB TH for LT lane*
✱ 3 *Mitigation: Add 2 SB RT lanes*

Piper Ranch Rd. at Otay Mesa Rd.



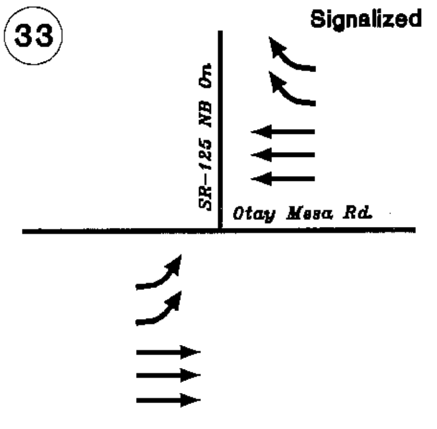
✱ *Restripe one of the Existing LT lanes to a shared LT/RT lane.*

SR-125 Southbound Off Ramp at Otay Mesa Road

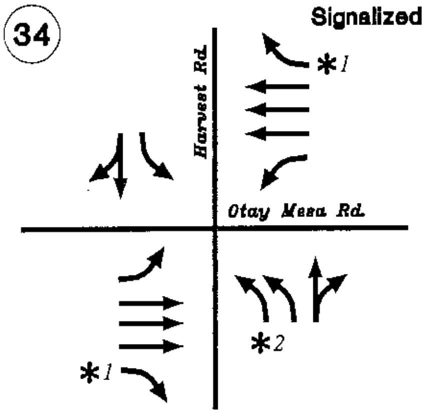
APPENDIX D - ATTACHMENT 10

Buildout Recommended Lane Configurations - Alternative 3-B

Without La Media Road

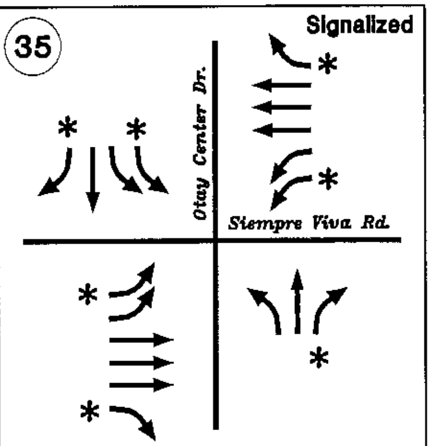


SR-125 Northbound On Ramp at Otay Mesa Road



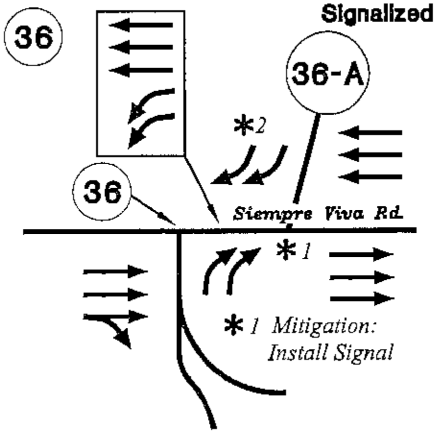
*1 Mitigation: Add EB & WB RT lanes
*2 Mitigation: Add NB LT lane

Harvest Road at Otay Mesa Road



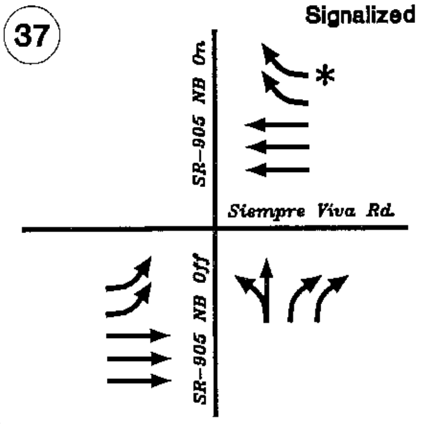
* Mitigation: Add lanes as shown

Otay Center Drive at Siempre Viva Road



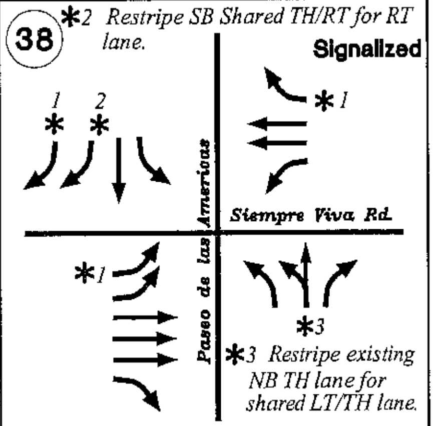
*2 Mitigation: Widen Ramp, Add RT lane

SR-905 Southbound Ramps at Siempre Viva Road



* Mitigation: Add WB RT lane

SR-905 Northbound Ramps at Siempre Viva Road

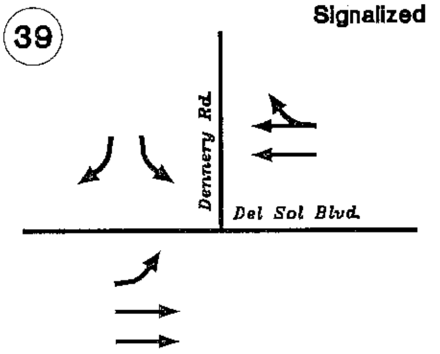


*2 Restripe SB Shared TH/RT for RT lane.

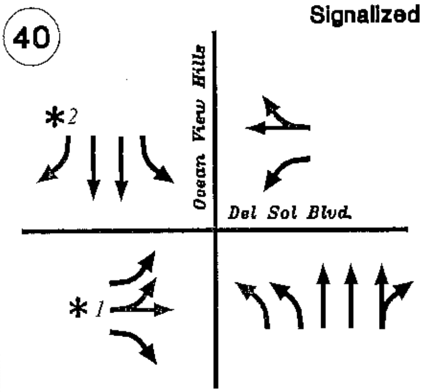
*3 Restripe existing NB TH lane for shared LT/TH lane.

*1 Mitigation: Add EB LT lane / WB RT lane SB RT lane

Paseo de las Americas at Siempre Viva Road

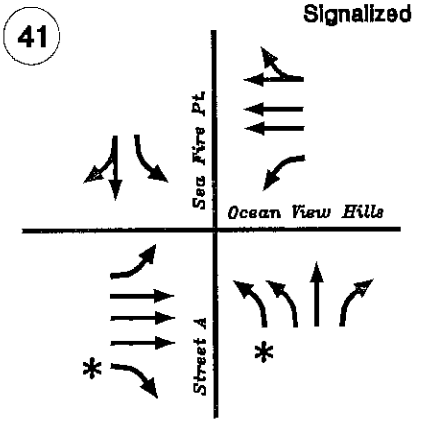


Dennery Road at Del Sol Boulevard



* 1 Mitigation: Restripe for EB dual LT/TH
* 2 Mitigation: Add SB RT lane

Ocean View Hills Parkway at Del Sol Boulevard



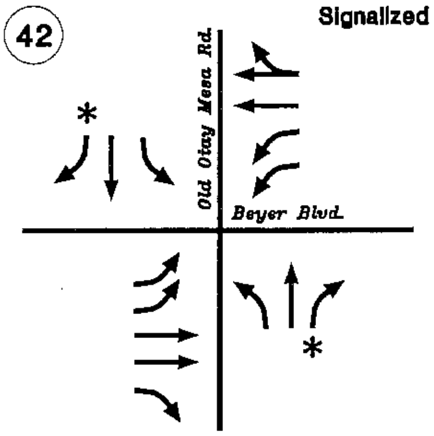
* Mitigation: Add NB LT lane & EB RT lane

Ocean View Hills Parkway at Street A

APPENDIX D - ATTACHMENT 10

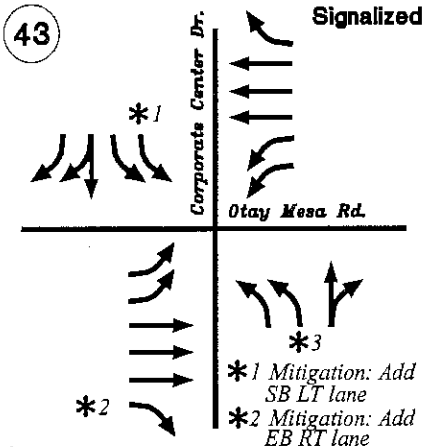
Buildout Recommended Lane Configurations - Alternative 3-B

Without La Media Road



Mitigation: Add SB & NB RT lanes

Old Otay Mesa Road at Beyer Boulevard

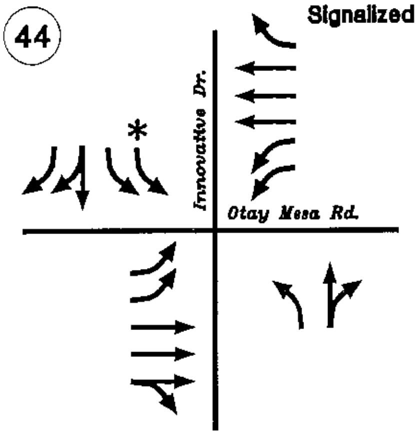


*1 *Mitigation: Add SB LT lane*

*2 *Mitigation: Add EB RT lane*

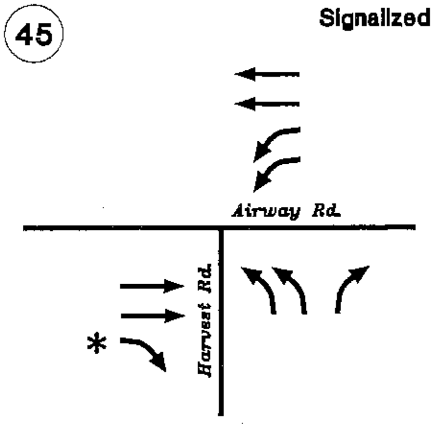
*3 *Restripe NB TH lane*

Otay Mesa Road at Corporate Center Drive



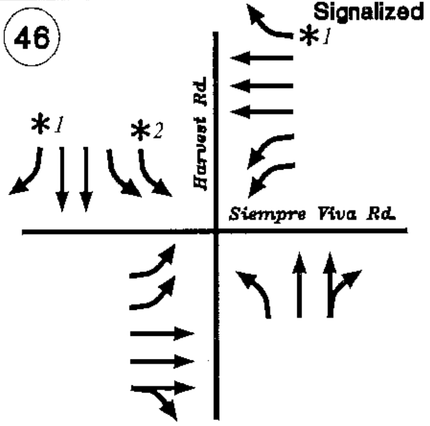
Mitigation: Add SB LT lane

Otay Mesa Road at Innovative Drive



Mitigation: Add EB RT lane

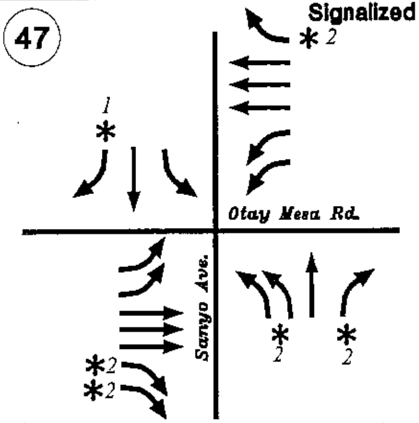
Airway Road at Harvest Road



*1 *Mitigation: Add WB & SB RT lanes*

*2 *Mitigation: Add SB LT lane*

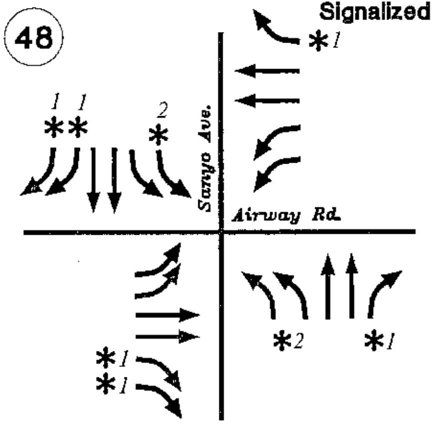
Harvest Road at Siempre Viva Road



*1 *Restripe shared TH/RT lane for RT lane*

*2 *Mitigation: Add NB RT lane, restripe for dual left / Add EB & WB RT lanes*

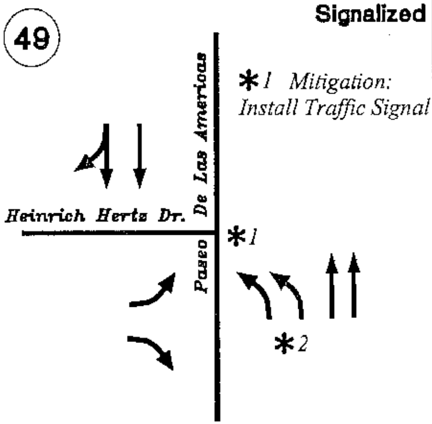
Otay Mesa Road at Sanyo Ave.



*1 *Mitigation:Add SB, EB, NB, WB RT lanes*

*2 *Add NB & SB LT lanes*

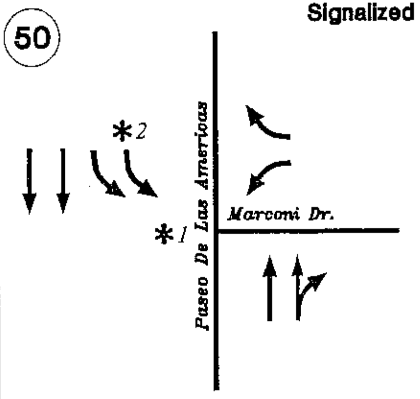
Airway Road at Sanyo Ave.



*1 *Mitigation: Install Traffic Signal*

*2 *Mitigation: Widen NB for dual left turns*

Paseo De Las Americas at Heinrich Hertz Drive



*1 *Mitigation: Install Traffic Signal*

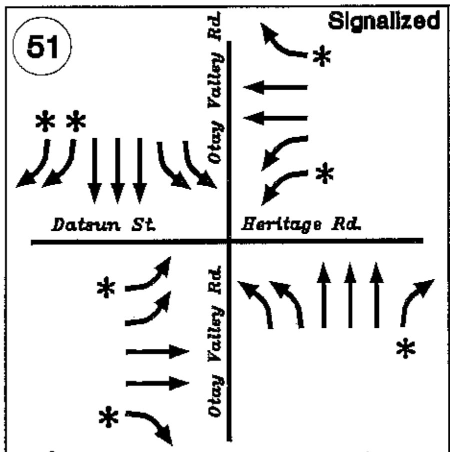
*2 *Mitigation: Widen for SB dual LT lanes*

Paseo De Las Americas at Marconi Drive

APPENDIX D - ATTACHMENT 10

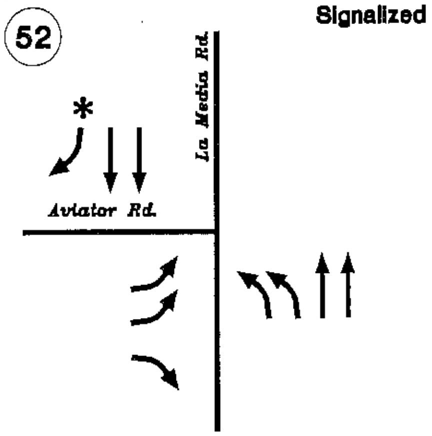
Buildout Recommended Lane Configurations - Alternative 3-B

Without La Media Road



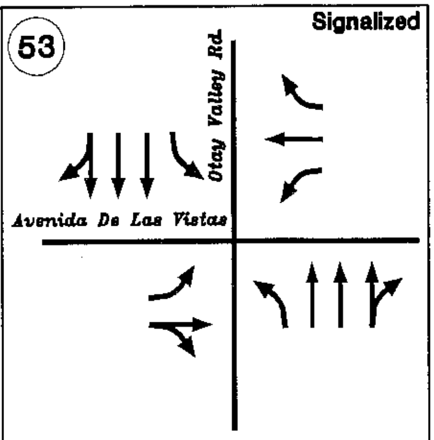
* *Mitigation: Add Lanes as noted*

Heritage Road at Otay Valley Road



* *Mitigation: Add SB RT lane*

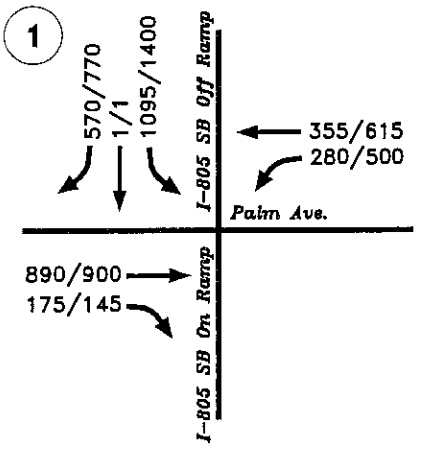
La Media Road at Aviator Road



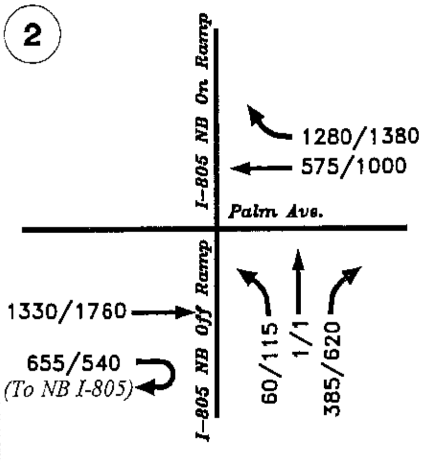
Otay Valley Road at Avenida De Las Vistas

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

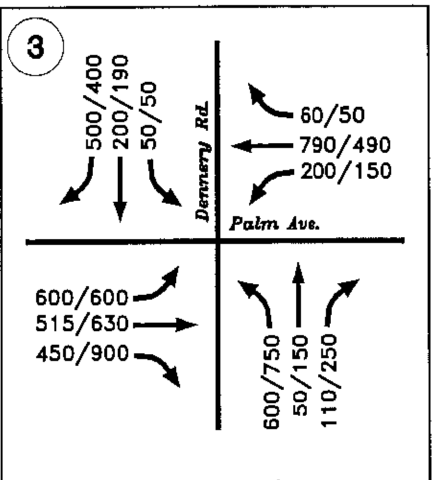
Without La Media Road



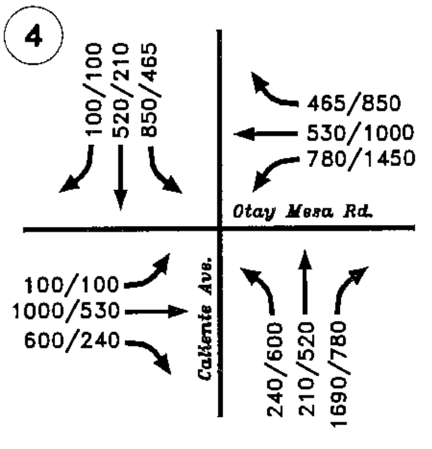
I-805 Southbound Ramps at Palm Avenue



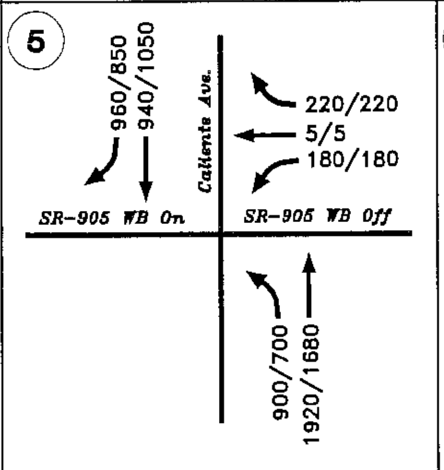
I-805 Northbound Ramps at Palm Avenue



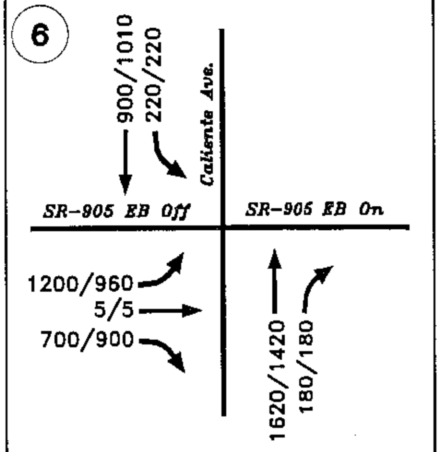
Dennery Road at Palm Avenue



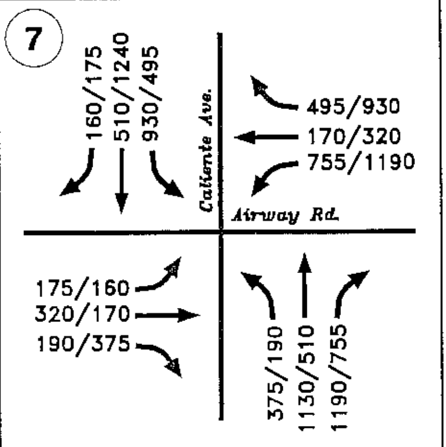
Caliente Avenue at Otay Mesa Road



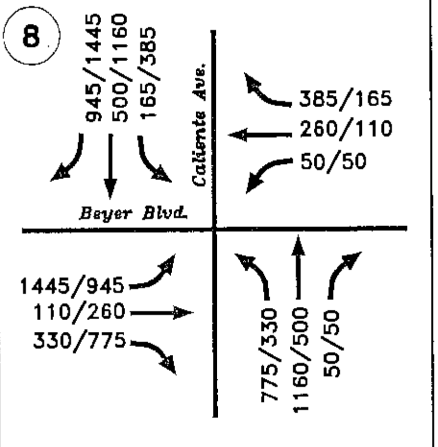
Caliente Avenue at SR-905 Westbound Rampe



Caliente Avenue at SR-905 Eastbound Ramps



Caliente Avenue at Airway Road



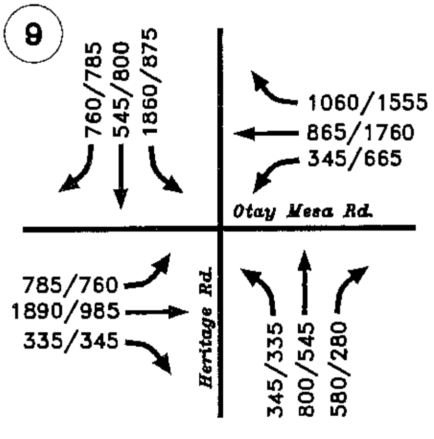
Caliente Avenue at Beyer Boulevard

(7-26-10 Run Date) *(Revised 7-29-11)*

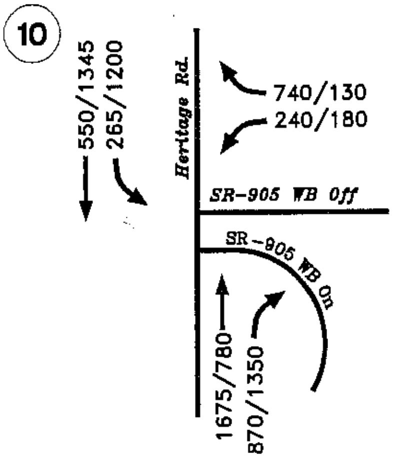
APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

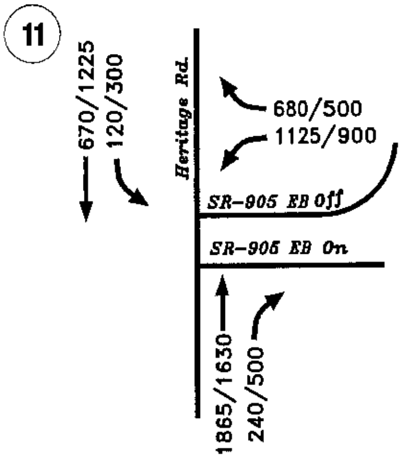
Without La Media Road



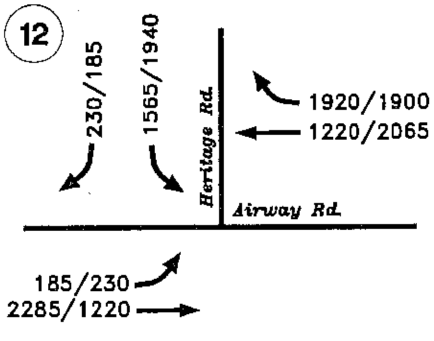
Heritage Road at Otay Mesa Road



Heritage Road at SR-905 Westbound Ramps



Heritage Road at SR-905 Eastbound Ramps

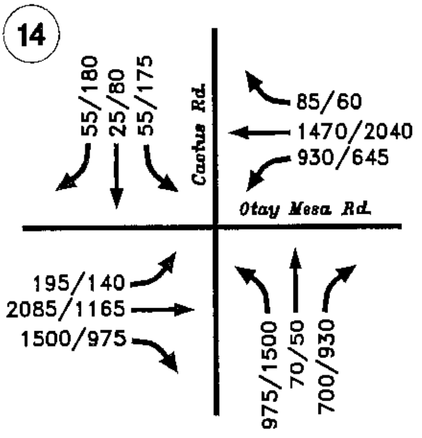


Heritage Road at Airway Road

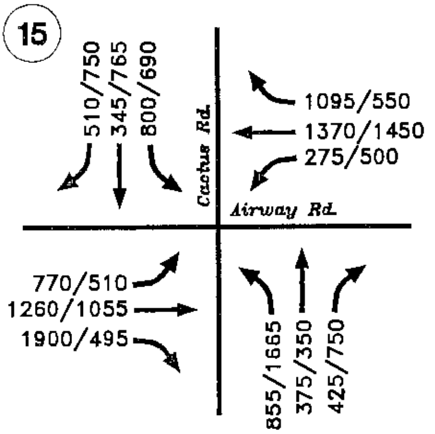
13

No Intersection With Alternative 3-B

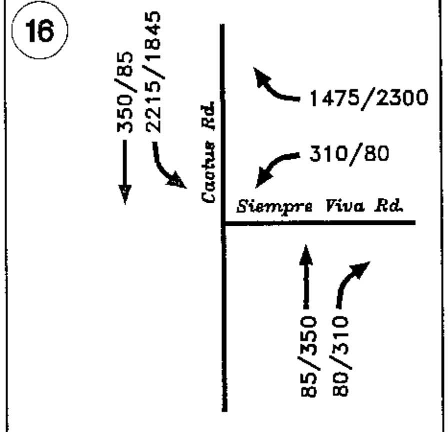
Heritage Road at Siempre Viva Road



Cactus Road at Otay Mesa Road



Cactus Road at Airway Road



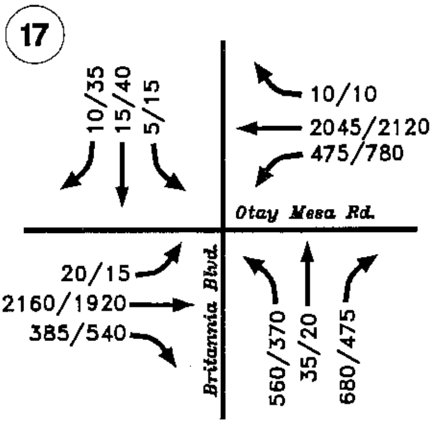
Cactus Road at Siempre Viva Road

(7-26-10 Run Date) *(Revised 7-29-11)*

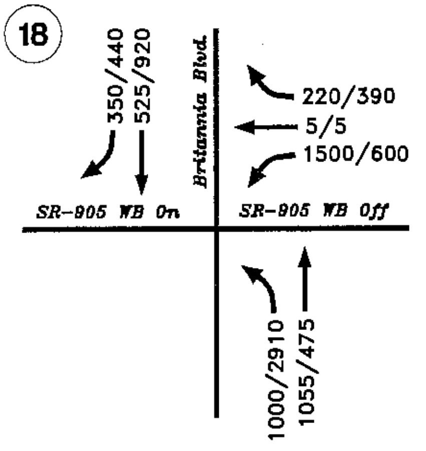
APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

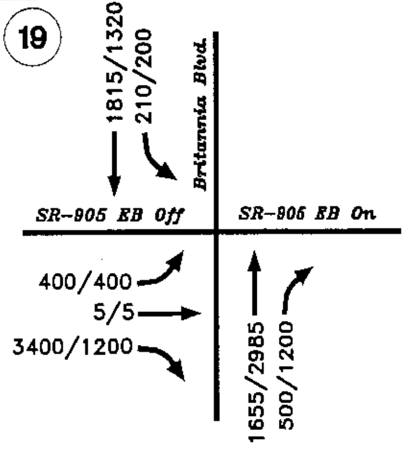
Without La Media Road



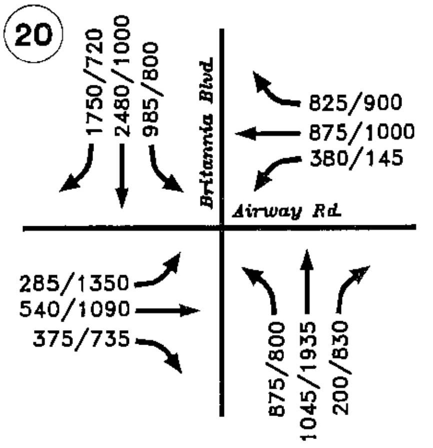
Britannia Boulevard at Otay Mesa Road



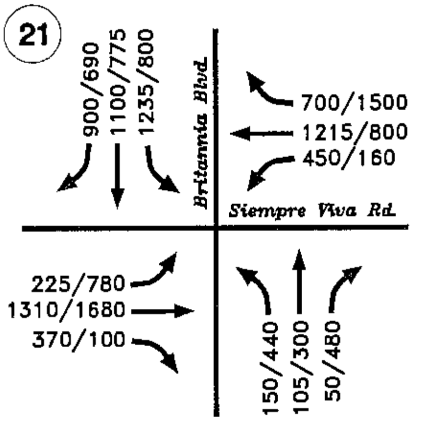
Britannia Boulevard at SR-905 Westbound Ramps



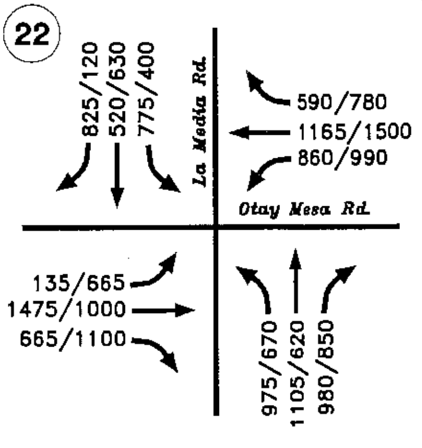
Britannia Boulevard at SR-905 Eastbound Ramps



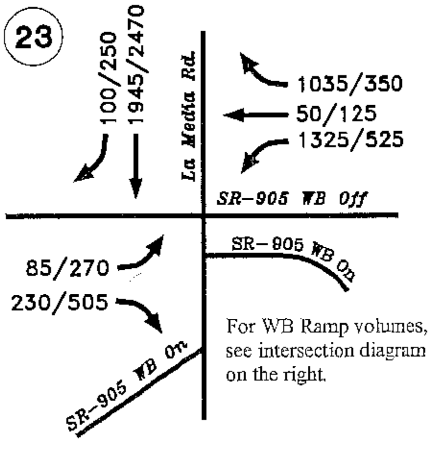
Britannia Boulevard at Airway Road



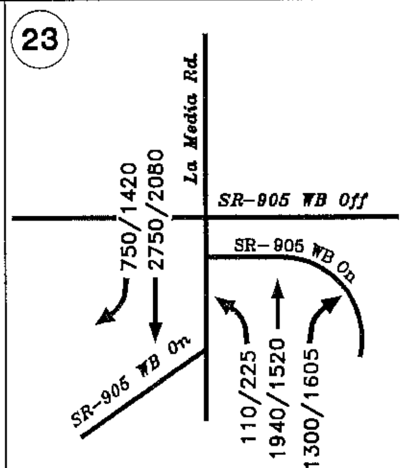
Britannia Boulevard at Siempre Viva Road



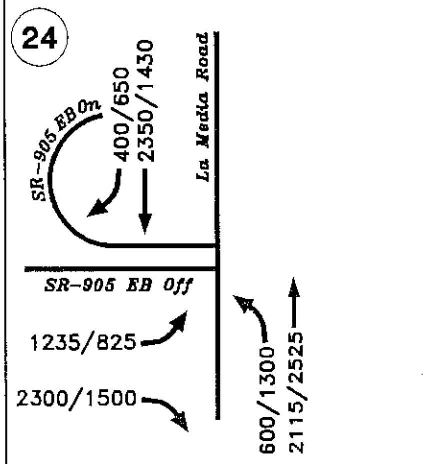
La Media Road at Otay Mesa Road



La Media Road at SR-905 Westbound Ramps



La Media Road at SR-905 Westbound Ramps



La Media Road at SR-905 Eastbound Ramps

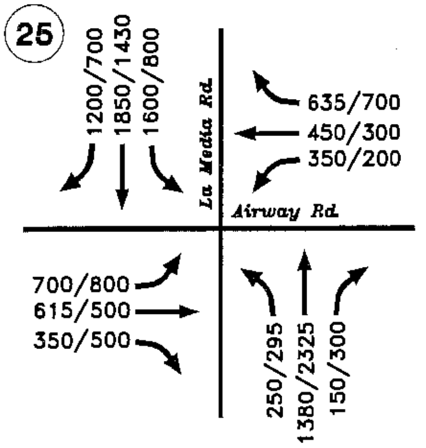
(7-26-10 Run Date)

(Revised 7-29-11)

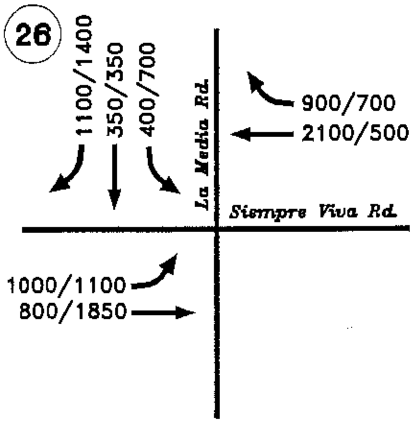
APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



La Media Road at Airway Road

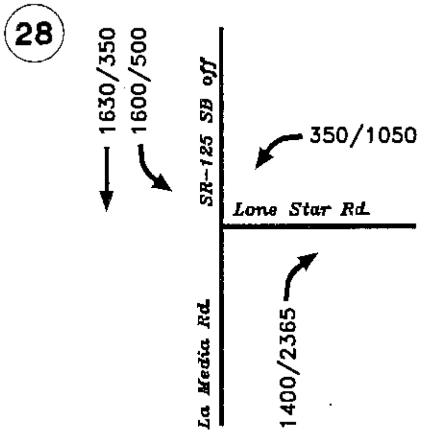


La Media Road at Siempre Viva Road

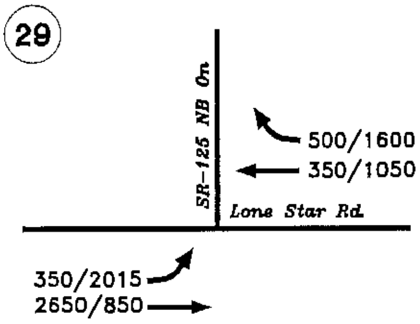
27

SEE INTERSECTION #28

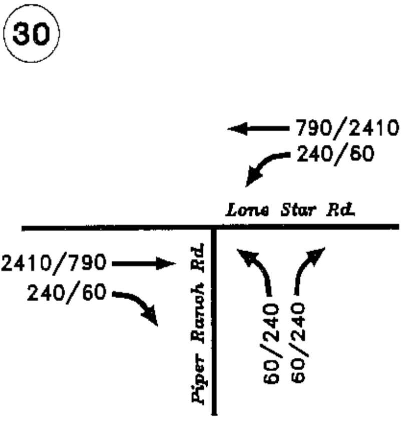
La Media Road at Lone Star Road



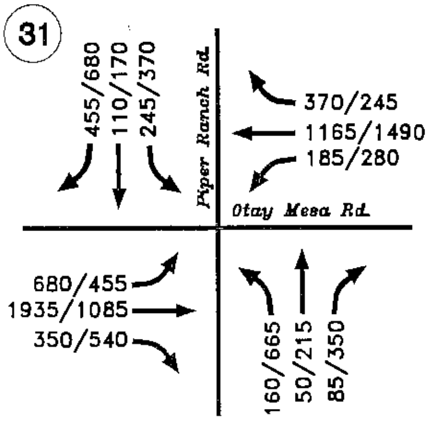
SR-125 Southbound Off Ramp at Lone Star Road



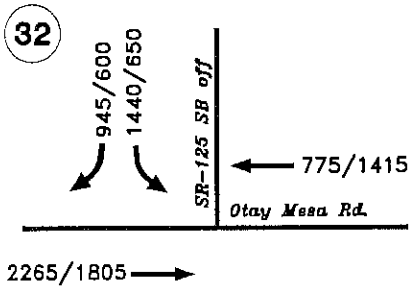
SR-125 Northbound On Ramp at Lone Star Road



Piper Ranch Road at Lone Star Road



Piper Ranch Road at Otay Mesa Road



SR-125 Southbound Off Ramp at Otay Mesa Road

(7-26-10 Run Date)

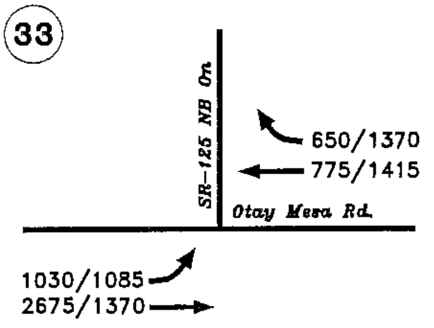
(Revised 7-29-11)

APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

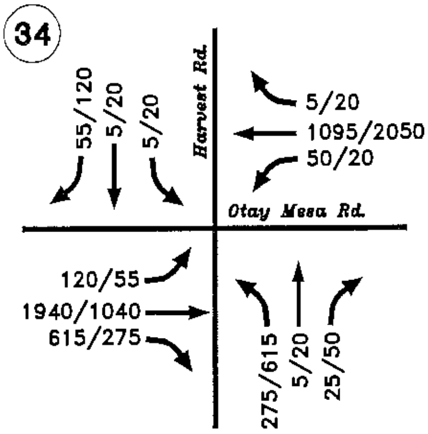
Without La Media Road

33



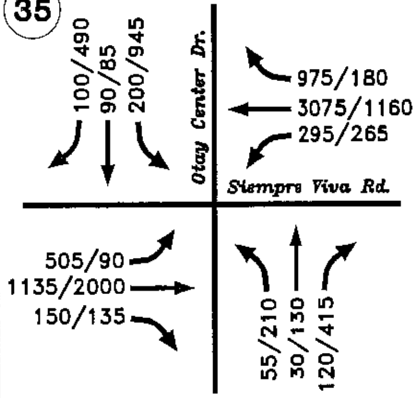
SR-125 Northbound On Ramp at Otay Mesa Road

34



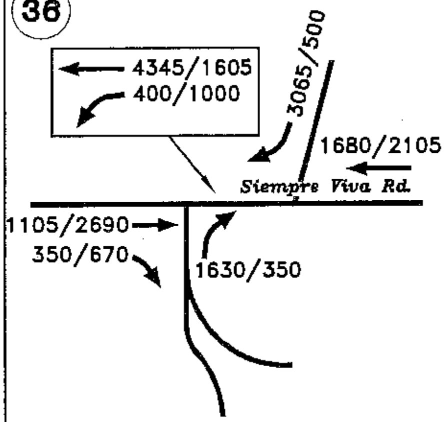
Harvest Road at Otay Mesa Road

35



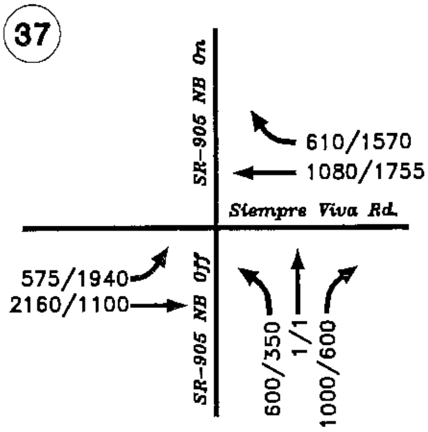
Otay Center Drive at Siempre Viva Road

36



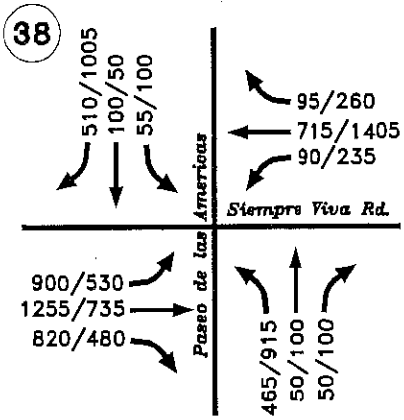
SR-905 Southbound Ramps at Siempre Viva Road

37



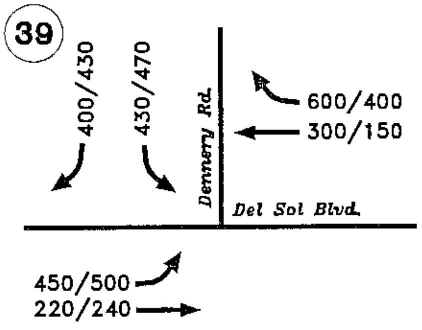
SR-905 Northbound Ramps at Siempre Viva Road

38



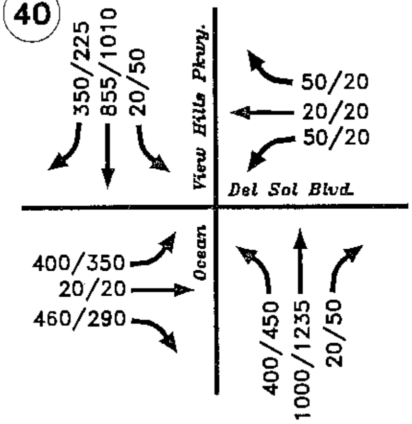
Paseo de las Americas at Siempre Viva Road

39



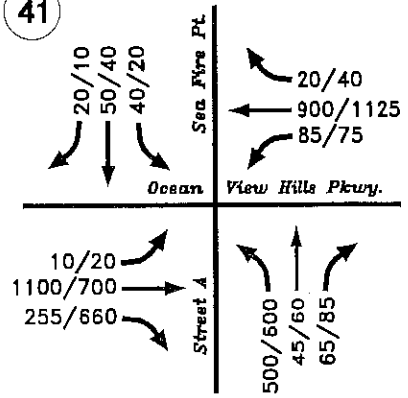
Dennery Road at Del Sol Boulevard

40



Ocean View Hills Parkway at Del Sol Boulevard

41

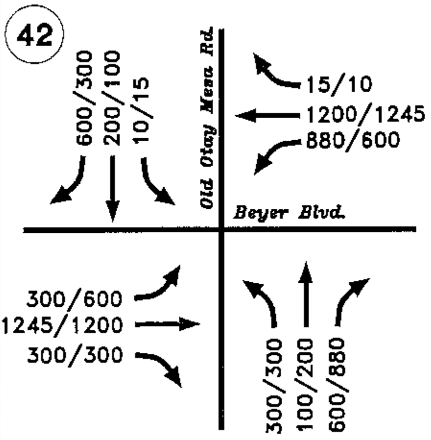


Ocean View Hills Parkway at Street A

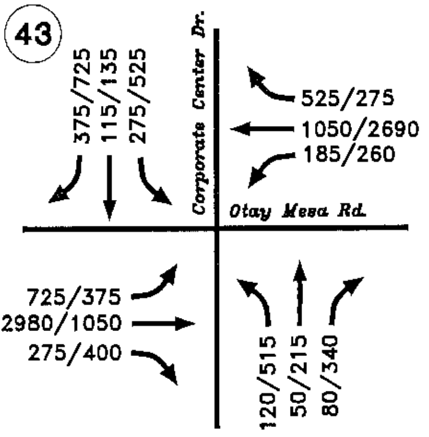
APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

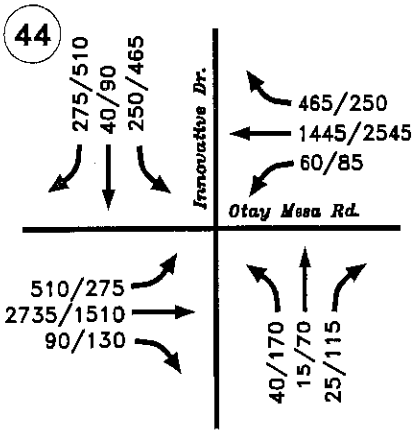
Without La Media Road



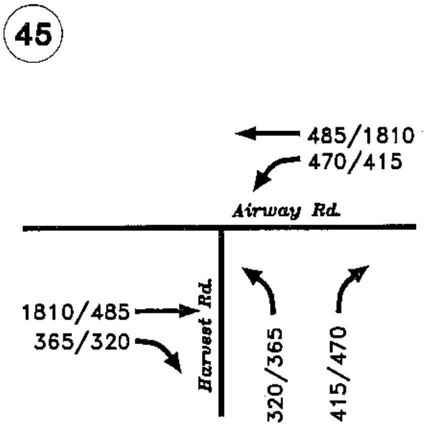
Old Otay Mesa Road at Beyer Boulevard



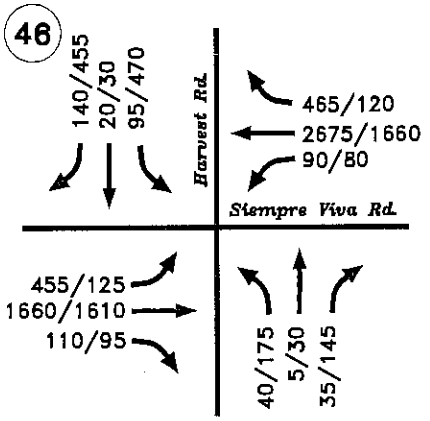
Otay Mesa Road at Corporate Center Drive



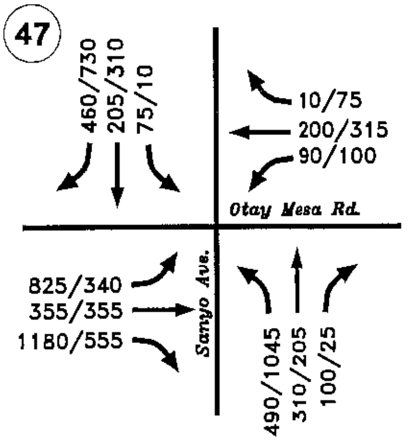
Otay Mesa Road at Innovative Drive



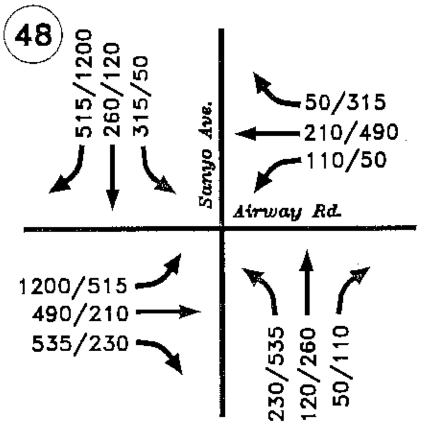
Airway Road at Harvest Road



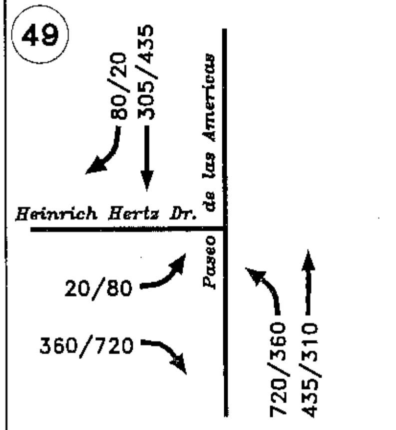
Harvest Road at Siempre Viva Road



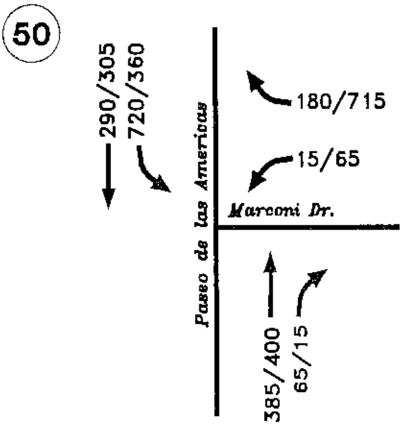
Otay Mesa Road at Sanyo Avenue



Airway Road at Sanyo Avenue



Paseo de las Americas at Heinrich Hertz Drive



Paseo de las Americas at Marconi Drive

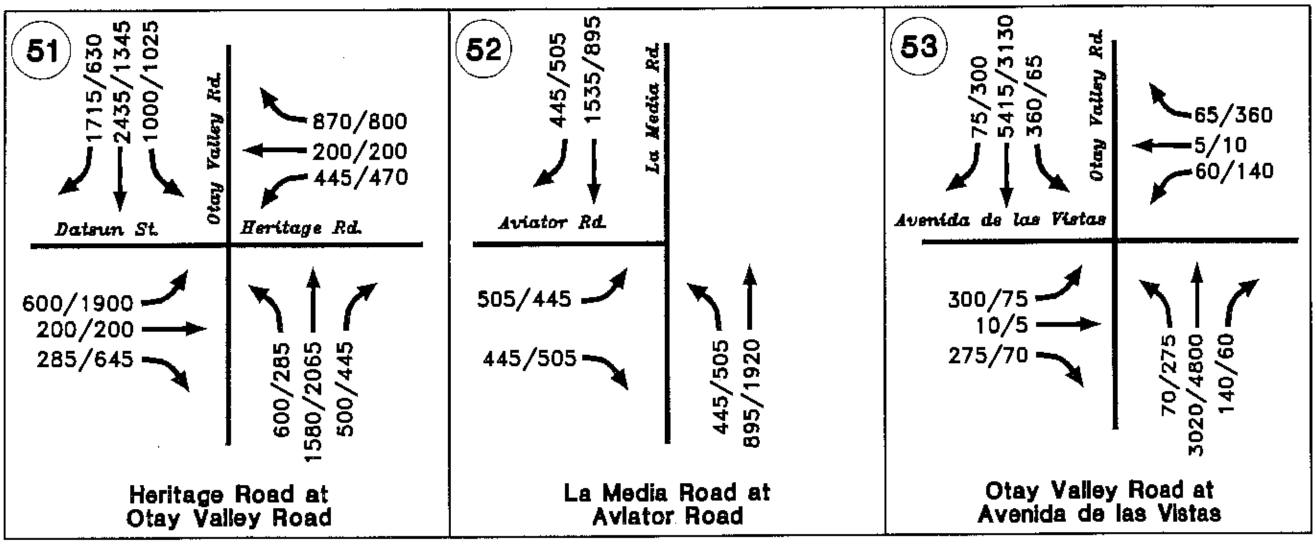
(7-26-10 Run Date)

(Revised 7-29-11)

APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



Heritage Road at Otay Valley Road

La Media Road at Aviator Road

Otay Valley Road at Avenida de las Vistas

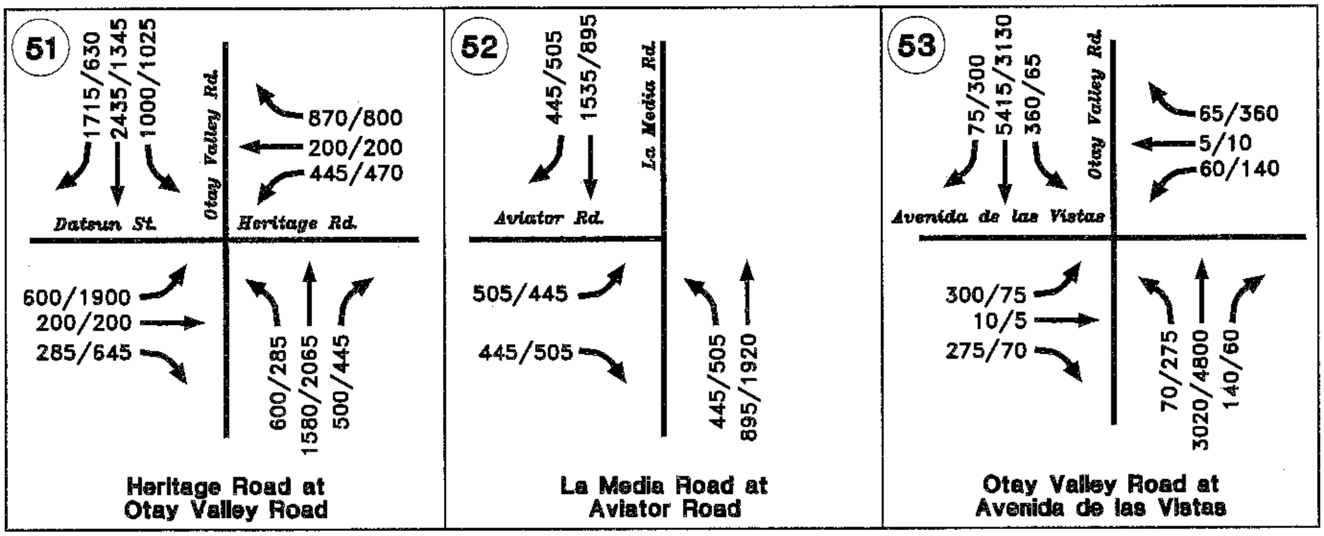
(7-26-10 Run Date)

(Revised 7-29-11)

ATTACHMENT 9

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



Heritage Road at Otay Valley Road

La Media Road at Aviator Road

Otay Valley Road at Avenida de las Vistas

(7-26-10 Run Date)

(Revised 7-29-11)

TABLE APPENDIX D-1

Traffic Signal Warrant Worksheets

Buildout Scenario 3B Withont La Media Road Intersection

Intersection		Existing Signal	Warrants OK
1	Palm Ave. / I-805 SB Ramps	Y	-
2	Palm Ave. / I-805 NB Ramps	Y	-
3	Palm Ave. / Dennery Rd.	Y	-
4	Otay Mesa Rd. / Caliente Ave.	Y	-
5	Caliente Ave. / SR-905 WB Ramps	N	Caltrans
6	Caliente Ave. / SR-905 EB Ramps	N	Caltrans
7	Caliente Ave. / Airway Rd.	N	Y
8	Caliente Ave. / Beyer Blvd.	N	Y
9	Otay Mesa Rd. / Heritage Rd.	Y	-
10	Heritage Rd. / SR-905 WB Ramps	N	Y
11	Heritage Rd. / SR-905 EB Ramps	N	Y
12	Heritage Rd. / Airway Rd.	N	Y
13	Heritage Rd. / Siempre Viva Rd.	N	N/A
14	Otay Mesa Rd. / Cactus Rd.	Y	-
15	Airway Rd. / Cactus Rd.	N	Y
16	Siempre Viva Rd. / Cactus Rd.	N	Y
17	Otay Mesa Rd. / Britannia blvd.	Y	-
18	Britannia Blvd. / SR-905 WB Ramps	Y	-
19	Britannia Blvd. / SR-905 EB Ramps	Y	-
20	Britannia Blvd. / Airway Rd.	Y	-
21	Siempre Viva Rd. / Britannia Blvd.	Y	-
22	Otay Mesa Rd. / La Media Rd.	Y	-
23	La Media Rd. / SR-905 WB Ramps	Y	-
24	La Media Rd. / SR-905 EB Ramps	Y	-
25	La Media Rd. / Airway Rd.	N	Y
26	La Media Rd. / Siempre Viva Rd.	Y	-
27	La Media Rd. / Lone Star Rd.	N	2-Way Approach
28	Lone Star Rd. / SR-125 SB Off Ramp	N	Y
29	Lone Star Rd. / SR-125 NB On Ramp	N	Y
30	Lone Star Rd. / Piper Ranch Rd.	N	Y
31	Otay Mesa Rd. / Piper Ranch Rd.	Y	-
32	Otay Mesa Rd. / SR-125 SB Off Ramp	Y	-
33	Otay Mesa Rd. / SR-125 NB On Ramp	Y	-
34	Otay Mesa Rd. / Harvest Rd.	N	Y
35	Siempre Viva Rd. / Otay Center Dr.	Y	-
36	Siempre Viva Rd. / SR-905 SB to EB Ramp	Y	-
36A	Siempre Viva Rd. / SR-905 SB to WB Ramp	N	Y
37	Siempre Viva Rd. / SR-905 NB Ramps	Y	-
38	Siempre Viva Rd. / Paseo de las Americas	Y	-
39	Dennery Rd. / Del Sol Blvd.	Y	-
40	Ocean View Hills Pkwy. / Del Sol Blvd.	Y	-
41	Ocean View Hills Pkwy. / Street A	Y	-
42	Old Otay Mesa Rd. / Beyer Blvd.	Y	-
43	Otay Mesa Rd. / Corporate Center Dr.	Y	-
44	Otay Mesa Rd. / Innovative Dr.	N	Y
45	Harvest Rd. / Airway Rd.	N	Y
46	Harvest Rd. / Siempre Viva Rd.	Y	-
47	Otay Mesa Rd. / Sanyo Ave.	Y	-
48	Airway Rd. / Sanyo Ave.	N	Y
49	Paseo de las Americas / Heinrich Hertz Dr.	N	Y
50	Paseo de las Americas / Marconi Dr.	N	Y
51	Heritage Rd. / Otay Valley Rd.	N	Y
52	Aviator Way / La Media Rd.	N	Y
53	Otay Valley Rd. / Avenida De Las Vistas	N	Y

Note: 21 intersection warrant worksheets attached.

2/22

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ____________
CALC ____________ DATE ____________
CHK ____________ DATE ____________

____ DIST ____ CO ____ RTE ____ PM

#7

Major St: CALIENTE AVE. (3BW/0)
Minor St: AIRWAY RD.

Critical Approach Speed ____________ mph
Critical Approach Speed ____________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)......... ☒ or
In built up area of isolated community of < 10,000 population......................... ☐
} **RURAL (R)**

☐ **URBAN (U)**

(Based on Estimated Average Daily Traffic - See Note)

URBAN.................. RURAL X..................		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied X Not Satisfied ______		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1..................	1..................	8,000	5,600	2,400	1,680
2 or More..................	1..................	9,600	6,720	2,400	1,680
[✓ 2] or More..................	[✓ 2] or More..................	9,600	[✓ 6,720]	3,200	[✓ 2,240]
1..................	2 or More..................	8,000	5,600	3,200	2,240
			39,000		19,000
CONDITION B - Interruption of Continuous Traffic Satisfied X Not Satisfied ______		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1..................	1..................	12,000	8,400	1,200	850
2 or More..................	1..................	14,400	10,080	1,200	850
2 or More..................	2 or More..................	14,400	[✓ 10,080]	1,600	[✓ 1,120]
1..................	2 or More..................	12,000	8,400	1,600	1,120
			39,000		19,000
Combination of CONDITIONS A + B Satisfied ______ Not Satisfied ______ No one condition satisfied, but following conditions fulfilled 80% or more.......... ______ A ______ B		2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

3/22

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE ______
CALC ______ DATE ______
CHK ______ DATE ______

______ DIST ______ CO ______ RTE ______ PM

#8

Major St: CALIENTE AVE. (3B w/o L.M.) Critical Approach Speed ______ mph
Minor St: BEYER BLVD Critical Approach Speed ______ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population........................ ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN.................... RURAL X....................

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied ______

Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	8,000	5,600	2,400	1,680
2 or More	1	9,600	6,720	2,400	1,680
[✓ 2] or More	[✓ 2] or More	9,600	6,720	3,200	2,240
1	2 or More	8,000	5,600	3,200	2,240
			43,500		15,500

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied ______

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	12,000	8,400	1,200	850
2 or More	1	14,400	10,080	1,200	850
2 or More	2 or More	14,400	10,080	1,600	1,120
1	2 or More	12,000	8,400	1,600	1,120
			43,500		15,500

Combination of CONDITIONS A + B

Satisfied ______ Not Satisfied ______

No one condition satisfied, but following conditions fulfilled 80% or more.......... ______ A ______ B

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ____________
CALC ____________ DATE ____________
CHK ____________ DATE ____________

____ ____ ____ ____
DIST CO RTE PM

#10

Major St: HERITAGE ROAD
Minor St: SR-905 WB RAMPS

Critical Approach Speed ____________ mph
Critical Approach Speed ____________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒
or
In built up area of isolated community of < 10,000 population.................... ☐
} RURAL (R)

☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN............	RURAL X............	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied X	Not Satisfied ______	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1............	1............	8,000	5,600	2,400	1,680
2 or More............	1............	9,600	6,720	2,400	1,680
[✓ 2] or More............	[✓ 2] or More............	9,600	[✓ 6,720]	3,200	[✓ 2,240]
1............	2 or More............	8,000	5,600	3,200	2,240
			39,000		8,200
CONDITION B - Interruption of Continuous Traffic Satisfied X	Not Satisfied ______	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1............	1............	12,000	8,400	1,200	850
2 or More............	1............	14,400	10,080	1,200	850
[✓ 2] or More............	[✓ 2] or More............	14,400	[✓ 10,080]	1,600	[✓ 1,120]
1............	2 or More............	12,000	8,400	1,600	1,120
			39,000		8,200
Combination of CONDITIONS A + B Satisfied ______	Not Satisfied ______	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% or more........ ______ A	______ B				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

#11

COUNT DATE ____

DIST ____ CO ____ RTE ____ PM ____

CALC ____ DATE ____

CHK ____ DATE ____

Major St: HERITAGE ROAD

Minor St: SR-905 EB RAMPS

Critical Approach Speed ____ mph

Critical Approach Speed ____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population.................. ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN................ RURAL X................

Minimum Requirements EADT

CONDITION A - Minimum Vehicular Volume

Satisfied X ____ Not Satisfied ____

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1....................	1....................	8,000	5,600	2,400	1,680
2 or More....................	1....................	9,600	6,720	2,400	1,680
[✓ 2] or More....................	[✓ 2] or More....................	9,600	$\boxed{6,720}$	3,200	$\boxed{2,240}$
1....................	2 or More....................	8,000	5,600	3,200	2,240
			30,500		15,000

CONDITION B - Interruption of Continuous Traffic

Satisfied X ____ Not Satisfied ____

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1....................	1....................	12,000	8,400	1,200	850
2 or More....................	1....................	14,400	10,080	1,200	850
[✓ 2] or More....................	[✓ 2] or More....................	14,400	$\boxed{10,080}$	1,600	$\boxed{1,120}$
1....................	2 or More....................	12,000	8,400	1,600	1,120
			30,500		15,000

Combination of CONDITIONS A + B		
Satisfied ____ Not Satisfied ____	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or more.......... ____ A ____ B		

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ______
CALC ______ DATE ______
CHK ______ DATE ______

______ ______ ______ ______
DIST CO RTE PM

\#
12

Major St: AIRWAY RD (8B W/O LM)
Minor St: HERITAGE RD

Critical Approach Speed ______ mph
Critical Approach Speed ______ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population.................... ☐
} RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN.................. RURAL X..................	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied X______ Not Satisfied ______	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street / Minor Street				
1.................. / 1..................	8,000	5,600	2,400	1,680
2 or More.................. / 1..................	9,600	6,720	2,400	1,680
[✓ 2] or More.................. / [✓ 2] or More..................	9,600	6,720	3,200	2,240
1.................. / 2 or More..................	8,000	5,600	3,200	2,240
		49,250		17,500
CONDITION B - Interruption of Continuous Traffic Satisfied X______ Not Satisfied ______	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street / Minor Street				
1.................. / 1..................	12,000	8,400	1,200	850
2 or More.................. / 1..................	14,400	10,080	1,200	850
[✓ 2] or More.................. / [✓ 2] or More..................	14,400	10,080	1,600	1,120
1.................. / 2 or More..................	12,000	8,400	1,600	1,120
		49,250		17,500
Combination of CONDITIONS A + B Satisfied ______ Not Satisfied ______ No one condition satisfied, but following conditions fulfilled 80% or more.......... ______ A ______ B	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ______
CALC ______ DATE ______
CHK ______ DATE ______

______ DIST ______ CO ______ RTE ______ PM

#15

Major St: AIRWAY RD (3B w/o LA MEDIA) Critical Approach Speed ______ mph
Minor St: CACTUS RD Critical Approach Speed ______ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population.................. ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN.................... RURAL X....................

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied ______

Minimum Requirements EADT

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1....................	1....................	8,000	5,600	2,400	1,680
2 or More....................	1....................	9,600	6,720	2,400	1,680
[✓ 2] or More....................	[✓ 2] or More....................	9,600	6,720	3,200	2,240
1....................	2 or More....................	8,000	5,600	3,200	2,240
			52,500		22,250

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied ______

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1....................	1....................	12,000	8,400	1,200	850
2 or More....................	1....................	14,400	10,080	1,200	850
[✓ 2] or More....................	[✓ 2] or More....................	14,400	10,080	1,600	1,120
1....................	2 or More....................	12,000	8,400	1,600	1,120
			52,500		22,250

Combination of CONDITIONS A + B

Satisfied ______ Not Satisfied ______

No one condition satisfied, but following conditions fulfilled 80% or more.......... ______ A ______ B

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ______
CALC ______ DATE ______
CHK ______ DATE ______

______ DIST ______ CO ______ RTE ______ PM

#16

Major St: CACTUS RD. ______ Critical Approach Speed ______ mph
Minor St: SIEMPRE VIVA RD ______ Critical Approach Speed ______ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population...................... ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN........ RURAL X........		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied X ______ Not Satisfied ______		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1........	1........	8,000	5,600	2,400	1,680
2 or More........	1........	9,600	6,720	2,400	1,680
[✓ 2] or More........	[✓ 2] or More........	9,600	6,720	3,200	2,240
1........	2 or More........	8,000	5,600	3,200	2,240
			25,750		18,500
CONDITION B - Interruption of Continuous Traffic Satisfied X ______ Not Satisfied ______		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1........	1........	12,000	8,400	1,200	850
2 or More........	1........	14,400	10,080	1,200	850
[✓ 2] or More........	[✓ 2] or More........	14,400	10,080	1,600	1,120
1........	2 or More........	12,000	8,400	1,600	1,120
			25,750		18,500
Combination of CONDITIONS A + B Satisfied ______ Not Satisfied ______ No one condition satisfied, but following conditions fulfilled 80% or more........ ______ A ______ B		2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

#25

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE ______
CALC ______ DATE ______
CHK ______ DATE ______

______ DIST ______ CO ______ RTE ______ PM

Major St: LA MEDIA RD.
Minor St: AIRWAY RD.

Critical Approach Speed 40 mph
Critical Approach Speed ______ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population.................. ☐
} **RURAL (R)**
☐ **URBAN (U)**

(Based on Estimated Average Daily Traffic - See Note)

URBAN X .... RURAL		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied X Not Satisfied ______		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	8,000	5,600	2,400	1,680
2 or More	1	9,600	6,720	2,400	1,680
[✓ 2] or More	[✓ 2] or More	9,600	6,720 ✓	3,200	2,240 ✓
1	2 or More	8,000	5,600	3,200	2,240
			48,500		15,500
CONDITION B - Interruption of Continuous Traffic Satisfied X Not Satisfied ______		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	12,000	8,400	1,200	850
2 or More	1	14,400	10,080	1,200	850
[✓ 2] or More	[✓ 2] or More	14,400	10,080 ✓	1,600	1,120 ✓
1	2 or More	12,000	8,400	1,600	1,120
			48,500		15,500
Combination of CONDITIONS A + B Satisfied ______ Not Satisfied ______ No one condition satisfied, but following conditions fulfilled 80% or more.......... ______ A ______ B		2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

#28

COUNT DATE ____________
CALC ____________ DATE ____________
CHK ____________ DATE ____________

____ DIST ____ CO ____ RTE ____ PM

Major St: LONE STAR ROAD
Minor St: SR-125 SB OFF-RAMP

Critical Approach Speed ____________ mph
Critical Approach Speed ____________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .... ☒ or
In built up area of isolated community of < 10,000 population .... ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN .... RURAL X ....

CONDITION A - Minimum Vehicular Volume

Satisfied X ______ Not Satisfied ______

Minimum Requirements EADT

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Vehicles Per Day on Major Street (Total of Both Approaches) Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Rural
1	1	8,000	5,600	2,400	1,680
2 or More	1	9,600	6,720	2,400	1,680
[✓ 2] or More	[✓ 2] or More	9,600	$\boxed{6,720}$	3,200	$\boxed{2,240}$
1	2 or More	8,000	5,600	3,200	2,240
			19,500		9,750

CONDITION B - Interruption of Continuous Traffic

Satisfied X ______ Not Satisfied ______

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Vehicles Per Day on Major Street (Total of Both Approaches) Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Rural
1	1	12,000	8,400	1,200	850
2 or More	1	14,400	10,080	1,200	850
[✓ 2] or More	[✓ 2] or More	14,400	$\boxed{10,080}$	1,600	$\boxed{1,120}$
1	2 or More	12,000	8,400	1,600	1,120
			19,500		9,750

Combination of CONDITIONS A + B

Satisfied ______ Not Satisfied ______

No one condition satisfied, but following conditions fulfilled 80% or more .... ______ A ______ B

2 CONDITIONS 80% | 2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

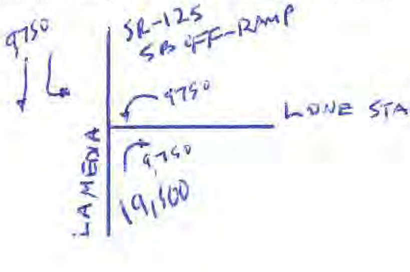


Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ____
CALC ____ DATE ____
CHK ____ DATE ____

____ DIST ____ CO ____ RTE ____ PM

#29

Major St: LONE STAR ROAD
Minor St: SR-125 NB ON-RAMP

Critical Approach Speed ____ mph
Critical Approach Speed ____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ...... ☒ or
In built up area of isolated community of < 10,000 population .... ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN .... RURAL X ....

	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied X ____ Not Satisfied ____	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	

Number of lanes for moving traffic on each approach Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	8,000	5,600	2,400	1,680
2 or More	1	9,600	6,720	2,400	1,680
② or More	② or More	9,600	$\boxed{6,720}$	3,200	$\boxed{2,240}$
1	2 or More	8,000	5,600	3,200	2,240
			27,600		8500

CONDITION B - Interruption of Continuous Traffic Satisfied X ____ Not Satisfied ____	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	

Number of lanes for moving traffic on each approach Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	12,000	8,400	1,200	850
2 or More	1	14,400	10,080	1,200	850
② or More	② or More	14,400	$\boxed{10,080}$	1,600	$\boxed{1,120}$
1	2 or More	12,000	8,400	1,600	1,120
			27,600		8,500

Combination of CONDITIONS A + B Satisfied ____ Not Satisfied ____ No one condition satisfied, but following conditions fulfilled 80% or more .... ____ A ____ B	2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ____________
CALC ____________ DATE ____________
CHK ____________ DATE ____________

____ DIST ____ CO ____ RTE ____ PM

#30

Major St: LONE STAR RD. (3BW/O LM) Critical Approach Speed ____________ mph
Minor St: PIPER RANCH RD. Critical Approach Speed ____________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population........ ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN.................. RURAL X..................

Minimum Requirements
EADT

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied ____________

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1..................	1..................	8,000	5,600	2,400	1,680
[✓ 2] or More..................	1..................	9,600	6,720	2,400	1,680
[✓ 2] or More..................	[✓ 2] or More..................	9,600	6,720	3,200	2,240
1..................	2 or More..................	8,000	5,600	3,200	2,240
			35,500		3,000

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied ____________

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1..................	1..................	12,000	8,400	1,200	850
2 or More..................	1..................	14,400	10,080	1,200	850
[✓ 2] or More..................	[✓ 2] or More..................	14,400	10,080	1,600	1,120
1..................	2 or More..................	12,000	8,400	1,600	1,120
			35,500		3,000

Combination of CONDITIONS A + B

Satisfied ____________ Not Satisfied ____________

No one condition satisfied, but following conditions fulfilled 80% or more.......... ______ A ______ B

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ______________
CALC ____________ DATE ____________
CHK ____________ DATE ____________

______ ______ ______ ______
DIST CO RTE PM

#34,

Major St: OTAY MESA ROAD
Minor St: HARVEST ROAD

Critical Approach Speed ____________ mph
Critical Approach Speed ____________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population.................. ☐ } RURAL (R)

☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN.................... RURAL X		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied X ______ Not Satisfied ______		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1....................	1....................	8,000	5,600	2,400	1,680
2 or More....................	1....................	9,600	6,720	2,400	1,680
[✓ 2] or More....................	[✓ 2] or More....................	9,600	$\boxed{6,720}$	3,200	$\boxed{2,240}$
1....................	2 or More....................	8,000	5,600	3,200	2,240
			34,000		4,250
CONDITION B - Interruption of Continuous Traffic Satisfied X ______ Not Satisfied ______		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1....................	1....................	12,000	8,400	1,200	850
2 or More....................	1....................	14,400	10,080	1,200	850
[✓ 2] or More....................	[✓ 2] or More....................	14,400	$\boxed{10,080}$	1,600	$\boxed{1,120}$
1....................	2 or More....................	12,000	8,400	1,600	1,120
			34,000		4,250
Combination of CONDITIONS A + B Satisfied ______ Not Satisfied ______ No one condition satisfied, but following conditions fulfilled 80% or more.......... ______ A ______ B		2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE ____________
CALC ________ DATE ________
CHK ________ DATE ________

____ DIST ____ CO ____ RTE ____ PM

36-A

Major St: SIEMPRE VIVA ROAD Critical Approach Speed ________ mph
Minor St: SR-905 - SB TO WB OFF-RAMP Critical Approach Speed ________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒
or
In built up area of isolated community of < 10,000 population.................. ☐ } RURAL (R)

☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN.......... RURAL X..........		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied ________ Not Satisfied ________		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	8,000	5,600	2,400	1,680
2 or More	1	9,600	6,720	2,400	1,680
② or More	② or More	9,600	$\boxed{6,720}$	3,200	$\boxed{2,240}$
1	2 or More	8,000	5,600	3,200	2,240
			26,300		15,300
CONDITION B - Interruption of Continuous Traffic Satisfied ________ Not Satisfied ________		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	12,000	8,400	1,200	850
2 or More	1	14,400	10,080	1,200	850
② or More	② or More	14,400	$\boxed{10,080}$	1,600	$\boxed{1,120}$
1	2 or More	12,000	8,400	1,600	1,120
			26,300		15,300
Combination of CONDITIONS A + B Satisfied ________ Not Satisfied ________ No one condition satisfied, but following conditions fulfilled 80% or more.......... ________ A ________ B		2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ____________
CALC ____________ DATE ____________
CHK ____________ DATE ____________

____ ____ ____ ____
DIST CO RTE PM

#44

Major St: OTAY MESA RD. (3B W/O) Critical Approach Speed ________ mph
Minor St: INNOVATIVE DR. Critical Approach Speed ________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population.................... ☐
} RURAL (R)

☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN.................... RURAL X....................

CONDITION A - Minimum Vehicular Volume

Satisfied X ________ Not Satisfied ________

		Minimum Requirements EADT			
		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1....................	1....................	8,000	5,600	2,400	1,680
2 or More....................	1....................	9,600	6,720	2,400	1,680
[✓ 2 or More]....................	[✓ 2 or More]....................	9,600	[✓ 6,720]	3,200	[✓ 2,240]
1....................	2 or More....................	8,000	5,600	3,200	2,240
			49,000		7,500

CONDITION B - Interruption of Continuous Traffic

Satisfied X ________ Not Satisfied ________

		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1....................	1....................	12,000	8,400	1,200	850
2 or More....................	1....................	14,400	10,080	1,200	850
[✓ 2 or More]....................	[✓ 2 or More]....................	14,400	[✓ 10,080]	1,600	[✓ 1,120]
1....................	2 or More....................	12,000	8,400	1,600	1,120
			49,000		7,500

Combination of CONDITIONS A + B

Satisfied ________ Not Satisfied ________

No one condition satisfied, but following conditions fulfilled 80% or more.......... ________ A ________ B

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ____________
CALC ________ DATE ________
CHK ________ DATE ________

___ DIST ___ CO ___ RTE ___ PM

#45

Major St: AIRWAY RD (3B w/o L.M.) Critical Approach Speed ________ mph
Minor St: HARVEST RD Critical Approach Speed ________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population........ ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN........ RURAL X........		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied X Not Satisfied ______		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1........	1........	8,000	5,600	2,400	1,680
2 or More........	1........	9,600	6,720	2,400	1,680
② or More........	② or More........	9,600	$\boxed{6,720}$	3,200	$\boxed{2,240}$
1........	2 or More........	8,000	5,600	3,200	2,240
			23,500		8,000
CONDITION B - Interruption of Continuous Traffic Satisfied X Not Satisfied ______		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1........	1........	12,000	8,400	1,200	850
2 or More........	1........	14,400	10,080	1,200	850
② or More........	② or More........	14,400	$\boxed{10,080}$	1,600	$\boxed{1,120}$
1........	2 or More........	12,000	8,400	1,600	1,120
			23,500		8,000
Combination of CONDITIONS A + B Satisfied ______ Not Satisfied ______		2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% or more........ ______ A ______ B					

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

#48.

COUNT DATE ____
CALC ____ DATE ____
CHK ____ DATE ____

DIST ____ CO ____ RTE ____ PM ____

Major St: AIRWAY ROAD
Minor St: SANYO AVENUE

Critical Approach Speed ____ mph
Critical Approach Speed ____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ☒ or
In built up area of isolated community of < 10,000 population ☐
} RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN ____ RURAL X

Minimum Requirements EADT

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied ____

Number of lanes for moving traffic on each approach

		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	8,000	5,600	2,400	1,680
2 or More	1	9,600	6,720	2,400	1,680
[✓ 2] or More	[✓ 2] or More	9,600	[✓ 6,720]	3,200	[✓ 2,240]
1	2 or More	8,000	5,600	3,200	2,240
			18,250		12,250

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied ____

Number of lanes for moving traffic on each approach

		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	12,000	8,400	1,200	850
2 or More	1	14,400	10,080	1,200	850
[✓ 2] or More	[✓ 2] or More	14,400	[✓ 10,080]	1,600	[✓ 1,120]
1	2 or More	12,000	8,400	1,600	1,120
			18,250		12,250

Combination of CONDITIONS A + B

Satisfied ____ Not Satisfied ____

2 CONDITIONS 80%

2 CONDITIONS 80%

No one condition satisfied, but following conditions fulfilled 80% or more ____ A ____ B

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

#49.

COUNT DATE ____________
CALC ____________ DATE ____________
CHK ____________ DATE ____________

____ DIST ____ CO ____ RTE ____ PM

Major St: PASEO DE LAS AMERICAS
Critical Approach Speed ____________ mph
Minor St: HEINRICH HERTZ DR.
Critical Approach Speed ____________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population.................. ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN .... RURAL X	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied X ______ Not Satisfied ______	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach Major Street / Minor Street	Urban	Rural	Urban	Rural
1 .... / 1	8,000	5,600	2,400	1,680
[✓ 2] or More .... / [✓ 1]	9,600	$\boxed{6{,}720}$	2,400	$\boxed{1{,}680}$
2 or More .... / 2 or More	9,600	6,720	3,200	2,240
1 .... / 2 or More	8,000	5,600	3,200	2,240
		9,250		5,500
CONDITION B - Interruption of Continuous Traffic Satisfied ______ Not Satisfied X (92%)	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach Major Street / Minor Street	Urban	Rural	Urban	Rural
1 .... / 1	12,000	8,400	1,200	850
[✓ 2] or More .... / [✓ 1]	14,400	$\boxed{10{,}080}$	1,200	$\boxed{850}$
2 or More .... / 2 or More	14,400	10,080	1,600	1,120
1 .... / 2 or More	12,000	8,400	1,600	1,120
		9,250		5,500
Combination of CONDITIONS A + B Satisfied X ______ Not Satisfied ______ No one condition satisfied, but following conditions fulfilled 80% or more.......... ______ A 95% B	2 CONDITIONS 80% $\frac{9{,}250}{10{,}080} = 92\%$		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ________
CALC ________ DATE ________
CHK ________ DATE ________

____ ____ ____ ____
DIST CO RTE PM

#50. Major St: PASEO DE LAS AMERICAS
Minor St: MARCONI DRIVE

Critical Approach Speed ________ mph
Critical Approach Speed ________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒
or
In built up area of isolated community of < 10,000 population.................. ☐
} RURAL (R)

☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN.................. RURAL X..................		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied ________ Not Satisfied ________		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1..................	1..................	8,000	5,600	2,400	1,680
[✓ 2] or More..................	[✓ 1]..................	9,600	[✓ 6,720]	2,400	[✓ 1,680]
2 or More..................	2 or More..................	9,600	6,720	3,200	2,240
1..................	2 or More..................	8,000	5,600	3,200	2,240
			8,000		4,000
CONDITION B - Interruption of Continuous Traffic Satisfied ________ Not Satisfied X (79%)		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1..................	1..................	12,000	8,400	1,200	850
[✓ 2] or More..................	[✓ 1]..................	14,400	[✓ 10,080]	1,200	[✓ 850]
2 or More..................	2 or More..................	14,400	10,080	1,600	1,120
1..................	2 or More..................	12,000	8,400	1,600	1,120
			8,000		4,000
Combination of CONDITIONS A + B Satisfied X Not Satisfied ________ No one condition satisfied, but following conditions fulfilled 80% or more.......... ________ A 0.79 B		2 CONDITIONS 80% $\frac{8000}{10080} = 0.79$		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ____________
CALC ____________ DATE ____________
CHK ____________ DATE ____________

____ ____ ____ ____
DIST CO RTE PM

#51

Major St: HERITAGE RD (3B w/o L.M.) Critical Approach Speed ____________ mph
Minor St: DATSUN ST. Critical Approach Speed ____________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population...................... ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN.................... RURAL X....................

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied ____________

Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1....................	1....................	8,000	5,600	2,400	1,680
2 or More....................	1....................	9,600	6,720	2,400	1,680
[✓ 2] or More....................	[✓ 2] or More....................	9,600	6,720	3,200	2,240
1....................	2 or More....................	8,000	5,600	3,200	2,240
			61,750		15,000

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied ____________

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1....................	1....................	12,000	8,400	1,200	850
2 or More....................	1....................	14,400	10,080	1,200	850
[✓ 2] or More....................	[✓ 2] or More....................	14,400	10,080	1,600	1,120
1....................	2 or More....................	12,000	8,400	1,600	1,120
			61,750		15,000

Combination of CONDITIONS A + B

Satisfied ____________ Not Satisfied ____________

No one condition satisfied, but following conditions fulfilled 80% or more.......... ____ A ____ B

Combination of CONDITIONS A + B	2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE ____________
CALC ________ DATE ________
CHK ________ DATE ________

____ DIST ____ CO ____ RTE ____ PM

#52

Major St: LA MEDIA RD (3B W/O L.M.) Critical Approach Speed ________ mph
Minor St: AVIATOR WAY Critical Approach Speed ________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)....... ☒ or
In built up area of isolated community of < 10,000 population.................... ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN.................... RURAL X..................

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied ________

Minimum Requirements EADT

Number of lanes for moving traffic on each approach: Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches): Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only): Urban	Rural
1	1	8,000	5,600	2,400	1,680
2 or More	1	9,600	6,720	2,400	1,680
[✓ 2] or More	[✓ 2] or More	9,600	$\boxed{6,720}$	3,200	$\boxed{2,240}$
1	2 or More	8,000	5,600	3,200	2,240
			21,000		8,000

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied ________

Number of lanes for moving traffic on each approach: Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches): Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only): Urban	Rural
1	1	12,000	8,400	1,200	850
2 or More	1	14,400	10,080	1,200	850
[✓ 2] or More	[✓ 2] or More	14,400	$\boxed{10,080}$	1,600	$\boxed{1,120}$
1	2 or More	12,000	8,400	1,600	1,120
			21,000		8,000

Combination of CONDITIONS A + B

Satisfied ________ Not Satisfied ________

No one condition satisfied, but following conditions fulfilled 80% or more.......... ____ A ____ B

2 CONDITIONS 80% | 2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ________
CALC ________ DATE ________
CHK ________ DATE ________

____ DIST ____ CO ____ RTE ____ PM

#53 Major St: OTAY VALLEY ROAD
Minor St: AVENIDA DE LAS VISTAS

Critical Approach Speed ________ mph
Critical Approach Speed ________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population.................. ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN.................. RURAL X..................

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied ________

Minimum Requirements EADT

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1..................	1..................	8,000	5,600	2,400	1,680
[✓ 2] or More..................	[✓ 1]..................	9,600	6,720	2,400	1,680
2 or More..................	2 or More..................	9,600	6,720	3,200	2,240
1..................	2 or More..................	8,000	5,600	3,200	2,240
			79,250		3,500

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied ________

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1..................	1..................	12,000	8,400	1,200	850
[✓ 2] or More..................	[✓ 1]..................	14,400	10,080	1,200	850
2 or More..................	2 or More..................	14,400	10,080	1,600	1,120
1..................	2 or More..................	12,000	8,400	1,600	1,120
			79,250		3,500

Combination of CONDITIONS A + B

Satisfied ________ Not Satisfied ________

No one condition satisfied, but following conditions fulfilled 80% or more.......... ____ A ____ B

2 CONDITIONS 80%

2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

1-A

NO MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 SB RAMPS
Agency or Co.	SAN DIEGO	Area Type	All other areas
Date Performed	12/16/10	Jurisdiction	SAN DIEGO
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 /ALT.3B NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	1	1	1
Lane group		T	R	L	T					L	LTR	R
Volume (vph)		890	175	280	355					1095	1	570
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0				10			10	5	150
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	WB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 45.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		937	184	295	374					692	572	332
Lane group cap.		887	405	859	2022					664	647	572
v/c ratio		1.06	0.45	0.34	0.18					1.04	0.88	0.58
Green ratio		0.25	0.25	0.25	0.54					0.38	0.38	0.38
Unif. delay d1		45.0	38.1	36.9	14.0					37.5	35.1	30.0
Delay factor k		0.50	0.11	0.11	0.11					0.50	0.41	0.17
Increm. delay d2		46.2	0.8	0.2	0.0					46.4	13.8	1.5
PF factor		0.778	0.778	0.778	0.212					0.600	0.600	0.600
Control delay		81.2	30.4	29.0	3.0					68.9	34.8	19.5
Lane group LOS		F	C	C	A					E	C	B
Apprch. delay	72.9			14.5						46.4		
Approach LOS	E			B						D		
Intersec. delay	48.9			Intersection LOS						D		

1-A
NO
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3-B NO LA MEDIA AM PEAK HOUR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*T*	*R*	*L*	*T*					*L*	*LTR*	*R*
Init. queue/lane		*0.0*	*0.0*	*0.0*	*0.0*					*0.0*	*0.0*	*0.0*
Flow rate/lane		*937*	*184*	*295*	*374*					*692*	*572*	*332*
Satflow per lane		*1862*	*1620*	*1770*	*1960*					*1770*	*1726*	*1524*
Capacity/lane		*887*	*405*	*859*	*2022*					*664*	*647*	*572*
Flow ratio		*0.26*	*0.11*	*0.09*	*0.10*					*0.39*	0.33	*0.22*
v/c ratio		*1.06*	*0.45*	*0.34*	*0.18*					*1.04*	*0.88*	*0.58*
I factor		*1.000*	*1.000*	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*
Arrival type		*5*	*5*	*5*	*5*					*5*	*5*	*5*
Platoon ratio		*1.67*	*1.67*	*1.67*	*1.67*					*1.67*	*1.67*	*1.67*
PF factor		*1.00*	*0.85*	*0.83*	*0.23*					*1.00*	*0.90*	*0.74*
Q_1		*16.4*	*4.4*	*3.4*	*0.8*					*23.1*	*16.0*	*6.5*
k_B		*0.5*	*0.5*	*0.5*	*0.8*					*0.6*	*0.6*	*0.6*
Q_2		*7.6*	*0.4*	*0.3*	*0.2*					*9.4*	*3.5*	*0.8*
Q avg.		*24.0*	*4.8*	*3.7*	*1.0*					*32.5*	*19.5*	*7.3*

Percentile Back of Queue (95th percentile)

$f_{B\%}$		*1.7*	*2.0*	*2.0*	*2.1*					*1.6*	*1.7*	*1.9*
BOQ, $Q_{\%}$		*39.8*	*9.4*	*7.3*	*2.0*					*51.9*	*33.2*	*13.9*

Queue Storage Ratio

Q spacing		*24.9*	*24.9*	*24.9*	*24.9*					*24.9*	*24.9*	*24.9*
Q storage		*0*	*0*	*0*	*0*					*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	PALM AV./I-805 SB RAMPS
Agency or Co.	SAN DIEGO	Area Type	All other areas
Date Performed	03/06/12	Jurisdiction	SAN DIEGO/WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 /ALT.3B NO LA MEDIA/

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	2	1	1
Lane group		T	R	L	T					L	TR	R
Volume (vph)		890	175	280	355					1095	1	570
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0				10			10	5	0
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	WB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 20.0	G = 35.0	G =	G =	G = 50.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		937	184	295	374					1153	301	300
Lane group cap.		1035	474	573	1867					1432	636	636
v/c ratio		0.91	0.39	0.51	0.20					0.81	0.47	0.47
Green ratio		0.29	0.29	0.17	0.50					0.42	0.42	0.42
Unif. delay d1		40.9	33.9	45.6	16.7					30.7	25.4	25.4
Delay factor k		0.43	0.11	0.12	0.11					0.35	0.11	0.11
Increm. delay d2		11.2	0.5	0.8	0.1					3.5	0.6	0.6
PF factor		0.725	0.725	0.867	0.333					0.524	0.524	0.524
Control delay		40.9	25.2	40.3	5.6					19.6	13.9	13.9
Lane group LOS		D	C	D	A					B	B	B
Apprch. delay	38.3			20.9						17.6		
Approach LOS	D			C						B		
Intersec. delay	24.8			Intersection LOS						C		

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MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3-B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*T*	*R*	*L*	*T*					*L*	*TR*	*R*
Init. queue/lane		*0.0*	*0.0*	*0.0*	*0.0*					*0.0*	*0.0*	*0.0*
Flow rate/lane		*937*	*184*	*295*	*374*					*1153*	*301*	*300*
Satflow per lane		*1862*	*1624*	*1770*	*1960*					*1770*	*1527*	*1526*
Capacity/lane		*1035*	*474*	*573*	*1867*					*1432*	*636*	*636*
Flow ratio		*0.26*	*0.11*	*0.09*	*0.10*					*0.34*	0.20	*0.20*
v/c ratio		*0.91*	*0.39*	*0.51*	*0.20*					*0.81*	*0.47*	*0.47*
I factor		*1.000*	*1.000*	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*
Arrival type		*5*	*5*	*5*	*5*					*5*	*5*	*5*
Platoon ratio		*1.67*	*1.67*	*1.67*	*1.67*					*1.67*	*1.67*	*1.67*
PF factor		*0.95*	*0.79*	*0.92*	*0.36*					*0.79*	*0.63*	*0.63*
Q_1		*15.1*	*3.9*	*4.2*	*1.3*					*13.7*	*4.6*	*4.5*
k_B		*0.6*	*0.5*	*0.4*	*0.8*					*0.7*	*0.6*	*0.6*
Q_2		*3.5*	*0.3*	*0.4*	*0.2*					*2.5*	*0.6*	*0.6*
Q avg.		*18.6*	*4.2*	*4.6*	*1.5*					*16.2*	*5.1*	*5.1*

Percentile Back of Queue (95th percentile)

$f_{B\%}$		*1.7*	*2.0*	*2.0*	*2.1*					*1.7*	*2.0*	*2.0*
BOQ, $Q_{\%}$		*31.9*	*8.3*	*9.1*	*3.1*					*28.2*	*10.0*	*9.9*

Queue Storage Ratio

Q spacing		*24.9*	*24.9*	*24.9*	*24.9*					*24.9*	*24.9*	*24.9*
Q storage		*0*	*0*	*0*	*0*					*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

1-P
NO
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 SB RAMPS
Agency or Co.	SAN DIEGO	Area Type	All other areas
Date Performed	12/16/10	Jurisdiction	NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 /ALT.3B NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	1	1	1
Lane group		T	R	L	T					L	LTR	R
Volume (vph)		900	145	500	615					1400	1	770
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0				10			10	5	150
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	WB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 25.0	G = 35.0	G =	G =	G = 60.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 135.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		947	153	526	647					825	813	490
Lane group cap.		920	420	636	1797					787	767	679
v/c ratio		1.03	0.36	0.83	0.36					1.05	1.06	0.72
Green ratio		0.26	0.26	0.19	0.48					0.44	0.44	0.44
Unif. delay d1		50.0	40.9	52.9	22.0					37.5	37.5	30.7
Delay factor k		0.50	0.11	0.37	0.11					0.50	0.50	0.28
Increm. delay d2		37.4	0.5	8.9	0.1					45.5	49.6	3.8
PF factor		0.767	0.767	0.848	0.381					0.467	0.467	0.467
Control delay		75.8	31.9	53.8	8.5					63.0	67.1	18.1
Lane group LOS		E	C	D	A					E	E	B
Apprch. delay	69.7			28.8						54.2		
Approach LOS	E			C						D		
Intersec. delay	51.3			Intersection LOS						D		

1-P

NO MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3-B NO LA MEDIA PM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*T*	*R*	*L*	*T*					*L*	*LTR*	*R*
Init. queue/lane		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Flow rate/lane		947	153	526	647					825	813	490
Satflow per lane		1862	1621	1770	1960					1770	1725	1528
Capacity/lane		920	420	636	1797					787	767	679
Flow ratio		0.27	0.09	0.15	0.17					0.47	0.47	0.32
v/c ratio		1.03	0.36	0.83	0.36					1.05	1.06	0.72
I factor		1.000	1.000	1.000	1.000					1.000	1.000	1.000
Arrival type		5	5	5	5					5	5	5
Platoon ratio		1.67	1.67	1.67	1.67					1.67	1.67	1.67
PF factor		1.00	0.82	0.96	0.44					1.00	1.00	0.68
Q_1		18.6	3.9	9.4	3.5					30.9	30.5	10.2
k_B		0.6	0.5	0.5	0.8					0.8	0.8	0.7
Q_2		6.9	0.3	1.7	0.5					11.6	12.1	1.7
Q avg.		25.5	4.2	11.1	4.0					42.5	42.6	11.9

Percentile Back of Queue (95th percentile)

	EB			WB			NB			SB		
$f_{B\%}$		1.6	2.0	1.8	2.0					1.6	1.6	1.8
BOQ, $Q_{\%}$		42.0	8.2	20.3	7.9					66.1	66.2	21.6

Queue Storage Ratio

	EB			WB			NB			SB		
Q spacing		24.9	24.9	24.9	24.9					24.9	24.9	24.9
Q storage		0	0	0	0					0	0	0
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 SB RAMPS
Agency or Co.	SAN DIEGO	Area Type	All other areas
Date Performed	03/06/12	Jurisdiction	WITH MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 /ALT.3B NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	2	1	1
Lane group		T	R	L	T					L	TR	R
Volume (vph)		900	145	500	615					1400	1	770
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0				10			10	5	0
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	WB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 20.0	G = 40.0	G =	G =	G = 60.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 135.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		947	153	526	647					1474	406	406
Lane group cap.		1051	481	509	1797					1528	680	679
v/c ratio		0.90	0.32	1.03	0.36					0.96	0.60	0.60
Green ratio		0.30	0.30	0.15	0.48					0.44	0.44	0.44
Unif. delay d1		45.6	36.9	57.5	22.0					36.5	28.4	28.4
Delay factor k		0.42	0.11	0.50	0.11					0.47	0.19	0.19
Increm. delay d2		10.6	0.4	48.8	0.1					15.4	1.4	1.5
PF factor		0.719	0.719	0.884	0.381					0.467	0.467	0.467
Control delay		43.4	26.9	99.6	8.5					32.4	14.7	14.7
Lane group LOS		D	C	F	A					C	B	B
Apprch. delay	41.1			49.3						26.1		
Approach LOS	D			D						C		
Intersec. delay	35.7			Intersection LOS						D		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3-B NO LA MEDIA PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*T*	*R*	*L*	*T*					*L*	*TR*	*R*
Init. queue/lane		*0.0*	*0.0*	*0.0*	*0.0*					*0.0*	*0.0*	*0.0*
Flow rate/lane		*947*	*153*	*500*	*647*					*1474*	*406*	*406*
Satflow per lane		*1862*	*1624*	*1770*	*1960*					*1770*	*1529*	*1528*
Capacity/lane		*1043*	*478*	*531*	*1812*					*1516*	*675*	*674*
Flow ratio		*0.27*	*0.09*	*0.15*	*0.17*					*0.43*	0.27	*0.27*
v/c ratio		*0.91*	*0.32*	*0.94*	*0.36*					*0.97*	*0.60*	*0.60*
I factor		*1.000*	*1.000*	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*
Arrival type		*5*	*5*	*5*	*5*					*5*	*5*	*5*
Platoon ratio		*1.67*	*1.67*	*1.67*	*1.67*					*1.67*	*1.67*	*1.67*
PF factor		*0.95*	*0.78*	*0.99*	*0.43*					*0.95*	*0.62*	*0.62*
Q_1		*17.2*	*3.5*	*9.5*	*3.4*					*26.6*	*7.3*	*7.3*
k_B		*0.6*	*0.6*	*0.4*	*0.9*					*0.8*	*0.7*	*0.7*
Q_2		*3.8*	*0.3*	*2.7*	*0.5*					*7.3*	*1.0*	*1.0*
Q avg.		*21.1*	*3.8*	*12.3*	*3.9*					*33.9*	*8.3*	*8.3*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		*1.7*	*2.0*	*1.8*	*2.0*					*1.6*	*1.9*	*1.9*
BOQ, $Q_\%$		*35.5*	*7.5*	*22.1*	*7.8*					*54.0*	*15.6*	*15.6*
Queue Storage Ratio												
Q spacing		*24.9*	*24.9*	*24.9*	*24.9*					*24.9*	*24.9*	*24.9*
Q storage		*0*	*0*	*0*	*0*					*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

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NO
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 NB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/08/10	Jurisdiction	SAN DIEGO
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030/ 3B NO LM/NO MI

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	0	2	1	0	1	1	0	0	0
Lane group	L	T			T	R		LTR	R			
Volume (vph)	655	1330			575	1280	60	1	385			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				10	5	200	10	5	0	10		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 25.0	G = 50.0	G =	G =	G = 31.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	689	1400			605	1137		185	284			
Lane group cap.	716	2458			1555	645		414	390			
v/c ratio	0.96	0.57			0.39	1.76		0.45	0.73			
Green ratio	0.21	0.66			0.42	0.42		0.26	0.26			
Unif. delay d1	47.0	11.2			24.4	35.0		37.3	40.7			
Delay factor k	0.47	0.16			0.11	0.50		0.11	0.29			
Increm. delay d2	24.6	0.3			0.2	349.6		0.8	6.8			
PF factor	0.825	0.146			0.524	0.790		0.768	0.768			
Control delay	63.4	2.0			12.9	377.2		29.4	38.0			
Lane group LOS	E	A			B	F		C	D			
Apprch. delay	22.2			250.7			34.6					
Approach LOS	C			F			C					
Intersec. delay	116.1			Intersection LOS						F		

2-A
NO
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA AM PEAK HOUR/NO MIT/#2*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*			*T*	*R*		*LTR*	*R*			
Init. queue/lane	*0.0*	*0.0*			*0.0*	*0.0*		*0.0*	*0.0*			
Flow rate/lane	*689*	*1400*			*605*	*1137*		*185*	*284*			
Satflow per lane	*1770*	*1960*			*1960*	*1549*		*1602*	*1511*			
Capacity/lane	*716*	*2458*			*1555*	*645*		*414*	*390*			
Flow ratio	*0.20*	*0.38*			*0.16*	*0.73*		*0.12*	*0.19*			
v/c ratio	*0.96*	*0.57*			*0.39*	*1.76*		*0.45*	*0.73*			
I factor	*1.000*	*1.000*			*1.000*	*1.000*		*1.000*	*1.000*			
Arrival type	*5*	*5*			*5*	*5*		*5*	*5*			
Platoon ratio	*1.67*	*1.44*			*1.67*	*1.29*		*1.67*	*1.67*			
PF factor	*0.99*	*0.20*			*0.60*	*1.00*		*0.84*	*0.91*			
Q_1	*11.6*	*2.7*			*4.4*	*37.9*		*4.3*	*7.9*			
k_B	*0.5*	*1.0*			*0.7*	*0.6*		*0.5*	*0.5*			
Q_2	*3.7*	*1.2*			*0.5*	*62.9*		*0.4*	*1.1*			
Q avg.	*15.2*	*3.9*			*4.9*	*100.8*		*4.7*	*9.0*			

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.8*	*2.0*			*2.0*	*1.5*		*2.0*	*1.9*			
BOQ, $Q_{\%}$	*26.8*	*7.8*			*9.6*	*151*		*9.3*	*16.8*			

Queue Storage Ratio

Q spacing	*24.9*	*24.9*			*24.9*	*24.9*		*24.9*	*24.9*			
Q storage	*0*	*0*			*0*	*0*		*0*	*0*			
Avg. R_Q												
95% $R_{Q\%}$												

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Version 4.1f

2-A
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 NB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/06/12	Jurisdiction	WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR YEAR 2030/ ALT. 3B-NO LA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	3	1	0	3	2	1	1	1	0	0	0
Lane group		T	R		T	R	L	LTR	R			
Volume (vph)		1330	655		575	1280	60	1	385			
% Heavy veh		2	0		2	2	2	2	2			
PHF		0.95	0.95		0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)		A	A		A	A	A	A	A			
Startup lost time		2.0	2.0		2.0	2.0	2.0	2.0	2.0			
Ext. eff. green		2.0	2.0		2.0	2.0	2.0	2.0	2.0			
Arrival type		5	5		5	5	5	5	5			
Unit Extension		3.0	3.0		3.0	3.0	3.0	3.0	3.0			
Ped/Bike/RTOR Volume	0	0	0	10		200	10	5	0	10		
Lane Width		12.0	12.0		12.0	12.0	12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0	0		0	0	0	0	0			
Unit Extension		3.0	3.0		3.0	3.0	3.0	3.0	3.0			

Phasing	Thru & RT	02	03	04	NB Only	06	07	08
Timing	G = 50.0	G =	G =	G =	G = 31.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1400	689		605	1137	44	141	284			
Lane group cap.		2967	944		2967	1557	610	544	533			
v/c ratio		0.47	0.73		0.20	0.73	0.07	0.26	0.53			
Green ratio		0.56	0.56		0.56	0.56	0.34	0.34	0.34			
Unif. delay d1		12.0	15.0		10.0	15.0	19.8	21.2	23.7			
Delay factor k		0.11	0.29		0.11	0.29	0.11	0.11	0.14			
Increm. delay d2		0.1	2.9		0.0	1.8	0.1	0.3	1.0			
PF factor		0.167	0.167		0.167	0.167	0.650	0.650	0.650			
Control delay		2.1	5.4		1.7	4.3	12.9	14.1	16.4			
Lane group LOS		A	A		A	A	B	B	B			
Apprch. delay	3.2			3.4			15.4					
Approach LOS	A			A			B					
Intersec. delay	4.6			Intersection LOS						A		

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2-A
w
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*T*	*R*		*T*	*R*	*L*	*LTR*	*R*			
Init. queue/lane		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*			
Flow rate/lane		*1400*	*689*		*605*	*1137*	*44*	*141*	*284*			
Satflow per lane		*1960*	*1700*		*1960*	*1584*	*1770*	*1578*	*1546*			
Capacity/lane		*2967*	*944*		*2967*	*1557*	*610*	*544*	*533*			
Flow ratio		*0.26*	*0.41*		*0.11*	*0.41*	*0.02*	*0.09*	*0.18*			
v/c ratio		*0.47*	*0.73*		*0.20*	*0.73*	*0.07*	*0.26*	*0.53*			
I factor		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*			
Arrival type		*5*	*5*		*5*	*5*	*5*	*5*	*5*			
Platoon ratio		*1.67*	*1.67*		*1.67*	*1.67*	*1.67*	*1.67*	*1.67*			
PF factor		*0.22*	*0.31*		*0.18*	*0.31*	*0.66*	*0.70*	*0.76*			
Q_1		*1.7*	*3.9*		*0.5*	*3.7*	*0.5*	*1.8*	*4.4*			
k_B		*0.7*	*0.7*		*0.7*	*0.6*	*0.5*	*0.5*	*0.5*			
Q_2		*0.6*	*1.7*		*0.2*	*1.6*	*0.0*	*0.2*	*0.5*			
Q avg.		*2.3*	*5.6*		*0.7*	*5.3*	*0.5*	*1.9*	*4.9*			
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		*2.0*	*1.9*		*2.1*	*1.9*	*2.1*	*2.0*	*2.0*			
BOQ, $Q_\%$		*4.7*	*10.9*		*1.4*	*10.3*	*1.1*	*3.9*	*9.6*			
Queue Storage Ratio												
Q spacing		*24.9*	*24.9*		*24.9*	*24.9*	*24.9*	*24.9*	*24.9*			
Q storage		*0*	*0*		*0*	*0*	*0*	*0*	*0*			
Avg. R_Q												
95% $R_{Q\%}$												

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Version 4.1f

2P

NO MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAi	Intersection	PALM AV./I-805 NB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/08/10	Jurisdiction	SAN DIEGO
Time Period	PM PEAK HOUR	Analysis Year	YEAR YEAR 2030/ 3B NO LM/NO MI

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	0	2	1	0	1	1	0	0	0
Lane group	L	T			T	R		LTR	R			
Volume (vph)	540	1760			1000	1380	115	1	620			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				10	5	200	10	5	0	10		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 25.0	G = 50.0	G =	G =	G = 31.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	568	1853			1053	1242		448	327			
Lane group cap.	716	2458			1555	645		409	390			
v/c ratio	0.79	0.75			0.68	1.93		1.10	0.84			
Green ratio	0.21	0.66			0.42	0.42		0.26	0.26			
Unif. delay d1	45.0	13.9			28.4	35.0		44.5	42.1			
Delay factor k	0.34	0.31			0.25	0.50		0.50	0.37			
Increm. delay d2	6.1	1.4			1.2	422.2		72.7	14.9			
PF factor	0.825	0.146			0.524	0.868		0.768	0.768			
Control delay	43.3	3.4			16.1	452.6		106.9	47.2			
Lane group LOS	D	A			B	F		F	D			
Apprch. delay	12.8			252.3			81.7					
Approach LOS	B			F			F					
Intersec. delay	122.6			Intersection LOS						F		

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2-P
No
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA PM PEAK HOUR/NO MIT/#2*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*			*T*	*R*		*LTR*	*R*			
Init. queue/lane	0.0	0.0			0.0	0.0		0.0	0.0			
Flow rate/lane	568	1853			1053	1242		448	327			
Satflow per lane	1770	1960			1960	1549		1583	1511			
Capacity/lane	716	2458			1555	645		409	390			
Flow ratio	0.16	0.50			0.28	0.80		0.28	0.22			
v/c ratio	0.79	0.75			0.68	1.93		1.10	0.84			
I factor	1.000	1.000			1.000	1.000		1.000	1.000			
Arrival type	5	5			5	5		5	5			
Platoon ratio	1.67	1.44			1.67	1.18		1.67	1.67			
PF factor	0.95	0.26			0.71	1.00		1.00	0.94			
Q_1	8.8	5.7			10.6	41.4		14.9	9.7			
k_B	0.5	1.0			0.7	0.6		0.5	0.5			
Q_2	1.5	2.7			1.5	75.9		8.2	1.9			
Q avg.	10.3	8.5			12.1	117.3		23.1	11.7			

Percentile Back of Queue (95th percentile)

$f_{B\%}$	1.8	1.9			1.8	1.5		1.7	1.8			
BOQ, $Q_{\%}$	18.9	15.9			21.9	176		38.5	21.1			

Queue Storage Ratio

Q spacing	24.9	24.9			24.9	24.9		24.9	24.9			
Q storage	0	0			0	0		0	0			
Avg. R_Q												
95% $R_{Q\%}$												

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Version 4.1f

2-P
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MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*PALM AV./I-805 NB RAMPS*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/06/12*	Jurisdiction	*WITH MITIGATION*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR YEAR 2030/ ALT. 3B- NO LA*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	3	1	0	3	2	1	1	1	0	0	0
Lane group		T	R		T	R	L	LTR	R			
Volume (vph)		1760	540		1000	1380	115	1	620			
% Heavy veh		2	0		2	2	2	2	2			
PHF		0.95	0.95		0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)		A	A		A	A	A	A	A			
Startup lost time		2.0	2.0		2.0	2.0	2.0	2.0	2.0			
Ext. eff. green		2.0	2.0		2.0	2.0	2.0	2.0	2.0			
Arrival type		5	5		5	5	5	5	5			
Unit Extension		3.0	3.0		3.0	3.0	3.0	3.0	3.0			
Ped/Bike/RTOR Volume	0	0	0	10		200	10	5	0	10		
Lane Width		12.0	12.0		12.0	12.0	12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0	0		0	0	0	0	0			
Unit Extension		3.0	3.0		3.0	3.0	3.0	3.0	3.0			

Phasing	Thru & RT	02	03	04	NB Only	06	07	08
Timing	G = 50.0	G =	G =	G =	G = 31.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1853	568		1053	1242	73	375	327			
Lane group cap.		2967	944		2967	1557	610	543	533			
v/c ratio		0.62	0.60		0.35	0.80	0.12	0.69	0.61			
Green ratio		0.56	0.56		0.56	0.56	0.34	0.34	0.34			
Unif. delay d1		13.6	13.4		11.1	16.0	20.2	25.4	24.5			
Delay factor k		0.21	0.19		0.11	0.34	0.11	0.26	0.20			
Increm. delay d2		0.4	1.1		0.1	3.0	0.1	3.7	2.1			
PF factor		0.167	0.167		0.167	0.167	0.650	0.650	0.650			
Control delay		2.7	3.3		1.9	5.7	13.2	20.2	18.0			
Lane group LOS		A	A		A	A	B	C	B			
Apprch. delay	2.8			4.0			18.6					
Approach LOS	A			A			B					
Intersec. delay	5.5			Intersection LOS						A		

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Z-P
w
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA PM PEAK HOUR/WITH MIT.*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*T*	*R*		*T*	*R*	*L*	*LTR*	*R*			
Init. queue/lane		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*			
Flow rate/lane		*1853*	*568*		*1053*	*1242*	*73*	*375*	*327*			
Satflow per lane		*1960*	*1700*		*1960*	*1584*	*1770*	*1576*	*1546*			
Capacity/lane		*2967*	*944*		*2967*	*1557*	*610*	*543*	*533*			
Flow ratio		*0.35*	*0.33*		*0.20*	*0.44*	*0.04*	*0.24*	*0.21*			
v/c ratio		*0.62*	*0.60*		*0.35*	*0.80*	*0.12*	*0.69*	*0.61*			
I factor		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*			
Arrival type		*5*	*5*		*5*	*5*	*5*	*5*	*5*			
Platoon ratio		*1.67*	*1.67*		*1.67*	*1.67*	*1.67*	*1.67*	*1.67*			
PF factor		*0.26*	*0.25*		*0.20*	*0.35*	*0.67*	*0.82*	*0.79*			
Q_1		*3.0*	*2.4*		*1.1*	*5.0*	*0.8*	*6.6*	*5.4*			
k_B		*0.7*	*0.7*		*0.7*	*0.6*	*0.5*	*0.5*	*0.5*			
Q_2		*1.2*	*1.0*		*0.4*	*2.3*	*0.1*	*1.0*	*0.7*			
Q avg.		*4.2*	*3.4*		*1.5*	*7.2*	*0.9*	*7.6*	*6.1*			
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		*2.0*	*2.0*		*2.1*	*1.9*	*2.1*	*1.9*	*1.9*			
BOQ, $Q_{\%}$		*8.2*	*6.7*		*3.0*	*13.8*	*1.9*	*14.4*	*11.8*			
Queue Storage Ratio												
Q spacing		*24.9*	*24.9*		*24.9*	*24.9*	*24.9*	*24.9*	*24.9*			
Q storage		*0*	*0*		*0*	*0*	*0*	*0*	*0*			
Avg. R_Q												
95% $R_{Q\%}$												

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Version 4.1f

3A

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AVE./DENNERY ROAD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/07/10	Jurisdiction	SAN DIEGO
Time Period	AM PEAK	Analysis Year	YEAR 2030/ALT-3B-NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	3	1	0	2	2	1
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	600	515	450	200	790	60	600	150	110	50	200	500
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	50	10		0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 29.0	G = 35.0	G =	G =	G = 16.0	G = 21.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	632	542	474	211	832	67	632	221		53	211	526
Lane group cap.	831	1558	721	831	1558	450	843	247		601	498	594
v/c ratio	0.76	0.35	0.66	0.25	0.53	0.15	0.75	0.89		0.09	0.42	0.89
Green ratio	0.24	0.29	0.47	0.24	0.29	0.29	0.17	0.13		0.17	0.13	0.38
Unif. delay d1	42.3	33.5	24.6	36.8	35.7	31.5	47.0	51.2		41.5	47.8	35.1
Delay factor k	0.31	0.11	0.23	0.11	0.14	0.11	0.30	0.42		0.11	0.11	0.41
Increm. delay d2	4.1	0.1	2.2	0.2	0.4	0.2	3.8	31.2		0.1	0.6	14.9
PF factor	0.788	0.725	0.417	0.788	0.725	0.725	0.859	0.897		0.859	0.897	0.600
Control delay	37.4	24.4	12.5	29.1	26.2	23.0	44.1	77.1		35.7	43.4	36.0
Lane group LOS	D	C	B	C	C	C	D	E		D	D	D
Apprch. delay	26.0			26.6			52.7			38.0		
Approach LOS	C			C			D			D		
Intersec. delay	33.5			Intersection LOS						C		

3A

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA AM PEAK HOUR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*		*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*
Flow rate/lane	*632*	*542*	*474*	*211*	*832*	*67*	*632*	*221*		*53*	*211*	*526*
Satflow per lane	*1770*	*1960*	*1545*	*1770*	*1960*	*1543*	*1769*	*1854*		*1770*	*1960*	*1583*
Capacity/lane	*831*	*1558*	*721*	*831*	*1558*	*450*	*843*	*247*		*601*	*498*	*594*
Flow ratio	*0.18*	*0.10*	*0.31*	*0.06*	*0.16*	*0.04*	*0.13*	*0.12*		*0.02*	0.06	*0.33*
v/c ratio	*0.76*	*0.35*	*0.66*	*0.25*	*0.53*	*0.15*	*0.75*	*0.89*		*0.09*	*0.42*	*0.89*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*		*5*	*5*	*5*
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*		*1.67*	*1.67*	*1.67*
PF factor	*0.93*	*0.78*	*0.59*	*0.82*	*0.83*	*0.75*	*0.95*	*0.99*		*0.87*	*0.93*	*0.90*
Q_1	*9.3*	*4.1*	*7.2*	*2.4*	*7.1*	*1.2*	*7.0*	*7.2*		*0.7*	*3.1*	*14.7*
k_B	*0.5*	*0.6*	*0.7*	*0.5*	*0.6*	*0.5*	*0.4*	*0.4*		*0.4*	*0.4*	*0.6*
Q_2	*1.4*	*0.3*	*1.2*	*0.2*	*0.7*	*0.1*	*1.1*	*1.9*		*0.0*	*0.3*	*3.3*
Q avg.	*10.7*	*4.4*	*8.4*	*2.6*	*7.7*	*1.3*	*8.1*	*9.1*		*0.7*	*3.4*	*18.1*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.8*	*2.0*	*1.9*	*2.0*	*1.9*	*2.1*	*1.9*	*1.9*		*2.1*	*2.0*	*1.7*
BOQ, $Q_{\%}$	*19.7*	*8.6*	*15.8*	*5.2*	*14.6*	*2.7*	*15.3*	*16.9*		*1.4*	*6.8*	*31.1*
Queue Storage Ratio												
Q spacing												
Q storage												
Avg. R_Q												
95% $R_{Q\%}$												

3P

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	PALM AVE./DENNERY ROAD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/07/10	Jurisdiction	SAN DIEGO
Time Period	PM PEAK	Analysis Year	YEAR 2030/ALT-3B-NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	3	1	0	2	2	1
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	600	630	900	150	490	50	750	150	250	50	190	400
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	75	10		0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 25.0	G = 37.0	G =	G =	G = 25.0	G = 29.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 135.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	632	663	947	158	516	56	789	342		53	200	421
Lane group cap.	636	1464	755	636	1464	422	1035	328		738	691	586
v/c ratio	0.99	0.45	1.25	0.25	0.35	0.13	0.76	1.04		0.07	0.29	0.72
Green ratio	0.19	0.27	0.49	0.19	0.27	0.27	0.21	0.19		0.21	0.19	0.37
Unif. delay d1	54.9	40.6	34.5	47.0	39.4	36.9	49.8	55.0		42.3	47.4	36.5
Delay factor k	0.50	0.11	0.50	0.11	0.11	0.11	0.31	0.50		0.11	0.11	0.28
Increm. delay d2	34.0	0.2	125.2	0.2	0.1	0.1	3.4	61.2		0.0	0.2	4.3
PF factor	0.848	0.748	0.475	0.848	0.748	0.748	0.818	0.848		0.818	0.848	0.608
Control delay	80.6	30.6	141.6	40.1	29.6	27.8	44.1	107.9		34.6	40.4	26.4
Lane group LOS	F	C	F	D	C	C	D	F		C	D	C
Apprch. delay	91.6			31.7			63.4			31.2		
Approach LOS	F			C			E			C		
Intersec. delay	67.2			Intersection LOS						E		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA PM PEAK HOUR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*		*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*
Flow rate/lane	*632*	*663*	*947*	*158*	*516*	*56*	*789*	*342*		*53*	*200*	*421*
Satflow per lane	*1770*	*1960*	*1544*	*1770*	*1960*	*1541*	*1769*	*1770*		*1770*	*1960*	*1583*
Capacity/lane	*636*	*1464*	*755*	*636*	*1464*	*422*	*1035*	*328*		*738*	*691*	*586*
Flow ratio	*0.18*	*0.12*	*0.61*	*0.05*	*0.10*	*0.04*	*0.16*	*0.19*		*0.02*	0.05	*0.27*
v/c ratio	*0.99*	*0.45*	*1.25*	*0.25*	*0.35*	*0.13*	*0.76*	*1.04*		*0.07*	*0.29*	*0.72*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*		*5*	*5*	*5*
Platoon ratio	*1.67*	*1.67*	*1.55*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*		*1.67*	*1.67*	*1.67*
PF factor	*1.00*	*0.83*	*1.00*	*0.88*	*0.81*	*0.77*	*0.94*	*1.00*		*0.83*	*0.88*	*0.80*
Q_1	*12.1*	*6.2*	*35.5*	*2.3*	*4.6*	*1.2*	*9.6*	*12.8*		*0.7*	*3.0*	*10.9*
k_B	*0.5*	*0.6*	*0.7*	*0.5*	*0.6*	*0.5*	*0.5*	*0.5*		*0.5*	*0.5*	*0.6*
Q_2	*4.2*	*0.5*	*27.2*	*0.1*	*0.3*	*0.1*	*1.4*	*5.4*		*0.0*	*0.2*	*1.5*
Q avg.	*16.3*	*6.7*	*62.7*	*2.4*	*4.9*	*1.3*	*11.0*	*18.2*		*0.7*	*3.2*	*12.4*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.7*	*1.9*	*1.5*	*2.0*	*2.0*	*2.1*	*1.8*	*1.7*		*2.1*	*2.0*	*1.8*
BOQ, $Q_{\%}$	*28.4*	*12.9*	*95.3*	*4.9*	*9.6*	*2.7*	*20.0*	*31.2*		*1.5*	*6.4*	*22.3*

Queue Storage Ratio

Q spacing												
Q storage												
Avg. R_Q												
95% $R_{Q\%}$												

4-A
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MIT

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*OTAY MESA RD/OCEAN VIEW HILLS*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*07/06/11*	Jurisdiction	*NO MITIGATION*
Time Period	*YEAR 2030 AM PEAK HOUR*	Analysis Year	*YEAR 2030/ALT. 3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	0	2	3	0
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Volume (vph)	100	1000	600	780	530	465	240	210	1690	850	520	100
% Heavy veh	2	2	2	5	2	2	2	2	5	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	3.0	2.0	2.0	3.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	100	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 26.0	G = 25.0	G =	G = 35.0	G = 26.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	105	1053	526	821	558	489	253	2000		895	652	
Lane group cap.	344	926	664	1031	2030	991	802	757		802	898	
v/c ratio	0.31	1.14	0.79	0.80	0.27	0.49	0.32	2.64		1.12	0.73	
Green ratio	0.10	0.17	0.43	0.30	0.38	0.64	0.23	0.17		0.23	0.17	
Unif. delay d1	62.7	62.0	36.7	48.3	32.2	14.2	47.6	62.0		57.5	58.6	
Delay factor k	0.11	0.50	0.34	0.34	0.11	0.11	0.11	0.50		0.50	0.29	
Increm. delay d2	0.5	75.0	6.5	4.4	0.1	0.4	0.2	742.7		68.6	3.0	
PF factor	0.926	0.860	0.490	0.714	0.591	0.139	0.797	0.860		0.797	0.860	
Control delay	58.5	128.3	24.5	38.9	19.1	2.4	38.2	796.0		114.4	53.4	
Lane group LOS	E	F	C	D	B	A	D	F		F	D	
Apprch. delay	91.5			23.4			710.9			88.7		
Approach LOS	F			C			F			F		
Intersec. delay	263.5			Intersection LOS						F		

HCS2000™

Version 4.1f

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT 3B NO LA MEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*105*	*1053*	*526*	*821*	*558*	*489*	*253*	*2000*		*895*	*652*	
Satflow per lane	*1770*	*1960*	*1532*	*1769*	*1960*	*1549*	*1770*	*1604*		*1770*	*1902*	
Capacity/lane	*344*	*926*	*664*	*1031*	*2030*	*991*	*802*	*757*		*802*	*898*	
Flow ratio	*0.03*	*0.20*	*0.34*	*0.24*	*0.10*	*0.32*	*0.07*	*0.46*		*0.26*	0.13	
v/c ratio	*0.31*	*1.14*	*0.79*	*0.80*	*0.27*	*0.49*	*0.32*	*2.64*		*1.12*	*0.73*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.48*	*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*0.95*	*1.00*	*0.75*	*0.90*	*0.64*	*0.18*	*0.84*	*1.00*		*1.00*	*0.95*	
Q_1	*2.0*	*16.1*	*14.2*	*14.6*	*3.8*	*1.9*	*3.8*	*30.6*		*19.2*	*9.0*	
k_B	*0.3*	*0.5*	*0.7*	*0.6*	*0.8*	*0.9*	*0.6*	*0.4*		*0.6*	*0.5*	
Q_2	*0.1*	*8.6*	*2.4*	*2.2*	*0.3*	*0.9*	*0.3*	*57.8*		*9.4*	*1.2*	
Q avg.	*2.1*	*24.7*	*16.7*	*16.8*	*4.1*	*2.8*	*4.0*	*88.4*		*28.5*	*10.1*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.0*	*1.7*	*1.7*	*1.7*	*2.0*	*2.0*	*2.0*	*1.5*		*1.6*	*1.8*	
BOQ, $Q_{\%}$	*4.3*	*40.8*	*29.0*	*29.1*	*8.0*	*5.7*	*8.0*	*133*		*46.3*	*18.6*	
Queue Storage Ratio												
Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™ Version 4.1f

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*OTAY MESA RD/OCEAN VIEW HILLS*
Agency or Co.	*USAI*		
Date Performed	*07/06/11*	Area Type	*All other areas*
Time Period	*YEAR 2030 AM PEAK HOUR*	Jurisdiction	*WITH MITIGATION*
		Analysis Year	*YEAR 2030/ALT. 3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	1	2	3	0
Lane group	L	T	R	L	T	R	L	T	R	L	TR	
Volume (vph)	100	1000	600	780	530	465	240	210	1690	850	520	100
% Heavy veh	2	2	2	5	2	2	2	2	5	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	3.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	100	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 26.0	G = 25.0	G =	G = 35.0	G = 26.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	105	1053	526	821	558	489	253	221	1779	895	652	
Lane group cap.	344	926	664	1031	2030	991	802	926	755	802	898	
v/c ratio	0.31	1.14	0.79	0.80	0.27	0.49	0.32	0.24	2.36	1.12	0.73	
Green ratio	0.10	0.17	0.43	0.30	0.38	0.64	0.23	0.17	0.51	0.23	0.17	
Unif. delay d1	62.7	62.0	36.7	48.3	32.2	14.2	47.6	53.5	37.0	57.5	58.6	
Delay factor k	0.11	0.50	0.34	0.34	0.11	0.11	0.11	0.11	0.50	0.50	0.29	
Increm. delay d2	0.5	75.0	6.5	4.4	0.1	0.4	0.2	0.1	614.4	68.6	3.0	
PF factor	0.926	0.860	0.490	0.714	0.591	0.139	0.797	0.860	1.000	0.797	0.860	
Control delay	58.5	128.3	24.5	38.9	19.1	2.4	38.2	46.1	651.4	114.4	53.4	
Lane group LOS	E	F	C	D	B	A	D	D	F	F	D	
Apprch. delay	91.5			23.4			523.2			88.7		
Approach LOS	F			C			F			F		
Intersec. delay	205.9			Intersection LOS						F		

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MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT 3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*105*	*1053*	*526*	*821*	*558*	*489*	*253*	*221*	*1779*	*895*	*652*	
Satflow per lane	*1770*	*1960*	*1532*	*1769*	*1960*	*1549*	*1770*	*1960*	*1491*	*1770*	*1902*	
Capacity/lane	*344*	*926*	*664*	*1031*	*2030*	*991*	*802*	*926*	*755*	*802*	*898*	
Flow ratio	*0.03*	*0.20*	*0.34*	*0.24*	*0.10*	*0.32*	*0.07*	*0.04*	*1.19*	*0.26*	0.13	
v/c ratio	*0.31*	*1.14*	*0.79*	*0.80*	*0.27*	*0.49*	*0.32*	*0.24*	*2.36*	*1.12*	*0.73*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.48*	*1.67*	*1.67*	*1.00*	*1.67*	*1.67*	
PF factor	*0.95*	*1.00*	*0.75*	*0.90*	*0.64*	*0.18*	*0.84*	*0.89*	*1.00*	*1.00*	*0.95*	
Q_1	*2.0*	*16.1*	*14.2*	*14.6*	*3.8*	*1.9*	*3.8*	*2.6*	*74.1*	*19.2*	*9.0*	
k_B	*0.3*	*0.5*	*0.7*	*0.6*	*0.8*	*0.9*	*0.6*	*0.5*	*0.8*	*0.6*	*0.5*	
Q_2	*0.1*	*8.6*	*2.4*	*2.2*	*0.3*	*0.9*	*0.3*	*0.2*	*129.4*	*9.4*	*1.2*	
Q avg.	*2.1*	*24.7*	*16.7*	*16.8*	*4.1*	*2.8*	*4.0*	*2.7*	*203.5*	*28.5*	*10.1*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.0*	*1.7*	*1.7*	*1.7*	*2.0*	*2.0*	*2.0*	*2.0*	*1.5*	*1.6*	*1.8*	
BOQ, $Q_{\%}$	*4.3*	*40.8*	*29.0*	*29.1*	*8.0*	*5.7*	*8.0*	*5.5*	*305*	*46.3*	*18.6*	
Queue Storage Ratio												
Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™ Version 4.1f

4-P
N
MIT

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*OTAY MESA RD/OCEAN VIEW HILLS*
Agency or Co.	*USAI*		
Date Performed	*07/06/11*	Area Type	*All other areas*
Time Period	*YEAR 2030 PM PEAK HOUR*	Jurisdiction	*NO MITIGATION*
		Analysis Year	*YEAR 2030/ALT. 3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	0	2	3	0
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Volume (vph)	100	530	240	1450	1000	850	600	520	780	465	210	100
% Heavy veh	2	2	2	5	2	2	2	2	5	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	3.0	2.0	2.0	3.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	100	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 26.0	G = 25.0	G =	G = 35.0	G = 26.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	105	558	147	1526	1053	895	632	1368		489	326	
Lane group cap.	344	926	664	1031	2030	991	802	811		802	871	
v/c ratio	0.31	0.60	0.22	1.48	0.52	0.90	0.79	1.69		0.61	0.37	
Green ratio	0.10	0.17	0.43	0.30	0.38	0.64	0.23	0.17		0.23	0.17	
Unif. delay d1	62.7	57.2	26.6	52.5	35.9	23.0	54.0	62.0		51.4	54.8	
Delay factor k	0.11	0.19	0.11	0.50	0.12	0.42	0.33	0.50		0.20	0.11	
Increm. delay d2	0.5	1.1	0.2	221.3	0.2	11.4	5.3	314.4		1.4	0.3	
PF factor	0.926	0.860	0.490	0.714	0.591	0.139	0.797	0.860		0.797	0.860	
Control delay	58.5	50.3	13.2	258.8	21.5	14.6	48.3	367.8		42.3	47.4	
Lane group LOS	E	D	B	F	C	B	D	F		D	D	
Apprch. delay	44.7			124.0			266.8			44.4		
Approach LOS	D			F			F			D		
Intersec. delay	146.0			Intersection LOS						F		

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N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT 3B NO LA MEDIA PM PEAK HOUR/NO MITIGATION/#4*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*105*	*558*	*147*	*1526*	*1053*	*895*	*632*	*1368*		*489*	*326*	
Satflow per lane	*1770*	*1960*	*1532*	*1769*	*1960*	*1549*	*1770*	*1716*		*1770*	*1845*	
Capacity/lane	*344*	*926*	*664*	*1031*	*2030*	*991*	*802*	*811*		*802*	*871*	
Flow ratio	*0.03*	*0.10*	*0.10*	*0.44*	*0.20*	*0.58*	*0.18*	*0.29*		*0.14*	0.06	
v/c ratio	*0.31*	*0.60*	*0.22*	*1.48*	*0.52*	*0.90*	*0.79*	*1.69*		*0.61*	*0.37*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.48*	*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*0.95*	*0.93*	*0.53*	*1.00*	*0.71*	*0.41*	*0.94*	*1.00*		*0.90*	*0.90*	
Q_1	*2.0*	*7.3*	*2.0*	*32.7*	*8.8*	*13.1*	*11.9*	*20.9*		*8.4*	*4.0*	
k_B	*0.3*	*0.5*	*0.7*	*0.6*	*0.8*	*0.9*	*0.6*	*0.5*		*0.6*	*0.5*	
Q_2	*0.1*	*0.7*	*0.2*	*33.7*	*0.8*	*5.8*	*1.8*	*26.7*		*0.8*	*0.3*	
Q avg.	*2.1*	*8.0*	*2.2*	*66.4*	*9.6*	*19.0*	*13.7*	*47.6*		*9.2*	*4.2*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.9*	*2.0*	*1.5*	*1.9*	*1.7*	*1.8*	*1.5*		*1.9*	*2.0*	
BOQ, $Q_{\%}$	*4.3*	*15.1*	*4.5*	*101*	*17.8*	*32.4*	*24.4*	*73.4*		*17.1*	*8.4*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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4-8
w
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD/OCEAN VIEW HILLS
Agency or Co.	USAI		
Date Performed	07/06/11	Area Type	All other areas
Time Period	YEAR 2030 PM PEAK HOUR	Jurisdiction	WITH MITIGATION
		Analysis Year	YEAR 2030/ALT. 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	1	2	3	0
Lane group	L	T	R	L	T	R	L	T	R	L	TR	
Volume (vph)	100	530	240	1450	1000	850	600	520	780	465	210	100
% Heavy veh	2	2	2	5	2	2	2	2	5	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	3.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	100	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 26.0	G = 25.0	G =	G = 35.0	G = 26.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	105	558	147	1526	1053	895	632	547	821	489	326	
Lane group cap.	344	926	664	1031	2030	991	802	926	755	802	871	
v/c ratio	0.31	0.60	0.22	1.48	0.52	0.90	0.79	0.59	1.09	0.61	0.37	
Green ratio	0.10	0.17	0.43	0.30	0.38	0.64	0.23	0.17	0.51	0.23	0.17	
Unif. delay d1	62.7	57.2	26.6	52.5	35.9	23.0	54.0	57.1	37.0	51.4	54.8	
Delay factor k	0.11	0.19	0.11	0.50	0.12	0.42	0.33	0.18	0.50	0.20	0.11	
Increm. delay d2	0.5	1.1	0.2	221.3	0.2	11.4	5.3	1.0	59.1	1.4	0.3	
PF factor	0.926	0.860	0.490	0.714	0.591	0.139	0.797	0.860	0.315	0.797	0.860	
Control delay	58.5	50.3	13.2	258.8	21.5	14.6	48.3	50.1	70.7	42.3	47.4	
Lane group LOS	E	D	B	F	C	B	D	D	E	D	D	
Apprch. delay	44.7			124.0			58.0			44.4		
Approach LOS	D			F			E			D		
Intersec. delay	87.2			Intersection LOS						F		

HCS2000™ Version 4.1f

4-P
w
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT 3B NO LA MEDIA PM PEAK HOUR/WITH MITIGATION/#4*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*105*	*558*	*147*	*1526*	*1053*	*895*	*632*	*547*	*821*	*489*	*326*	
Satflow per lane	*1770*	*1960*	*1532*	*1769*	*1960*	*1549*	*1770*	*1960*	*1491*	*1770*	*1845*	
Capacity/lane	*344*	*926*	*664*	*1031*	*2030*	*991*	*802*	*926*	*755*	*802*	*871*	
Flow ratio	*0.03*	*0.10*	*0.10*	*0.44*	*0.20*	*0.58*	*0.18*	*0.10*	*0.55*	*0.14*	0.06	
v/c ratio	*0.31*	*0.60*	*0.22*	*1.48*	*0.52*	*0.90*	*0.79*	*0.59*	*1.09*	*0.61*	*0.37*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.48*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*0.95*	*0.93*	*0.53*	*1.00*	*0.71*	*0.41*	*0.94*	*0.93*	*1.00*	*0.90*	*0.90*	
Q_1	*2.0*	*7.3*	*2.0*	*32.7*	*8.8*	*13.1*	*11.9*	*7.1*	*34.2*	*8.4*	*4.0*	
k_B	*0.3*	*0.5*	*0.7*	*0.6*	*0.8*	*0.9*	*0.6*	*0.5*	*0.8*	*0.6*	*0.5*	
Q_2	*0.1*	*0.7*	*0.2*	*33.7*	*0.8*	*5.8*	*1.8*	*0.7*	*14.0*	*0.8*	*0.3*	
Q avg.	*2.1*	*8.0*	*2.2*	*66.4*	*9.6*	*19.0*	*13.7*	*7.8*	*48.2*	*9.2*	*4.2*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.9*	*2.0*	*1.5*	*1.9*	*1.7*	*1.8*	*1.9*	*1.5*	*1.9*	*2.0*	
BOQ, $Q_{\%}$	*4.3*	*15.1*	*4.5*	*101*	*17.8*	*32.4*	*24.4*	*14.8*	*74.4*	*17.1*	*8.4*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™ Version 4.1f

5-A

N
MIT

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SR-905 WB/CALIENTE*
Agency or Co.	*905CALW30A3BNLM*	Area Type	*All other areas*
Date Performed	*07/06/11*	Jurisdiction	*NO MITIGATION*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030/ALT. 3B/NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	1	1	1	3	0	0	3	0
Lane group					LT	R	L	T			TR	
Volume (vph)				180	5	220	900	1920			940	960
% Heavy veh				5	5	5	5	5			5	5
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time					2.0	2.0	2.0	2.0			2.0	
Ext. eff. green					2.0	2.0	2.0	2.0			2.0	
Arrival type					5	5	5	5			5	
Unit Extension					3.0	3.0	3.0	3.0			3.0	
Ped/Bike/RTOR Volume	10			10	5	0				10	5	350
Lane Width					12.0	12.0	12.0	12.0			12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0	0	0			0	
Unit Extension					3.0	3.0	3.0	3.0			3.0	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 57.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					194	232	947	2021			1631	
Lane group cap.					246	859	700	1853			1717	
v/c ratio					0.79	0.27	1.35	1.09			0.95	
Green ratio					0.14	0.58	0.41	0.36			0.36	
Unif. delay d1					58.0	14.7	41.5	45.0			43.8	
Delay factor k					0.34	0.11	0.50	0.50			0.46	
Increm. delay d2					15.7	0.2	168.1	50.3			12.0	
PF factor					0.889	0.119	0.542	0.630			0.630	
Control delay					67.2	1.9	190.6	78.6			39.5	
Lane group LOS					E	A	F	E			D	
Apprch. delay				31.7			114.3			39.5		
Approach LOS				C			F			D		
Intersec. delay	83.1			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LAMEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LT*	*R*	*L*	*T*			*TR*	
Init. queue/lane					*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	
Flow rate/lane					*194*	*232*	*947*	*2021*			*1631*	
Satflow per lane					*1725*	*1485*	*1719*	*1904*			*1765*	
Capacity/lane					*246*	*859*	*700*	*1853*			*1717*	
Flow ratio					*0.11*	*0.16*	*0.55*	*0.39*			0.34	
v/c ratio					*0.79*	*0.27*	*1.35*	*1.09*			*0.95*	
I factor					*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	
Arrival type					*5*	*5*	*5*	*5*			*5*	
Platoon ratio					*1.67*	*1.64*	*1.67*	*1.67*			*1.67*	
PF factor					*0.97*	*0.13*	*1.00*	*1.00*			*0.96*	
Q_1					*7.1*	*0.6*	*36.8*	*28.8*			*21.6*	
k_B					*0.4*	*0.8*	*0.7*	*0.7*			*0.7*	
Q_2					*1.2*	*0.3*	*33.4*	*12.8*			*5.4*	
Q avg.					*8.3*	*0.9*	*70.3*	*41.6*			*27.0*	

Percentile Back of Queue (95th percentile)

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
$f_{B\%}$					*1.9*	*2.1*	*1.5*	*1.6*			*1.6*	
BOQ, $Q_{\%}$					*15.6*	*1.9*	*106*	*64.9*			*44.2*	

Queue Storage Ratio

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Q spacing					*24.9*	*24.9*	*24.9*	*24.9*			*24.9*	
Q storage					*0*	*0*	*0*	*0*			*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SR-905 WB/CALIENTE
Agency or Co.	905CALW30A3BNLM	Area Type	All other areas
Date Performed	07/7/11	Jurisdiction	WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030/ALT. 3B/NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	1	1	2	3	0	0	3	1
Lane group					LT	R	L	T			T	R
Volume (vph)				180	5	220	900	1920			940	960
% Heavy veh				5	5	5	5	5			5	5
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time					2.0	2.0	2.0	2.0			2.0	2.0
Ext. eff. green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival type					5	5	5	5			5	5
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10			10	5	0				10	5	350
Lane Width					12.0	12.0	12.0	12.0			12.0	12.0
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0	0	0			0	0
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 50.0	G = 57.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					194	232	947	2021			989	642
Lane group cap.					246	785	1192	2113			2113	613
v/c ratio					0.79	0.30	0.79	0.96			0.47	1.05
Green ratio					0.14	0.53	0.36	0.41			0.41	0.41
Unif. delay d1					58.0	18.4	40.4	40.3			30.4	41.5
Delay factor k					0.34	0.11	0.34	0.47			0.11	0.50
Increm. delay d2					15.7	0.2	3.8	11.1			0.2	49.3
PF factor					0.889	0.253	0.630	0.542			0.542	0.542
Control delay					67.2	4.9	29.2	33.0			16.6	71.8
Lane group LOS					E	A	C	C			B	E
Apprch. delay				33.3			31.8			38.4		
Approach LOS				C			C			D		
Intersec. delay	34.0			Intersection LOS						C		

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MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LAMEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					LT	R	L	T			T	R
Init. queue/lane					0.0	0.0	0.0	0.0			0.0	0.0
Flow rate/lane					194	232	947	2021			989	642
Satflow per lane					1725	1485	1719	1904			1904	1505
Capacity/lane					246	785	1192	2113			2113	613
Flow ratio					0.11	0.16	0.28	0.39			0.19	0.43
v/c ratio					0.79	0.30	0.79	0.96			0.47	1.05
I factor					1.000	1.000	1.000	1.000			1.000	1.000
Arrival type					5	5	5	5			5	5
Platoon ratio					1.67	1.67	1.67	1.67			1.67	1.67
PF factor					0.97	0.29	0.85	0.94			0.64	1.00
Q_1					7.1	1.5	14.5	26.4			6.7	25.0
k_B					0.4	0.8	0.7	0.8			0.8	0.7
Q_2					1.2	0.3	2.3	6.6			0.7	9.4
Q avg.					8.3	1.8	16.8	33.0			7.3	34.3

Percentile Back of Queue (95th percentile)

$f_{B\%}$					1.9	2.0	1.7	1.6			1.9	1.6
BOQ, $Q_{\%}$					15.6	3.6	29.2	52.6			13.9	54.6

Queue Storage Ratio

Q spacing					24.9	24.9	24.9	24.9			24.9	24.9
Q storage					0	0	0	0			0	0
Avg. R_Q												
95% $R_{Q\%}$												

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MIT

SHORT REPORT

General Information

Analyst USAI
Agency or Co. USAI
Date Performed 07/07/11
Time Period PM PEAK HOUR

Site Information

Intersection SR-905 WB/CALIENTE
Area Type All other areas
Jurisdiction NO MITIGATION
Analysis Year YEAR 2030/ALT. 3B/NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	1	1	1	3	0	0	3	0
Lane group					LT	R	L	T			TR	
Volume (vph)				180	5	220	700	1680			1050	850
% Heavy veh				5	5	5	5	5			5	5
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time					2.0	2.0	2.0	2.0			2.0	
Ext. eff. green					2.0	2.0	2.0	2.0			2.0	
Arrival type					5	5	5	5			5	
Unit Extension					3.0	3.0	3.0	3.0			3.0	
Ped/Bike/RTOR Volume	10			10	5	0				10	5	350
Lane Width					12.0	12.0	12.0	12.0			12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0	0	0			0	
Unit Extension					3.0	3.0	3.0	3.0			3.0	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 57.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					194	232	737	1768			1631	
Lane group cap.					246	859	700	1853			1741	
v/c ratio					0.79	0.27	1.05	0.95			0.94	
Green ratio					0.14	0.58	0.41	0.36			0.36	
Unif. delay d1					58.0	14.7	41.5	43.9			43.5	
Delay factor k					0.34	0.11	0.50	0.46			0.45	
Increm. delay d2					15.7	0.2	48.8	11.9			10.2	
PF factor					0.889	0.119	0.542	0.630			0.630	
Control delay					67.2	1.9	71.3	39.5			37.5	
Lane group LOS					E	A	E	D			D	
Apprch. delay				31.7			48.9			37.5		
Approach LOS				C			D			D		
Intersec. delay	43.2			Intersection LOS						D		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LAMEDIA PM PEAK HOUR/NO MITATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LT*	*R*	*L*	*T*			*TR*	
Init. queue/lane					*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	
Flow rate/lane					*194*	*232*	*737*	*1768*			*1631*	
Satflow per lane					*1725*	*1485*	*1719*	*1904*			*1790*	
Capacity/lane					*246*	*859*	*700*	*1853*			*1741*	
Flow ratio					*0.11*	*0.16*	*0.43*	*0.34*			0.33	
v/c ratio					*0.79*	*0.27*	*1.05*	*0.95*			*0.94*	
I factor					*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	
Arrival type					*5*	*5*	*5*	*5*			*5*	
Platoon ratio					*1.67*	*1.64*	*1.67*	*1.67*			*1.67*	
PF factor					*0.97*	*0.13*	*1.00*	*0.96*			*0.95*	
Q_1					*7.1*	*0.6*	*28.7*	*23.7*			*21.2*	
k_B					*0.4*	*0.8*	*0.7*	*0.7*			*0.7*	
Q_2					*1.2*	*0.3*	*10.8*	*5.9*			*5.1*	
Q avg.					*8.3*	*0.9*	*39.5*	*29.6*			*26.3*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$					*1.9*	*2.1*	*1.6*	*1.6*			*1.6*	
BOQ, $Q_{\%}$					*15.6*	*1.9*	*61.9*	*47.8*			*43.1*	

Queue Storage Ratio

Q spacing					*24.9*	*24.9*	*24.9*	*24.9*			*24.9*	
Q storage					*0*	*0*	*0*	*0*			*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SR-905 WB/CALIENTE*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*07/07/11*	Jurisdiction	*WITH MITIGATION*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030/ALT. 3B/NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*0*	*0*	*0*	*1*	*1*	*2*	*3*	*0*	*0*	*3*	*1*
Lane group					*LT*	*R*	*L*	*T*			*T*	*R*
Volume (vph)				*180*	*5*	*220*	*700*	*1680*			*1050*	*850*
% Heavy veh				*5*	*5*	*5*	*5*	*5*			*5*	*5*
PHF				*0.95*	*0.95*	*0.95*	*0.95*	*0.95*			*0.95*	*0.95*
Actuated (P/A)				*A*	*A*	*A*	*A*	*A*			*A*	*A*
Startup lost time					*2.0*	*2.0*	*2.0*	*2.0*			*2.0*	*2.0*
Ext. eff. green					*2.0*	*2.0*	*2.0*	*2.0*			*2.0*	*2.0*
Arrival type					*5*	*5*	*5*	*5*			*5*	*5*
Unit Extension					*3.0*	*3.0*	*3.0*	*3.0*			*3.0*	*3.0*
Ped/Bike/RTOR Volume	*10*			*10*	*5*	*0*				*10*	*5*	*350*
Lane Width					*12.0*	*12.0*	*12.0*	*12.0*			*12.0*	*12.0*
Parking/Grade/Parking	*N*		*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr					*0*	*0*	*0*	*0*			*0*	*0*
Unit Extension					*3.0*	*3.0*	*3.0*	*3.0*			*3.0*	*3.0*

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = *20.0*	G =	G =	G =	G = *57.0*	G = *50.0*	G =	G =
	Y = *4*	Y =	Y =	Y =	Y = *4*	Y = *5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*					Cycle Length C = *140.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					*194*	*232*	*737*	*1768*			*1105*	*526*
Lane group cap.					*246*	*859*	*1359*	*1853*			*1853*	*536*
v/c ratio					*0.79*	*0.27*	*0.54*	*0.95*			*0.60*	*0.98*
Green ratio					*0.14*	*0.58*	*0.41*	*0.36*			*0.36*	*0.36*
Unif. delay d1					*58.0*	*14.7*	*31.6*	*43.9*			*36.8*	*44.5*
Delay factor k					*0.34*	*0.11*	*0.14*	*0.46*			*0.19*	*0.49*
Increm. delay d2					*15.7*	*0.2*	*0.4*	*11.9*			*0.5*	*34.0*
PF factor					*0.889*	*0.119*	*0.542*	*0.630*			*0.630*	*0.630*
Control delay					*67.2*	*1.9*	*17.6*	*39.5*			*23.7*	*62.0*
Lane group LOS					*E*	*A*	*B*	*D*			*C*	*E*
Apprch. delay				*31.7*			*33.1*			*36.0*		
Approach LOS				*C*			*C*			*D*		
Intersec. delay	*34.0*			Intersection LOS						*C*		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LAMEDIA PM PEAK HOUR/WITH MTIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LT*	*R*	*L*	*T*			*T*	*R*
Init. queue/lane					*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane					*194*	*232*	*737*	*1768*			*1105*	*526*
Satflow per lane					*1725*	*1485*	*1719*	*1904*			*1904*	*1502*
Capacity/lane					*246*	*859*	*1359*	*1853*			*1853*	*536*
Flow ratio					*0.11*	*0.16*	*0.22*	*0.34*			0.21	*0.35*
v/c ratio					*0.79*	*0.27*	*0.54*	*0.95*			*0.60*	*0.98*
I factor					*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	*1.000*
Arrival type					*5*	*5*	*5*	*5*			*5*	*5*
Platoon ratio					*1.67*	*1.64*	*1.67*	*1.67*			*1.67*	*1.67*
PF factor					*0.97*	*0.13*	*0.67*	*0.96*			*0.77*	*0.98*
Q_1					*7.1*	*0.6*	*7.5*	*23.7*			*9.9*	*19.9*
k_B					*0.4*	*0.8*	*0.7*	*0.7*			*0.7*	*0.6*
Q_2					*1.2*	*0.3*	*0.8*	*5.9*			*1.0*	*5.8*
Q avg.					*8.3*	*0.9*	*8.3*	*29.6*			*10.9*	*25.7*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$					*1.9*	*2.1*	*1.9*	*1.6*			*1.8*	*1.6*
BOQ, $Q_{\%}$					*15.6*	*1.9*	*15.6*	*47.8*			*19.9*	*42.2*
Queue Storage Ratio												
Q spacing					*24.9*	*24.9*	*24.9*	*24.9*			*24.9*	*24.9*
Q storage					*0*	*0*	*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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MIT

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SR-905 EB/CALIENTE*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*07/07/11*	Jurisdiction	*NO MITIGATION*
Time Period	*YEAR 2030 AM PEAK*	Analysis Year	*YEAR 2030 /ALT. 3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*1*	*1*	*0*	*0*	*0*	*0*	*0*	*3*	*0*	*1*	*3*	*0*
Lane group	*L*	*LTR*						*TR*		*L*	*T*	
Volume (vph)	*1200*	*5*	*700*					*1620*	*180*	*220*	*900*	
% Heavy veh	*10*	*10*	*10*					*10*	*10*	*10*	*10*	
PHF	*0.95*	*0.95*	*0.95*					*0.95*	*0.95*	*0.95*	*0.95*	
Actuated (P/A)	*A*	*A*	*A*					*A*	*A*	*A*	*A*	
Startup lost time	*2.0*	*2.0*						*2.0*		*2.0*	*2.0*	
Ext. eff. green	*2.0*	*2.0*						*2.0*		*2.0*	*2.0*	
Arrival type	*3*	*3*						*5*		*5*	*5*	
Unit Extension	*3.0*	*3.0*						*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*10*	*0*	*100*	*0*			*10*	*5*	*0*			
Lane Width	*12.0*	*12.0*						*12.0*		*12.0*	*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr	*0*	*0*						*0*		*0*	*0*	
Unit Extension	*3.0*	*3.0*						*3.0*		*3.0*	*3.0*	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = *51.0*	G =	G =	G =	G = *20.0*	G = *46.0*	G =	G =
	Y = *4*	Y =	Y =	Y =	Y = *4*	Y = *5*	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *130.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	*707*	*1193*						*1894*		*232*	*947*	
Lane group cap.	*644*	*607*						*1720*		*252*	*2667*	
v/c ratio	*1.10*	*1.97*						*1.10*		*0.92*	*0.36*	
Green ratio	*0.39*	*0.39*						*0.35*		*0.15*	*0.54*	
Unif. delay d1	*39.5*	*39.5*						*42.0*		*54.2*	*17.1*	
Delay factor k	*0.50*	*0.50*						*0.50*		*0.44*	*0.11*	
Increm. delay d2	*65.2*	*440.4*						*55.0*		*36.1*	*0.1*	
PF factor	*1.000*	*1.000*						*0.635*		*0.879*	*0.222*	
Control delay	*104.7*	*479.9*						*81.6*		*83.7*	*3.9*	
Lane group LOS	*F*	*F*						*F*		*F*	*A*	
Apprch. delay	*340.3*						*81.6*			*19.6*		
Approach LOS	*F*						*F*			*B*		
Intersec. delay	*165.7*			Intersection LOS						*F*		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT-3B WITHOUT LA MEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*LTR*						*TR*		*L*	*T*	
Init. queue/lane	*0.0*	*0.0*						*0.0*		*0.0*	*0.0*	
Flow rate/lane	*707*	*1193*						*1894*		*232*	*947*	
Satflow per lane	*1641*	*1548*						*1784*		*1641*	*1818*	
Capacity/lane	*644*	*607*						*1720*		*252*	*2667*	
Flow ratio	*0.43*	*0.77*						*0.39*		*0.14*	0.19	
v/c ratio	*1.10*	*1.97*						*1.10*		*0.92*	*0.36*	
I factor	*1.000*	*1.000*						*1.000*		*1.000*	*1.000*	
Arrival type	*3*	*3*						*5*		*5*	*5*	
Platoon ratio	*1.00*	*1.00*						*1.67*		*1.67*	*1.67*	
PF factor	*1.00*	*1.00*						*1.00*		*0.99*	*0.26*	
Q_1	*25.5*	*43.1*						*25.1*		*8.2*	*1.9*	
k_B	*0.7*	*0.6*						*0.7*		*0.4*	*0.8*	
Q_2	*12.5*	*74.5*						*12.5*		*2.3*	*0.5*	
Q avg.	*38.1*	*117.6*						*37.6*		*10.4*	*2.3*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.6*	*1.5*						*1.6*		*1.8*	*2.0*	
BOQ, $Q_{\%}$	*59.9*	*177*						*59.2*		*19.2*	*4.8*	
Queue Storage Ratio												
Q spacing	*24.9*	*24.9*						*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*						*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905 EB/CALIENTE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/07/11	Jurisdiction	WITH MITIGATION
Time Period	YEAR 2030 AM PEAK	Analysis Year	YEAR 2030 /ALT. 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	0	0	0	0	3	1	2	3	0
Lane group	L	LT	R					T	R	L	T	
Volume (vph)	1200	5	700					1620	180	220	900	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time	2.0	2.0	2.0					2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0					2.0	2.0	2.0	2.0	
Arrival type	3	3	3					5	5	5	5	
Unit Extension	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	0	100	0			10	5	0			
Lane Width	12.0	12.0	12.0					12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0					0	0	0	0	
Unit Extension	3.0	3.0	3.0					3.0	3.0	3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 57.0	G =	G =	G =	G = 19.0	G = 41.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	707	561	632					1705	189	232	947	
Lane group cap.	720	722	639					1562	452	466	2438	
v/c ratio	0.98	0.78	0.99					1.09	0.42	0.50	0.39	
Green ratio	0.44	0.44	0.44					0.32	0.32	0.15	0.49	
Unif. delay d1	36.0	31.1	36.2					44.5	35.1	51.1	20.7	
Delay factor k	0.49	0.33	0.49					0.50	0.11	0.11	0.11	
Increm. delay d2	29.0	5.4	32.7					52.1	0.6	0.8	0.1	
PF factor	1.000	1.000	1.000					0.693	0.693	0.886	0.354	
Control delay	64.9	36.5	68.9					82.9	24.9	46.1	7.4	
Lane group LOS	E	D	E					F	C	D	A	
Apprch. delay	57.9						77.1			15.0		
Approach LOS	E						E			B		
Intersec. delay	55.0			Intersection LOS						E		

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w MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT-3B WITHOUT LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*LT*	*R*					*T*	*R*	*L*	*T*	
Init. queue/lane	*0.0*	*0.0*	*0.0*					*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*707*	*561*	*632*					*1705*	*189*	*232*	*947*	
Satflow per lane	*1641*	*1646*	*1458*					*1818*	*1432*	*1641*	*1818*	
Capacity/lane	*720*	*722*	*639*					*1562*	*452*	*466*	*2438*	
Flow ratio	*0.43*	*0.34*	*0.43*					*0.34*	*0.13*	*0.07*	0.19	
v/c ratio	*0.98*	*0.78*	*0.99*					*1.09*	*0.42*	*0.50*	*0.39*	
I factor	*1.000*	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*3*	*3*	*3*					*5*	*5*	*5*	*5*	
Platoon ratio	*1.00*	*1.00*	*1.00*					*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*1.00*	*1.00*	*1.00*					*1.00*	*0.77*	*0.93*	*0.42*	
Q_1	*25.2*	*17.3*	*22.6*					*22.6*	*4.1*	*3.7*	*3.3*	
k_B	*0.7*	*0.7*	*0.7*					*0.6*	*0.5*	*0.4*	*0.8*	
Q_2	*7.1*	*2.2*	*6.8*					*10.9*	*0.4*	*0.4*	*0.5*	
Q avg.	*32.3*	*19.5*	*29.4*					*33.5*	*4.5*	*4.1*	*3.8*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.6*	*1.7*	*1.6*					*1.6*	*2.0*	*2.0*	*2.0*	
BOQ, $Q_\%$	*51.7*	*33.2*	*47.6*					*53.3*	*8.9*	*8.0*	*7.6*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*					*24.9*	*24.9*	*24.9*	*24.9*	
Q storage	*0*	*0*	*0*					*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*SR-905 EB/CALIENTE*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*07/07/11*	Jurisdiction	*NO MITIGATION*
Time Period	*YEAR 2030 PM PEAK*	Analysis Year	*YEAR 2030 /ALT. 3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	0	0	0	0	3	0	1	3	0
Lane group	L	LTR						TR		L	T	
Volume (vph)	960	5	900					1420	180	220	1010	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time	2.0	2.0						2.0		2.0	2.0	
Ext. eff. green	2.0	2.0						2.0		2.0	2.0	
Arrival type	3	3						5		5	5	
Unit Extension	3.0	3.0						3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	100	10			10	5	0			
Lane Width	12.0	12.0						12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0						0		0	0	
Unit Extension	3.0	3.0						3.0		3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 53.0	G =	G =	G =	G = 28.0	G = 46.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1011	847						1684		232	1063	
Lane group cap.	621	544						1593		328	2760	
v/c ratio	1.63	1.56						1.06		0.71	0.39	
Green ratio	0.38	0.38						0.33		0.20	0.56	
Unif. delay d1	43.5	43.5						47.0		52.2	17.5	
Delay factor k	0.50	0.50						0.50		0.27	0.11	
Increm. delay d2	289.9	259.6						39.4		6.9	0.1	
PF factor	1.000	1.000						0.674		0.833	0.161	
Control delay	333.4	303.1						71.0		50.3	2.9	
Lane group LOS	F	F						E		D	A	
Apprch. delay	319.6						71.0			11.4		
Approach LOS	F						E			B		
Intersec. delay	150.5			Intersection LOS						F		

6-P
N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT-3B WITHOUT LA MEDIA PM PEAK HOUR/NO MIT.*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*LTR*						*TR*		*L*	*T*	
Init. queue/lane	*0.0*	*0.0*						*0.0*		*0.0*	*0.0*	
Flow rate/lane	*1011*	*847*						*1684*		*232*	*1063*	
Satflow per lane	*1641*	*1437*						*1779*		*1641*	*1818*	
Capacity/lane	*621*	*544*						*1593*		*328*	*2760*	
Flow ratio	*0.62*	*0.59*						*0.35*		*0.14*	0.21	
v/c ratio	*1.63*	*1.56*						*1.06*		*0.71*	*0.39*	
I factor	*1.000*	*1.000*						*1.000*		*1.000*	*1.000*	
Arrival type	*3*	*3*						*5*		*5*	*5*	
Platoon ratio	*1.00*	*1.00*						*1.67*		*1.67*	*1.67*	
PF factor	*1.00*	*1.00*						*1.00*		*0.94*	*0.20*	
Q_1	*39.3*	*32.9*						*24.0*		*7.9*	*1.7*	
k_B	*0.7*	*0.6*						*0.7*		*0.5*	*0.9*	
Q_2	*50.4*	*39.5*						*9.5*		*1.0*	*0.6*	
Q avg.	*89.8*	*72.5*						*33.6*		*8.9*	*2.2*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.5*	*1.5*						*1.6*		*1.9*	*2.0*	
BOQ, $Q_{\%}$	*135*	*110*						*53.5*		*16.6*	*4.6*	
Queue Storage Ratio												
Q spacing	*24.9*	*24.9*						*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*						*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*SR-905 EB/CALIENTE*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*07/07/11*	Jurisdiction	*WITH MITIGATION*
Time Period	*YEAR 2030 PM PEAK*	Analysis Year	*YEAR 2030 /ALT. 3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*1*	*1*	*1*	*0*	*0*	*0*	*0*	*3*	*1*	*2*	*3*	*0*
Lane group	*L*	*LT*	*R*					*T*	*R*	*L*	*T*	
Volume (vph)	*960*	*5*	*900*					*1420*	*180*	*220*	*1010*	
% Heavy veh	*10*	*10*	*10*					*10*	*10*	*10*	*10*	
PHF	*0.95*	*0.95*	*0.95*					*0.95*	*0.95*	*0.95*	*0.95*	
Actuated (P/A)	*A*	*A*	*A*					*A*	*A*	*A*	*A*	
Startup lost time	*2.0*	*2.0*	*2.0*					*2.0*	*2.0*	*2.0*	*2.0*	
Ext. eff. green	*2.0*	*2.0*	*2.0*					*2.0*	*2.0*	*2.0*	*2.0*	
Arrival type	*3*	*3*	*3*					*5*	*5*	*5*	*5*	
Unit Extension	*3.0*	*3.0*	*3.0*					*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*10*	*5*	*100*	*10*			*10*	*5*	*0*			
Lane Width	*12.0*	*12.0*	*12.0*					*12.0*	*12.0*	*12.0*	*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr	*0*	*0*	*0*					*0*	*0*	*0*	*0*	
Unit Extension	*3.0*	*3.0*	*3.0*					*3.0*	*3.0*	*3.0*	*3.0*	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = *62.0*	G =	G =	G =	G = *25.0*	G = *40.0*	G =	G =
	Y = *4*	Y =	Y =	Y =	Y = *4*	Y = *5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *140.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	*556*	*460*	*842*					*1495*	*189*	*232*	*1063*	
Lane group cap.	*727*	*729*	*637*					*1415*	*409*	*569*	*2441*	
v/c ratio	*0.76*	*0.63*	*1.32*					*1.06*	*0.46*	*0.41*	*0.44*	
Green ratio	*0.44*	*0.44*	*0.44*					*0.29*	*0.29*	*0.18*	*0.49*	
Unif. delay d1	*32.9*	*30.2*	*39.0*					*50.0*	*41.1*	*50.9*	*22.9*	
Delay factor k	*0.32*	*0.21*	*0.50*					*0.50*	*0.11*	*0.11*	*0.11*	
Increm. delay d2	*4.9*	*1.8*	*155.6*					*40.4*	*0.8*	*0.5*	*0.1*	
PF factor	*1.000*	*1.000*	*1.000*					*0.733*	*0.733*	*0.855*	*0.352*	
Control delay	*37.7*	*31.9*	*194.6*					*77.1*	*31.0*	*44.0*	*8.2*	
Lane group LOS	*D*	*C*	*F*					*E*	*C*	*D*	*A*	
Apprch. delay	*107.4*						*71.9*			*14.6*		
Approach LOS	*F*						*E*			*B*		
Intersec. delay	*70.2*			Intersection LOS						*E*		

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MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT-3B WITHOUT LA MEDIA PM PEAK HOUR/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*LT*	*R*					*T*	*R*	*L*	*T*	
Init. queue/lane	*0.0*	*0.0*	*0.0*					*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*556*	*460*	*842*					*1495*	*189*	*232*	*1063*	
Satflow per lane	*1641*	*1646*	*1438*					*1818*	*1430*	*1641*	*1818*	
Capacity/lane	*727*	*729*	*637*					*1415*	*409*	*569*	*2441*	
Flow ratio	*0.34*	*0.28*	*0.59*					*0.30*	*0.13*	*0.07*	0.21	
v/c ratio	*0.76*	*0.63*	*1.32*					*1.06*	*0.46*	*0.41*	*0.44*	
I factor	*1.000*	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*3*	*3*	*3*					*5*	*5*	*5*	*5*	
Platoon ratio	*1.00*	*1.00*	*1.00*					*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*1.00*	*1.00*	*1.00*					*1.00*	*0.82*	*0.90*	*0.43*	
Q_1	*18.2*	*13.8*	*32.7*					*21.3*	*4.9*	*3.7*	*4.2*	
k_B	*0.7*	*0.7*	*0.7*					*0.6*	*0.5*	*0.4*	*0.8*	
Q_2	*2.2*	*1.2*	*28.2*					*8.5*	*0.4*	*0.3*	*0.6*	
Q avg.	*20.4*	*15.1*	*60.9*					*29.8*	*5.4*	*4.0*	*4.9*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.7*	*1.8*	*1.5*					*1.6*	*1.9*	*2.0*	*2.0*	
BOQ, $Q_\%$	*34.6*	*26.5*	*92.6*					*48.1*	*10.5*	*7.9*	*9.5*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*					*24.9*	*24.9*	*24.9*	*24.9*	
Q storage	*0*	*0*	*0*					*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD.@CALIENTE BLVD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	NO MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030//ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	1	2	3	0	2	3	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	175	320	190	755	170	495	375	1130	1190	930	510	160
% Heavy veh	5	5	5	10	5	10	5	10	10	10	10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5	5	5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 30.0	G = 20.0	G =	G =	G = 41.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	184	537		795	179	521	395	2442		979	705	
Lane group cap.	715	482		683	518	506	715	1321		683	1405	
v/c ratio	0.26	1.11		1.16	0.35	1.03	0.55	1.85		1.43	0.50	
Green ratio	0.21	0.14		0.21	0.14	0.36	0.21	0.29		0.21	0.29	
Unif. delay d1	45.7	60.0		55.0	54.1	45.0	49.0	49.5		55.0	41.0	
Delay factor k	0.11	0.50		0.50	0.11	0.50	0.15	0.50		0.50	0.11	
Increm. delay d2	0.2	76.0		89.3	0.4	47.8	0.9	384.8		203.4	0.3	
PF factor	0.818	0.889		0.818	0.889	0.630	0.818	0.724		0.818	0.724	
Control delay	37.6	129.3		134.3	48.5	76.1	41.0	420.6		248.4	30.0	
Lane group LOS	D	F		F	D	E	D	F		F	C	
Apprch. delay	105.9			103.7			367.8			157.0		
Approach LOS	F			F			F			F		
Intersec. delay	228.5			Intersection LOS						F		

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N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LAMEDIA AM PEAK HOUR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*T*	*R*	*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*184*	*537*		*795*	*179*	*521*	*395*	*2442*		*979*	*705*	
Satflow per lane	*1719*	*1771*		*1641*	*1904*	*1416*	*1719*	*1656*		*1641*	*1761*	
Capacity/lane	*715*	*482*		*683*	*518*	*506*	*715*	*1321*		*683*	*1405*	
Flow ratio	*0.05*	*0.16*		*0.25*	*0.05*	*0.37*	*0.12*	*0.54*		*0.31*	0.15	
v/c ratio	*0.26*	*1.11*		*1.16*	*0.35*	*1.03*	*0.55*	*1.85*		*1.43*	*0.50*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*	*5*	*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*	*1.67*	*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*0.85*	*1.00*		*1.00*	*0.92*	*1.00*	*0.90*	*1.00*		*1.00*	*0.82*	
Q_1	*2.6*	*11.0*		*15.9*	*3.0*	*20.3*	*6.3*	*34.8*		*19.6*	*6.8*	
k_B	*0.5*	*0.4*		*0.5*	*0.4*	*0.6*	*0.5*	*0.6*		*0.5*	*0.6*	
Q_2	*0.2*	*6.0*		*9.8*	*0.2*	*7.2*	*0.6*	*52.7*		*20.6*	*0.6*	
Q avg.	*2.8*	*16.9*		*25.7*	*3.3*	*27.5*	*6.9*	*87.6*		*40.2*	*7.4*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.0*	*1.7*		*1.6*	*2.0*	*1.6*	*1.9*	*1.5*		*1.6*	*1.9*	
BOQ, $Q_{\%}$	*5.5*	*29.4*		*42.2*	*6.5*	*44.8*	*13.2*	*132*		*62.9*	*14.0*	
Queue Storage Ratio												
Q spacing	*24.9*	*24.9*		*24.9*	*24.9*	*24.9*	*24.9*	*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*		*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

7-A
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MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD.@CALIENTE BLVD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030//ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	2	3	1	2	3	0
Lane group	L	T	R	L	T	R	L	T	R	L	TR	
Volume (vph)	175	320	190	755	170	495	375	1130	1190	930	510	160
% Heavy veh	5	5	5	10	5	10	5	10	10	10	10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 30.0	G = 20.0	G =	G =	G = 41.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	184	337	200	795	179	521	395	1189	1253	979	705	
Lane group cap.	715	518	530	683	518	506	715	1451	727	683	1405	
v/c ratio	0.26	0.65	0.38	1.16	0.35	1.03	0.55	0.82	1.72	1.43	0.50	
Green ratio	0.21	0.14	0.36	0.21	0.14	0.36	0.21	0.29	0.51	0.21	0.29	
Unif. delay d1	45.7	56.7	33.4	55.0	54.1	45.0	49.0	46.1	34.5	55.0	41.0	
Delay factor k	0.11	0.23	0.11	0.50	0.11	0.50	0.15	0.36	0.50	0.50	0.11	
Increm. delay d2	0.2	2.9	0.5	89.3	0.4	47.8	0.9	3.9	331.4	203.4	0.3	
PF factor	0.818	0.889	0.630	0.818	0.889	0.630	0.818	0.724	0.911	0.818	0.724	
Control delay	37.6	53.3	21.5	134.3	48.5	76.1	41.0	37.2	362.8	248.4	30.0	
Lane group LOS	D	D	C	F	D	E	D	D	F	F	C	
Apprch. delay	40.5			103.7			181.5			157.0		
Approach LOS	D			F			F			F		
Intersec. delay	143.0			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LAMEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T	R	L	T	R	L	T	R	L	TR	
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Flow rate/lane	184	337	200	795	179	521	395	1189	1253	979	705	
Satflow per lane	1719	1904	1483	1641	1904	1416	1719	1818	1433	1641	1761	
Capacity/lane	715	518	530	683	518	506	715	1451	727	683	1405	
Flow ratio	0.05	0.09	0.13	0.25	0.05	0.37	0.12	0.24	0.87	0.31	0.15	
v/c ratio	0.26	0.65	0.38	1.16	0.35	1.03	0.55	0.82	1.72	1.43	0.50	
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Platoon ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.09	1.67	1.67	
PF factor	0.85	0.95	0.70	1.00	0.92	1.00	0.90	0.92	1.00	1.00	0.82	
Q_1	2.6	6.2	4.1	15.9	3.0	20.3	6.3	14.5	48.7	19.6	6.8	
k_B	0.5	0.4	0.6	0.5	0.4	0.6	0.5	0.6	0.7	0.5	0.6	
Q_2	0.2	0.7	0.4	9.8	0.2	7.2	0.6	2.3	67.5	20.6	0.6	
Q avg.	2.8	6.9	4.4	25.7	3.3	27.5	6.9	16.8	116.2	40.2	7.4	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	2.0	1.9	2.0	1.6	2.0	1.6	1.9	1.7	1.5	1.6	1.9	
BOQ, $Q_{\%}$	5.5	13.1	8.7	42.2	6.5	44.8	13.2	29.2	174	62.9	14.0	

Queue Storage Ratio

Q spacing	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	
Q storage	0	0	0	0	0	0	0	0	0	0	0	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD.@CALIENTE BLVD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030//ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	1	2	3	0	2	3	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	160	170	375	1190	320	930	190	510	755	495	1240	175
% Heavy veh	5	5	5	10	5	10	5	10	10	10	10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5	5	5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 31.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	168	574		1253	337	979	200	1332		521	1489	
Lane group cap.	715	682		683	777	612	715	980		683	1078	
v/c ratio	0.23	0.84		1.83	0.43	1.60	0.28	1.36		0.76	1.38	
Green ratio	0.21	0.21		0.21	0.21	0.43	0.21	0.22		0.21	0.22	
Unif. delay d1	45.5	52.7		55.0	47.6	40.0	46.0	54.5		51.7	54.5	
Delay factor k	0.11	0.38		0.50	0.11	0.50	0.11	0.50		0.31	0.50	
Increm. delay d2	0.2	9.3		381.3	0.4	277.5	0.2	168.3		5.1	177.4	
PF factor	0.818	0.818		0.818	0.818	0.711	0.818	0.810		0.818	0.810	
Control delay	37.4	52.5		426.3	39.4	305.9	37.8	212.5		47.4	221.6	
Lane group LOS	D	D		F	D	F	D	F		D	F	
Apprch. delay	49.1			329.7			189.7			176.4		
Approach LOS	D			F			F			F		
Intersec. delay	223.0			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LAMEDIA PM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*T*	*R*	*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*168*	*574*		*1253*	*337*	*979*	*200*	*1332*		*521*	*1489*	
Satflow per lane	*1719*	*1672*		*1641*	*1904*	*1427*	*1719*	*1625*		*1641*	*1787*	
Capacity/lane	*715*	*682*		*683*	*777*	*612*	*715*	*980*		*683*	*1078*	
Flow ratio	*0.05*	*0.18*		*0.39*	*0.09*	*0.69*	*0.06*	*0.30*		*0.16*	0.31	
v/c ratio	*0.23*	*0.84*		*1.83*	*0.43*	*1.60*	*0.28*	*1.36*		*0.76*	*1.38*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*	*5*	*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*	*1.38*	*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*0.85*	*0.96*		*1.00*	*0.88*	*1.00*	*0.85*	*1.00*		*0.94*	*1.00*	
Q_1	*2.3*	*10.8*		*25.1*	*5.2*	*38.1*	*2.8*	*19.0*		*9.2*	*21.2*	
k_B	*0.5*	*0.5*		*0.5*	*0.5*	*0.7*	*0.5*	*0.5*		*0.5*	*0.5*	
Q_2	*0.1*	*2.0*		*37.8*	*0.4*	*47.6*	*0.2*	*17.8*		*1.4*	*20.6*	
Q avg.	*2.5*	*12.8*		*62.9*	*5.6*	*85.7*	*3.0*	*36.8*		*10.6*	*41.8*	

Percentile Back of Queue (95th percentile)

	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
$f_{B\%}$	*2.0*	*1.8*		*1.5*	*1.9*	*1.5*	*2.0*	*1.6*		*1.8*	*1.6*	
BOQ, $Q_{\%}$	*5.0*	*22.9*		*95.4*	*10.9*	*129*	*6.1*	*58.0*		*19.4*	*65.2*	

Queue Storage Ratio

	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
Q spacing	*24.9*	*24.9*		*24.9*	*24.9*	*24.9*	*24.9*	*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*		*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	AIRWAY RD.@CALIENTE BLVD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	WITH MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030//ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	2	3	1	2	3	0
Lane group	L	T	R	L	T	R	L	T	R	L	TR	
Volume (vph)	160	170	375	1190	320	930	190	510	755	495	1240	175
% Heavy veh	5	5	5	10	5	10	5	10	10	10	10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 31.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	168	179	395	1253	337	979	200	537	795	521	1489	
Lane group cap.	715	777	641	683	777	612	715	1097	622	683	1078	
v/c ratio	0.23	0.23	0.62	1.83	0.43	1.60	0.28	0.49	1.28	0.76	1.38	
Green ratio	0.21	0.21	0.43	0.21	0.21	0.43	0.21	0.22	0.44	0.21	0.22	
Unif. delay d1	45.5	45.5	31.1	55.0	47.6	40.0	46.0	47.6	39.5	51.7	54.5	
Delay factor k	0.11	0.11	0.20	0.50	0.11	0.50	0.11	0.11	0.50	0.31	0.50	
Increm. delay d2	0.2	0.2	1.8	381.3	0.4	277.5	0.2	0.3	137.3	5.1	177.4	
PF factor	0.818	0.818	0.500	0.818	0.818	0.711	0.818	0.810	0.485	0.818	0.810	
Control delay	37.4	37.3	17.3	426.3	39.4	305.9	37.8	38.9	156.5	47.4	221.6	
Lane group LOS	D	D	B	F	D	F	D	D	F	D	F	
Apprch. delay	26.7			329.7			99.8			176.4		
Approach LOS	C			F			F			F		
Intersec. delay	200.5			Intersection LOS						F		

7-P
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MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LAMEDIA PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T	R	L	T	R	L	T	R	L	TR	
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Flow rate/lane	168	179	395	1253	337	979	200	537	795	521	1489	
Satflow per lane	1719	1904	1495	1641	1904	1427	1719	1818	1428	1641	1787	
Capacity/lane	715	777	641	683	777	612	715	1097	622	683	1078	
Flow ratio	0.05	0.05	0.26	0.39	0.09	0.69	0.06	0.11	0.56	0.16	0.31	
v/c ratio	0.23	0.23	0.62	1.83	0.43	1.60	0.28	0.49	1.28	0.76	1.38	
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Platoon ratio	1.67	1.67	1.67	1.67	1.67	1.38	1.67	1.67	1.67	1.67	1.67	
PF factor	0.85	0.85	0.66	1.00	0.88	1.00	0.85	0.88	1.00	0.94	1.00	
Q_1	2.3	2.6	7.8	25.1	5.2	38.1	2.8	5.9	30.9	9.2	21.2	
k_B	0.5	0.5	0.7	0.5	0.5	0.7	0.5	0.5	0.7	0.5	0.5	
Q_2	0.1	0.2	1.1	37.8	0.4	47.6	0.2	0.5	24.4	1.4	20.6	
Q avg.	2.5	2.7	8.9	62.9	5.6	85.7	3.0	6.4	55.3	10.6	41.8	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	2.0	2.0	1.9	1.5	1.9	1.5	2.0	1.9	1.5	1.8	1.6	
BOQ, $Q_{\%}$	5.0	5.5	16.6	95.4	10.9	129	6.1	12.3	84.5	19.4	65.2	

Queue Storage Ratio

Q spacing	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	
Q storage	0	0	0	0	0	0	0	0	0	0	0	
Avg. R_Q												
95% $R_{Q\%}$												

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MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	CALIENTE AV./BEYER BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	NO MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030/ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	1	1	1	2	2	0	2	3	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	1445	110	330	50	260	385	775	1160	50	165	500	945
% Heavy veh	10	5	5	5	5	5	5	5	5	5	5	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3	3	3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 37.0	G = 15.0	G =	G =	G = 30.0	G = 49.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1521	463		53	274	353	816	1274		174	1521	
Lane group cap.	786	309		424	191	146	668	1176		668	1459	
v/c ratio	1.94	1.50		0.13	1.43	2.42	1.22	1.08		0.26	1.04	
Green ratio	0.25	0.10		0.25	0.10	0.10	0.20	0.33		0.20	0.33	
Unif. delay d1	56.5	67.5		43.9	67.5	67.5	60.0	50.5		50.6	50.5	
Delay factor k	0.50	0.50		0.11	0.50	0.50	0.50	0.50		0.11	0.50	
Increm. delay d2	425.5	240.6		0.1	222.8	658.4	112.8	51.9		0.2	35.4	
PF factor	1.000	1.000		1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Control delay	482.0	308.1		44.1	290.3	725.9	172.8	102.4		50.8	85.9	
Lane group LOS	F	F		D	F	F	F	F		D	F	
Apprch. delay	441.4			497.2			129.9			82.3		
Approach LOS	F			F			F			F		
Intersec. delay	252.0			Intersection LOS						F		

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MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	CALIENTE AV./BEYER BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030/ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	1	1	1	2	2	0	2	2	2
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	1445	110	330	50	260	385	775	1160	50	165	500	945
% Heavy veh	10	5	5	5	5	5	5	5	5	5	5	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	3	3	3	3	3	3	3	3		3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 39.0	G = 15.0	G =	G =	G = 30.0	G = 47.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1521	116	347	53	274	353	816	1274		174	526	995
Lane group cap.	829	363	490	447	191	146	668	1128		668	1136	1517
v/c ratio	1.83	0.32	0.71	0.12	1.43	2.42	1.22	1.13		0.26	0.46	0.66
Green ratio	0.26	0.10	0.33	0.26	0.10	0.10	0.20	0.31		0.20	0.31	0.61
Unif. delay d1	55.5	62.8	43.6	42.4	67.5	67.5	60.0	51.5		50.6	41.4	19.3
Delay factor k	0.50	0.11	0.27	0.11	0.50	0.50	0.50	0.50		0.11	0.11	0.23
Increm. delay d2	380.3	0.5	4.7	0.1	222.8	658.4	112.8	69.9		0.2	0.3	1.0
PF factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1.000
Control delay	435.8	63.3	48.3	42.5	290.3	725.9	172.8	121.4		50.8	41.7	20.3
Lane group LOS	F	E	D	D	F	F	F	F		D	D	C
Apprch. delay	346.3			497.1			141.5			30.1		
Approach LOS	F			F			F			C		
Intersec. delay	212.7			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	CALIENTE AV./BEYER BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/14	Jurisdiction	NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030/ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	1	1	1	2	2	0	2	3	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	945	260	775	50	110	165	330	500	50	385	1160	1445
% Heavy veh	10	5	5	5	5	5	5	5	5	5	5	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3	3	3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 37.0	G = 15.0	G =	G =	G = 30.0	G = 49.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	995	1090		53	116	121	347	579		405	2742	
Lane group cap.	786	309		424	191	146	668	1166		668	1494	
v/c ratio	1.27	3.53		0.13	0.61	0.83	0.52	0.50		0.61	1.84	
Green ratio	0.25	0.10		0.25	0.10	0.10	0.20	0.33		0.20	0.33	
Unif. delay d1	56.5	67.5		43.9	64.7	66.2	53.6	40.6		54.6	50.5	
Delay factor k	0.50	0.50		0.11	0.19	0.37	0.13	0.11		0.19	0.50	
Increm. delay d2	129.7	1145		0.1	5.5	31.1	0.7	0.3		1.6	378.5	
PF factor	1.000	1.000		1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Control delay	186.2	1213		44.1	70.2	97.4	54.3	40.9		56.2	429.0	
Lane group LOS	F	F		D	E	F	D	D		E	F	
Apprch. delay	723.0			76.7			45.9			381.1		
Approach LOS	F			E			D			F		
Intersec. delay	429.8			Intersection LOS						F		

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NM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./HERITAGE RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	NO MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	0	2	3	0
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Volume (vph)	785	1890	335	345	865	1060	345	800	580	1860	545	760
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 33.0	G = 40.0	G =	G =	G = 32.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 155.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	826	1989	353	363	911	1116	363	1453		1958	1374	
Lane group cap.	679	1278	711	679	1278	711	658	886		658	858	
v/c ratio	1.22	1.56	0.50	0.53	0.71	1.57	0.55	1.64		2.98	1.60	
Green ratio	0.21	0.26	0.50	0.21	0.26	0.50	0.21	0.19		0.21	0.19	
Unif. delay d1	61.0	57.5	26.1	54.2	52.3	39.0	55.1	62.5		61.5	62.5	
Delay factor k	0.50	0.50	0.11	0.14	0.28	0.50	0.15	0.50		0.50	0.50	
Increm. delay d2	110.5	254.2	0.5	0.8	1.9	263.1	1.0	293.1		893.2	276.1	
PF factor	0.820	0.768	0.342	0.820	0.768	0.785	0.827	0.840		0.858	0.840	
Control delay	160.5	298.4	9.5	45.2	42.1	293.7	46.5	345.6		945.9	328.6	
Lane group LOS	F	F	A	D	D	F	D	F		F	F	
Apprch. delay	230.3			160.1			285.8			691.4		
Approach LOS	F			F			F			F		
Intersec. delay	367.5			Intersection LOS						F		

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9-A
WITH
MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*OTAY MESA RD./HERITAGE RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*12/09/10*	Jurisdiction	*WITH MITIGATION*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	2	2	3	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	785	1890	335	345	865	1060	345	800	580	1860	545	760
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 33.0	G = 40.0	G =	G =	G = 32.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 155.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	826	1989	353	363	911	1116	363	842	611	1958	574	800
Lane group cap.	679	1278	711	679	1278	1258	658	959	625	658	959	625
v/c ratio	1.22	1.56	0.50	0.53	0.71	0.89	0.55	0.88	0.98	2.98	0.60	1.28
Green ratio	0.21	0.26	0.50	0.21	0.26	0.50	0.21	0.19	0.44	0.21	0.19	0.44
Unif. delay d1	61.0	57.5	26.1	54.2	52.3	35.1	55.1	60.7	42.8	61.5	57.0	43.5
Delay factor k	0.50	0.50	0.11	0.14	0.28	0.41	0.15	0.40	0.48	0.50	0.19	0.50
Increm. delay d2	110.5	254.2	0.5	0.8	1.9	8.0	1.0	9.3	30.3	893.2	1.0	138.0
PF factor	0.820	0.768	0.342	0.820	0.768	0.342	0.827	0.840	0.479	0.858	0.840	0.479
Control delay	160.5	298.4	9.5	45.2	42.1	20.0	46.5	60.4	50.8	945.9	48.9	158.9
Lane group LOS	F	F	A	D	D	C	D	E	D	F	D	F
Apprch. delay	230.3			32.2			54.4			602.4		
Approach LOS	F			C			D			F		
Intersec. delay	272.0			Intersection LOS						F		

9-A
WITH
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow rate/lane	826	1989	353	363	911	1116	363	842	611	1958	574	800
Satflow per lane	1641	1818	1431	1641	1818	1431	1641	1818	1425	1641	1818	1425
Capacity/lane	679	1278	711	679	1278	1258	658	959	625	658	959	625
Flow ratio	0.26	0.40	0.25	0.11	0.18	0.44	0.11	0.17	0.43	0.61	0.12	0.56
v/c ratio	1.22	1.56	0.50	0.53	0.71	0.89	0.55	0.88	0.98	2.98	0.60	1.28
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Platoon ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.55	1.67	1.67
PF factor	1.00	1.00	0.44	0.90	0.90	0.72	0.90	0.97	0.96	1.00	0.92	1.00
Q_1	18.3	31.4	4.4	6.4	11.8	17.5	6.5	12.6	24.8	43.4	7.6	34.4
k_B	0.5	0.6	0.8	0.5	0.6	0.8	0.5	0.5	0.7	0.5	0.5	0.7
Q_2	11.8	34.2	0.8	0.6	1.4	4.3	0.6	2.5	6.6	84.5	0.7	24.8
Q avg.	30.1	65.7	5.2	6.9	13.2	21.8	7.1	15.1	31.4	127.9	8.3	59.2

Percentile Back of Queue (95th percentile)

$f_{B\%}$	1.6	1.5	1.9	1.9	1.8	1.7	1.9	1.8	1.6	1.5	1.9	1.5
BOQ, $Q_{\%}$	48.5	99.5	10.1	13.2	23.6	36.6	13.5	26.5	50.4	192	15.6	90.2

Queue Storage Ratio

Q spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Q storage	0	0	0	0	0	0	0	0	0	0	0	0
Avg. R_Q												
95% $R_{Q\%}$												

9-P
NO
MIT

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*OTAY MESA RD./HERITAGE RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*12/07/10*	Jurisdiction	*NO MITIGATION*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	0	2	3	0	2	3	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Volume (vph)	760	985	345	665	1760	1555	335	545	280	875	800	785
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 37.0	G =	G =	G = 30.0	G = 40.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	800	1037	363	700	3437		353	869		921	1668	
Lane group cap.	531	1222	686	531	1123		637	1242		637	1206	
v/c ratio	1.51	0.85	0.53	1.32	3.06		0.55	0.70		1.45	1.38	
Green ratio	0.17	0.25	0.48	0.17	0.25		0.20	0.27		0.20	0.27	
Unif. delay d1	62.5	53.8	27.2	62.5	56.5		54.0	49.6		60.0	55.0	
Delay factor k	0.50	0.38	0.13	0.50	0.50		0.15	0.27		0.50	0.50	
Increm. delay d2	237.6	5.8	0.8	156.1	929.6		1.1	1.8		209.4	177.6	
PF factor	0.867	0.782	0.385	0.867	0.915		0.833	0.758		0.833	0.758	
Control delay	291.8	47.9	11.2	210.3	981.3		46.0	39.3		259.4	219.3	
Lane group LOS	F	D	B	F	F		D	D		F	F	
Apprch. delay	130.5			850.9			41.3			233.6		
Approach LOS	F			F			D			F		
Intersec. delay	439.7			Intersection LOS						F		

9-P
N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./HERITAGE RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	0	2	3	0
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Volume (vph)	760	985	345	665	1760	1555	335	545	280	875	800	785
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 37.0	G =	G =	G = 30.0	G = 40.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	800	1037	363	700	1853	1584	353	869		921	1668	
Lane group cap.	531	1222	686	531	1222	686	637	1242		637	1206	
v/c ratio	1.51	0.85	0.53	1.32	1.52	2.31	0.55	0.70		1.45	1.38	
Green ratio	0.17	0.25	0.48	0.17	0.25	0.48	0.20	0.27		0.20	0.27	
Unif. delay d1	62.5	53.8	27.2	62.5	56.5	39.0	54.0	49.6		60.0	55.0	
Delay factor k	0.50	0.38	0.13	0.50	0.50	0.50	0.15	0.27		0.50	0.50	
Increm. delay d2	237.6	5.8	0.8	156.1	236.6	593.7	1.1	1.8		209.4	177.6	
PF factor	0.867	0.782	0.385	0.867	0.782	1.000	0.833	0.758		0.833	0.758	
Control delay	291.8	47.9	11.2	210.3	280.8	632.7	46.0	39.3		259.4	219.3	
Lane group LOS	F	D	B	F	F	F	D	D		F	F	
Apprch. delay	130.5			403.6			41.3			233.6		
Approach LOS	F			F			D			F		
Intersec. delay	257.4			Intersection LOS						F		

HCS2000™ Version 4.1f

9-P
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Flow rate/lane	800	1037	363	700	1853	1584	353	869		921	1668	
Satflow per lane	1641	1818	1430	1641	1818	1430	1641	1709		1641	1660	
Capacity/lane	531	1222	686	531	1222	686	637	1242		637	1206	
Flow ratio	0.25	0.21	0.25	0.22	0.37	1.11	0.11	0.19		0.29	0.37	
v/c ratio	1.51	0.85	0.53	1.32	1.52	2.31	0.55	0.70		1.45	1.38	
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Arrival type	5	5	5	5	5	5	5	5		5	5	
Platoon ratio	1.67	1.67	1.67	1.67	1.67	1.00	1.67	1.67		1.67	1.67	
PF factor	1.00	0.95	0.50	1.00	1.00	1.00	0.91	0.89		1.00	1.00	
Q_1	17.1	14.3	5.2	15.0	28.3	66.0	6.2	10.7		19.8	25.5	
k_B	0.4	0.6	0.7	0.4	0.6	0.7	0.5	0.6		0.5	0.6	
Q_2	18.4	2.5	0.8	12.4	30.6	113.6	0.6	1.3		19.7	23.1	
Q avg.	35.6	16.8	6.1	27.4	58.9	179.6	6.7	12.0		39.4	48.6	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	1.6	1.7	1.9	1.6	1.5	1.5	1.9	1.8		1.6	1.5	
BOQ, $Q_{\%}$	56.3	29.2	11.7	44.7	89.8	269	12.9	21.7		61.8	74.9	

Queue Storage Ratio

Q spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Q storage	0	0	0	0	0	0	0	0		0	0	
Avg. R_Q												
95% $R_{Q\%}$												

9-P

WITH MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*OTAY MESA RD./HERITAGE RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*11/07/10*	Jurisdiction	*WITH MITIGATION*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	2	2	3	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	760	985	345	665	1760	1555	335	545	280	875	800	785
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 37.0	G =	G =	G = 30.0	G = 40.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	800	1037	363	700	1853	1584	353	574	295	921	842	826
Lane group cap.	531	1222	686	531	1222	1215	637	1321	668	637	1321	668
v/c ratio	1.51	0.85	0.53	1.32	1.52	1.30	0.55	0.43	0.44	1.45	0.64	1.24
Green ratio	0.17	0.25	0.48	0.17	0.25	0.48	0.20	0.27	0.47	0.20	0.27	0.47
Unif. delay d1	62.5	53.8	27.2	62.5	56.5	39.0	54.0	45.6	26.9	60.0	48.6	40.0
Delay factor k	0.50	0.38	0.13	0.50	0.50	0.50	0.15	0.11	0.11	0.50	0.22	0.50
Increm. delay d2	237.6	5.8	0.8	156.1	236.6	142.8	1.1	0.2	0.5	209.4	1.0	119.0
PF factor	0.867	0.782	0.385	0.867	0.782	0.520	0.833	0.758	0.417	0.833	0.758	0.435
Control delay	291.8	47.9	11.2	210.3	280.8	163.1	46.0	34.8	11.7	259.4	37.8	136.4
Lane group LOS	F	D	B	F	F	F	D	C	B	F	D	F
Apprch. delay	130.5			223.8			32.5			148.1		
Approach LOS	F			F			C			F		
Intersec. delay	161.2			Intersection LOS						F		

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9-P
WITH
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*800*	*1037*	*363*	*700*	*1853*	*1584*	*353*	*574*	*295*	*921*	*842*	*826*
Satflow per lane	*1641*	*1818*	*1430*	*1641*	*1818*	*1430*	*1641*	*1818*	*1431*	*1641*	*1818*	*1431*
Capacity/lane	*531*	*1222*	*686*	*531*	*1222*	*1215*	*637*	*1321*	*668*	*637*	*1321*	*668*
Flow ratio	*0.25*	*0.21*	*0.25*	*0.22*	*0.37*	*0.63*	*0.11*	*0.12*	*0.21*	*0.29*	0.17	*0.58*
v/c ratio	*1.51*	*0.85*	*0.53*	*1.32*	*1.52*	*1.30*	*0.55*	*0.43*	*0.44*	*1.45*	*0.64*	*1.24*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.52*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.65*
PF factor	*1.00*	*0.95*	*0.50*	*1.00*	*1.00*	*1.00*	*0.91*	*0.83*	*0.50*	*1.00*	*0.88*	*1.00*
Q_1	*17.1*	*14.3*	*5.2*	*15.0*	*28.3*	*37.3*	*6.2*	*6.0*	*4.2*	*19.8*	*10.0*	*34.4*
k_B	*0.4*	*0.6*	*0.7*	*0.4*	*0.6*	*0.7*	*0.5*	*0.6*	*0.7*	*0.5*	*0.6*	*0.7*
Q_2	*18.4*	*2.5*	*0.8*	*12.4*	*30.6*	*28.9*	*0.6*	*0.5*	*0.6*	*19.7*	*1.0*	*23.0*
Q avg.	*35.6*	*16.8*	*6.1*	*27.4*	*58.9*	*66.1*	*6.7*	*6.5*	*4.7*	*39.4*	*11.0*	*57.5*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.6*	*1.7*	*1.9*	*1.6*	*1.5*	*1.5*	*1.9*	*1.9*	*2.0*	*1.6*	*1.8*	*1.5*
BOQ, $Q_{\%}$	*56.3*	*29.2*	*11.7*	*44.7*	*89.8*	*100*	*12.9*	*12.4*	*9.3*	*61.8*	*20.1*	*87.6*

Queue Storage Ratio

Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 WB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBHER30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	0	2	0	3	0	2	3	0
Lane group					LR	R		TR		L	T	
Volume (vph)				240		740		1675	870	265	550	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time					2.0	2.0		2.0		2.0	2.0	
Ext. eff. green					2.0	2.0		2.0		2.0	2.0	
Arrival type					5	5		5		5	5	
Unit Extension					3.0	3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		300	10	5	0			
Lane Width					12.0	12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0		0		0	0	
Unit Extension					3.0	3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 30.0	G =	G =	G =	G = 20.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 123.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					253	463		2679		279	579	
Lane group cap.					422	634		2276		518	3383	
v/c ratio					0.60	0.73		1.18		0.54	0.17	
Green ratio					0.24	0.24		0.49		0.16	0.68	
Unif. delay d1					41.2	42.8		31.5		47.3	7.0	
Delay factor k					0.19	0.29		0.50		0.14	0.11	
Increm. delay d2					2.4	4.3		84.6		1.1	0.0	
PF factor					0.785	0.785		0.377		0.871	0.158	
Control delay					34.7	37.9		96.5		42.3	1.1	
Lane group LOS					C	D		F		D	A	
Apprch. delay				36.8			96.5			14.5		
Approach LOS				D			F			B		
Intersec. delay	69.9			Intersection LOS						E		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LR*	*R*		*TR*		*L*	*T*	
Init. queue/lane					*0.0*	*0.0*		*0.0*		*0.0*	*0.0*	
Flow rate/lane					*253*	*463*		*2679*		*279*	*579*	
Satflow per lane					*1732*	*1468*		*1712*		*1641*	*1818*	
Capacity/lane					*422*	*634*		*2276*		*518*	*3383*	
Flow ratio					*0.15*	*0.18*		*0.57*		*0.09*	0.12	
v/c ratio					*0.60*	*0.73*		*1.18*		*0.54*	*0.17*	
I factor					*1.000*	*1.000*		*1.000*		*1.000*	*1.000*	
Arrival type					*5*	*5*		*5*		*5*	*5*	
Platoon ratio					*1.67*	*1.67*		*1.65*		*1.67*	*1.39*	
PF factor					*0.89*	*0.92*		*1.00*		*0.93*	*0.17*	
Q_1					*6.8*	*7.5*		*33.6*		*4.2*	*0.4*	
k_B					*0.5*	*0.4*		*0.7*		*0.4*	*0.9*	
Q_2					*0.7*	*1.1*		*22.6*		*0.4*	*0.2*	
Q avg.					*7.5*	*8.6*		*56.2*		*4.6*	*0.6*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$					*1.9*	*1.9*		*1.5*		*2.0*	*2.1*	
BOQ, $Q_{\%}$					*14.2*	*16.1*		*85.7*		*9.0*	*1.3*	
Queue Storage Ratio												
Q spacing					*25.0*	*25.0*		*25.0*		*25.0*	*25.0*	
Q storage					*0*	*0*		*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 WB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBHER30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	0	2	0	3	2	2	3	0
Lane group					LR	R		T	R	L	T	
Volume (vph)				240		740		1675	870	265	550	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time					2.0	2.0		2.0	2.0	2.0	2.0	
Ext. eff. green					2.0	2.0		2.0	2.0	2.0	2.0	
Arrival type					5	5		5	5	5	5	
Unit Extension					3.0	3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10			10		300	10	5	0			
Lane Width					12.0	12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0		0	0	0	0	
Unit Extension					3.0	3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 30.0	G =	G =	G =	G = 20.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 123.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					253	463		1763	916	279	579	
Lane group cap.					422	634		2416	1225	518	3383	
v/c ratio					0.60	0.73		0.73	0.75	0.54	0.17	
Green ratio					0.24	0.24		0.49	0.49	0.16	0.68	
Unif. delay d1					41.2	42.8		25.1	25.4	47.3	7.0	
Delay factor k					0.19	0.29		0.29	0.30	0.14	0.11	
Increm. delay d2					2.4	4.3		1.2	2.6	1.1	0.0	
PF factor					0.785	0.785		0.365	0.365	0.871	0.158	
Control delay					34.7	37.9		10.3	11.9	42.3	1.1	
Lane group LOS					C	D		B	B	D	A	
Apprch. delay				36.8			10.8			14.5		
Approach LOS				D			B			B		
Intersec. delay	15.9			Intersection LOS						B		

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MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LR*	*R*		*T*	*R*	*L*	*T*	
Init. queue/lane					*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane					*253*	*463*		*1763*	*916*	*279*	*579*	
Satflow per lane					*1732*	*1468*		*1818*	*1419*	*1641*	*1818*	
Capacity/lane					*422*	*634*		*2416*	*1225*	*518*	*3383*	
Flow ratio					*0.15*	*0.18*		*0.36*	*0.36*	*0.09*	0.12	
v/c ratio					*0.60*	*0.73*		*0.73*	*0.75*	*0.54*	*0.17*	
I factor					*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type					*5*	*5*		*5*	*5*	*5*	*5*	
Platoon ratio					*1.67*	*1.67*		*1.67*	*1.67*	*1.67*	*1.39*	
PF factor					*0.89*	*0.92*		*0.58*	*0.59*	*0.93*	*0.17*	
Q_1					*6.8*	*7.5*		*10.2*	*8.4*	*4.2*	*0.4*	
k_B					*0.5*	*0.4*		*0.8*	*0.7*	*0.4*	*0.9*	
Q_2					*0.7*	*1.1*		*2.0*	*1.8*	*0.4*	*0.2*	
Q avg.					*7.5*	*8.6*		*12.1*	*10.2*	*4.6*	*0.6*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$					*1.9*	*1.9*		*1.8*	*1.8*	*2.0*	*2.1*	
BOQ, $Q_\%$					*14.2*	*16.1*		*21.9*	*18.8*	*9.0*	*1.3*	

Queue Storage Ratio

Q spacing					*25.0*	*25.0*		*25.0*	*25.0*	*25.0*	*25.0*	
Q storage					*0*	*0*		*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*HERITAGE RD./ SR-905 WB RAMPS*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/13/11*	Jurisdiction	*905WBHER30P3BNLM*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	0	2	0	3	0	2	3	0
Lane group					LR	R		TR		L	T	
Volume (vph)				180		130		780	1350	1200	1345	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time					2.0	2.0		2.0		2.0	2.0	
Ext. eff. green					2.0	2.0		2.0		2.0	2.0	
Arrival type					5	5		5		5	5	
Unit Extension					3.0	3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width					12.0	12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0		0		0	0	
Unit Extension					3.0	3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 57.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					189	137		2242		1263	1416	
Lane group cap.					231	347		1793		1211	3995	
v/c ratio					0.82	0.39		1.25		1.04	0.35	
Green ratio					0.13	0.13		0.40		0.38	0.81	
Unif. delay d1					63.2	59.5		45.0		46.5	3.9	
Delay factor k					0.36	0.11		0.50		0.50	0.11	
Increm. delay d2					20.2	0.7		117.5		37.8	0.1	
PF factor					0.897	0.897		0.556		0.591	0.259	
Control delay					76.9	54.1		142.5		65.3	1.1	
Lane group LOS					E	D		F		E	A	
Apprch. delay				67.3			142.5			31.3		
Approach LOS				E			F			C		
Intersec. delay	81.1			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LR*	*R*		*TR*		*L*	*T*	
Init. queue/lane					*0.0*	*0.0*		*0.0*		*0.0*	*0.0*	
Flow rate/lane					*189*	*137*		*2242*		*1263*	*1416*	
Satflow per lane					*1732*	*1468*		*1645*		*1641*	*1818*	
Capacity/lane					*231*	*347*		*1793*		*1211*	*3995*	
Flow ratio					*0.11*	*0.05*		*0.50*		*0.40*	0.29	
v/c ratio					*0.82*	*0.39*		*1.25*		*1.04*	*0.35*	
I factor					*1.000*	*1.000*		*1.000*		*1.000*	*1.000*	
Arrival type					*5*	*5*		*5*		*5*	*5*	
Platoon ratio					*1.67*	*1.67*		*1.67*		*1.67*	*1.18*	
PF factor					*0.98*	*0.93*		*1.00*		*1.00*	*0.28*	
Q_1					*7.5*	*2.7*		*34.3*		*27.1*	*1.6*	
k_B					*0.4*	*0.4*		*0.7*		*0.7*	*1.2*	
Q_2					*1.4*	*0.2*		*23.8*		*9.4*	*0.6*	
Q avg.					*8.9*	*3.0*		*58.1*		*36.5*	*2.3*	

Percentile Back of Queue (95th percentile)

	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
$f_{B\%}$					*1.9*	*2.0*		*1.5*		*1.6*	*2.0*	
BOQ, $Q_{\%}$					*16.6*	*5.9*		*88.5*		*57.7*	*4.6*	

Queue Storage Ratio

	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
Q spacing					*25.0*	*25.0*		*25.0*		*25.0*	*25.0*	
Q storage					*0*	*0*		*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 WB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBHER30P3BNLM/WITH MITIGATI
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	0	2	0	3	2	2	3	0
Lane group					LR	R		T	R	L	T	
Volume (vph)				180		130		780	1350	1200	1345	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time					2.0	2.0		2.0	2.0	2.0	2.0	
Ext. eff. green					2.0	2.0		2.0	2.0	2.0	2.0	
Arrival type					5	5		5	5	5	5	
Unit Extension					3.0	3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width					12.0	12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0		0	0	0	0	
Unit Extension					3.0	3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 57.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					189	137		821	1421	1263	1416	
Lane group cap.					231	347		1981	1473	1211	3995	
v/c ratio					0.82	0.39		0.41	0.96	1.04	0.35	
Green ratio					0.13	0.13		0.40	0.57	0.38	0.81	
Unif. delay d1					63.2	59.5		32.4	31.1	46.5	3.9	
Delay factor k					0.36	0.11		0.11	0.47	0.50	0.11	
Increm. delay d2					20.2	0.7		0.1	15.8	37.8	0.1	
PF factor					0.897	0.897		0.556	0.128	0.591	0.259	
Control delay					76.9	54.1		18.1	19.8	65.3	1.1	
Lane group LOS					E	D		B	B	E	A	
Apprch. delay				67.3			19.2			31.3		
Approach LOS				E			B			C		
Intersec. delay	28.4			Intersection LOS						C		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LR*	*R*		*T*	*R*	*L*	*T*	
Init. queue/lane					*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane					*189*	*137*		*821*	*1421*	*1263*	*1416*	
Satflow per lane					*1732*	*1468*		*1818*	*1468*	*1641*	*1818*	
Capacity/lane					*231*	*347*		*1981*	*1473*	*1211*	*3995*	
Flow ratio					*0.11*	*0.05*		*0.17*	*0.55*	*0.40*	0.29	
v/c ratio					*0.82*	*0.39*		*0.41*	*0.96*	*1.04*	*0.35*	
I factor					*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type					*5*	*5*		*5*	*5*	*5*	*5*	
Platoon ratio					*1.67*	*1.67*		*1.67*	*1.67*	*1.67*	*1.18*	
PF factor					*0.98*	*0.93*		*0.64*	*0.65*	*1.00*	*0.28*	
Q_1					*7.5*	*2.7*		*5.8*	*20.7*	*27.1*	*1.6*	
k_B					*0.4*	*0.4*		*0.8*	*0.8*	*0.7*	*1.2*	
Q_2					*1.4*	*0.2*		*0.5*	*7.5*	*9.4*	*0.6*	
Q avg.					*8.9*	*3.0*		*6.3*	*28.2*	*36.5*	*2.3*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$					*1.9*	*2.0*		*1.9*	*1.6*	*1.6*	*2.0*	
BOQ, $Q_{\%}$					*16.6*	*5.9*		*12.1*	*45.9*	*57.7*	*4.6*	

Queue Storage Ratio

Q spacing					*25.0*	*25.0*		*25.0*	*25.0*	*25.0*	*25.0*	
Q storage					*0*	*0*		*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 EB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/07/10	Jurisdiction	905EBHER30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	0	0	3	0	2	3	0
Lane group				L	LR			TR		L	T	
Volume (vph)				1125		680		1865	240	120	670	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0	2.0			2.0		2.0	2.0	
Ext. eff. green				2.0	2.0			2.0		2.0	2.0	
Arrival type				5	5			5		5	5	
Unit Extension				3.0	3.0			3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10	5	0			
Lane Width				12.0	12.0			12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0			0		0	0	
Unit Extension				3.0	3.0			3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 67.0	G =	G =	G =	G = 15.0	G = 55.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				900	1000			2216		126	705	
Lane group cap.				1424	715			1780		319	2443	
v/c ratio				0.63	1.40			1.24		0.39	0.29	
Green ratio				0.45	0.45			0.37		0.10	0.49	
Unif. delay d1				32.0	41.5			47.5		63.2	22.4	
Delay factor k				0.21	0.50			0.50		0.11	0.11	
Increm. delay d2				0.9	187.8			115.1		0.8	0.1	
PF factor				0.462	0.580			0.614		0.926	0.351	
Control delay				15.7	211.9			144.3		59.4	7.9	
Lane group LOS				B	F			F		E	A	
Apprch. delay				119.0				144.3		15.7		
Approach LOS				F				F		B		
Intersec. delay	113.0			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*	*LR*			*TR*		*L*	*T*	
Init. queue/lane				*0.0*	*0.0*			*0.0*		*0.0*	*0.0*	
Flow rate/lane				*900*	*1000*			*2216*		*126*	*705*	
Satflow per lane				*1641*	*1600*			*1782*		*1641*	*1818*	
Capacity/lane				*1424*	*715*			*1780*		*319*	*2443*	
Flow ratio				*0.28*	*0.63*			*0.46*		*0.04*	0.14	
v/c ratio				*0.63*	*1.40*			*1.24*		*0.39*	*0.29*	
I factor				*1.000*	*1.000*			*1.000*		*1.000*	*1.000*	
Arrival type				*5*	*5*			*5*		*5*	*5*	
Platoon ratio				*1.67*	*1.52*			*1.67*		*1.67*	*1.67*	
PF factor				*0.63*	*1.00*			*1.00*		*0.95*	*0.39*	
Q_1				*9.3*	*41.7*			*33.9*		*2.4*	*2.5*	
k_B				*0.8*	*0.8*			*0.7*		*0.3*	*0.9*	
Q_2				*1.3*	*38.1*			*23.2*		*0.2*	*0.4*	
Q avg.				*10.6*	*79.8*			*57.1*		*2.6*	*2.9*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$				*1.8*	*1.5*			*1.5*		*2.0*	*2.0*	
BOQ, $Q_{\%}$				*19.4*	*120*			*87.0*		*5.2*	*5.7*	

Queue Storage Ratio

Q spacing				*25.0*	*25.0*			*25.0*		*25.0*	*25.0*	
Q storage				*0*	*0*			*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 EB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/07/10	Jurisdiction	905EBHER30A3BNLM/WITH MITIGATI
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	1	2	3	0
Lane group				L		R		T	R	L	T	
Volume (vph)				1125		680		1865	240	120	670	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0	2.0	2.0	2.0	
Ext. eff. green				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type				5		5		5	5	5	5	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10	5	0			
Lane Width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0	0	0	0	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 67.0	G =	G =	G =	G = 15.0	G = 55.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				1184		716		1963	253	126	705	
Lane group cap.				1424		842		1816	1217	319	2443	
v/c ratio				0.83		0.85		1.08	0.21	0.39	0.29	
Green ratio				0.45		0.57		0.37	0.85	0.10	0.49	
Unif. delay d1				36.5		26.6		47.5	2.1	63.2	22.4	
Delay factor k				0.37		0.38		0.50	0.11	0.11	0.11	
Increm. delay d2				4.3		8.3		46.7	0.1	0.8	0.1	
PF factor				0.462		0.117		0.614	0.326	0.926	0.351	
Control delay				21.2		11.4		75.9	0.8	59.4	7.9	
Lane group LOS				C		B		E	A	E	A	
Apprch. delay				17.5			67.3			15.7		
Approach LOS				B			E			B		
Intersec. delay	39.5			Intersection LOS						D		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*		*R*		*T*	*R*	*L*	*T*	
Init. queue/lane				*0.0*		*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane				*1184*		*716*		*1963*	*253*	*126*	*705*	
Satflow per lane				*1641*		*1468*		*1818*	*1437*	*1641*	*1818*	
Capacity/lane				*1424*		*842*		*1816*	*1217*	*319*	*2443*	
Flow ratio				*0.37*		*0.49*		*0.40*	*0.18*	*0.04*	0.14	
v/c ratio				*0.83*		*0.85*		*1.08*	*0.21*	*0.39*	*0.29*	
I factor				*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type				*5*		*5*		*5*	*5*	*5*	*5*	
Platoon ratio				*1.67*		*1.66*		*1.67*	*1.12*	*1.67*	*1.67*	
PF factor				*0.76*		*0.31*		*1.00*	*0.33*	*0.95*	*0.39*	
Q_1				*17.0*		*7.8*		*30.0*	*0.7*	*2.4*	*2.5*	
k_B				*0.8*		*0.8*		*0.7*	*1.1*	*0.3*	*0.9*	
Q_2				*3.2*		*3.9*		*12.2*	*0.3*	*0.2*	*0.4*	
Q avg.				*20.2*		*11.6*		*42.2*	*0.9*	*2.6*	*2.9*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$				*1.7*		*1.8*		*1.6*	*2.1*	*2.0*	*2.0*	
BOQ, $Q_{\%}$				*34.2*		*21.1*		*65.7*	*1.9*	*5.2*	*5.7*	

Queue Storage Ratio

Q spacing				*25.0*		*25.0*		*25.0*	*25.0*	*25.0*	*25.0*	
Q storage				*0*		*0*		*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 EB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905EBHER30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	0	0	3	0	2	3	0
Lane group				L	LR			TR		L	T	
Volume (vph)				900		500		1630	500	300	1225	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0	2.0			2.0		2.0	2.0	
Ext. eff. green				2.0	2.0			2.0		2.0	2.0	
Arrival type				5	5			5		5	5	
Unit Extension				3.0	3.0			3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				12.0	12.0			12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0			0		0	0	
Unit Extension				3.0	3.0			3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 60.0	G =	G =	G =	G = 22.0	G = 55.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				777	696			2242		316	1289	
Lane group cap.				1275	637			1752		467	2675	
v/c ratio				0.61	1.09			1.28		0.68	0.48	
Green ratio				0.40	0.40			0.37		0.15	0.54	
Unif. delay d1				35.7	45.0			47.5		60.6	21.5	
Delay factor k				0.20	0.50			0.50		0.25	0.11	
Increm. delay d2				0.9	63.5			130.4		3.9	0.1	
PF factor				0.556	0.556			0.614		0.885	0.217	
Control delay				20.7	88.5			159.6		57.6	4.8	
Lane group LOS				C	F			F		E	A	
Apprch. delay				52.8			159.6			15.2		
Approach LOS				D			F			B		
Intersec. delay	86.4			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*	*LR*			*TR*		*L*	*T*	
Init. queue/lane				*0.0*	*0.0*			*0.0*		*0.0*	*0.0*	
Flow rate/lane				*777*	*696*			*2242*		*316*	*1289*	
Satflow per lane				*1641*	*1593*			*1754*		*1641*	*1818*	
Capacity/lane				*1275*	*637*			*1752*		*467*	*2675*	
Flow ratio				*0.24*	*0.44*			*0.47*		*0.10*	0.26	
v/c ratio				*0.61*	*1.09*			*1.28*		*0.68*	*0.48*	
I factor				*1.000*	*1.000*			*1.000*		*1.000*	*1.000*	
Arrival type				*5*	*5*			*5*		*5*	*5*	
Platoon ratio				*1.67*	*1.67*			*1.67*		*1.67*	*1.67*	
PF factor				*0.71*	*1.00*			*1.00*		*0.96*	*0.28*	
Q_1				*9.4*	*29.0*			*34.3*		*6.1*	*3.5*	
k_B				*0.7*	*0.7*			*0.7*		*0.4*	*0.9*	
Q_2				*1.1*	*12.4*			*25.4*		*0.8*	*0.9*	
Q avg.				*10.5*	*41.4*			*59.7*		*6.9*	*4.3*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$				*1.8*	*1.6*			*1.5*		*1.9*	*2.0*	
BOQ, $Q_{\%}$				*19.2*	*64.6*			*90.9*		*13.1*	*8.5*	

Queue Storage Ratio

Q spacing				*25.0*	*25.0*			*25.0*		*25.0*	*25.0*	
Q storage				*0*	*0*			*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 EB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905EBHER30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	1	2	3	0
Lane group				L		R		T	R	L	T	
Volume (vph)				900		500		1630	500	300	1225	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0	2.0	2.0	2.0	
Ext. eff. green				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type				5		5		5	5	5	5	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0	0	0	0	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 60.0	G =	G =	G =	G = 22.0	G = 55.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				947		526		1716	526	316	1289	
Lane group cap.				1275		587		1816	1174	467	2675	
v/c ratio				0.74		0.90		0.94	0.45	0.68	0.48	
Green ratio				0.40		0.40		0.37	0.80	0.15	0.54	
Unif. delay d1				38.4		42.1		46.0	4.7	60.6	21.5	
Delay factor k				0.30		0.42		0.46	0.11	0.25	0.11	
Increm. delay d2				2.4		16.4		10.8	0.3	3.9	0.1	
PF factor				0.556		0.556		0.614	0.250	0.885	0.217	
Control delay				23.7		39.8		39.1	1.4	57.6	4.8	
Lane group LOS				C		D		D	A	E	A	
Apprch. delay				29.5			30.3			15.2		
Approach LOS				C			C			B		
Intersec. delay	25.5			Intersection LOS						C		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*		*R*		*T*	*R*	*L*	*T*	
Init. queue/lane				*0.0*		*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane				*947*		*526*		*1716*	*526*	*316*	*1289*	
Satflow per lane				*1641*		*1468*		*1818*	*1468*	*1641*	*1818*	
Capacity/lane				*1275*		*587*		*1816*	*1174*	*467*	*2675*	
Flow ratio				*0.30*		*0.36*		*0.35*	*0.36*	*0.10*	0.26	
v/c ratio				*0.74*		*0.90*		*0.94*	*0.45*	*0.68*	*0.48*	
I factor				*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type				*5*		*5*		*5*	*5*	*5*	*5*	
Platoon ratio				*1.67*		*1.67*		*1.67*	*1.19*	*1.67*	*1.67*	
PF factor				*0.77*		*0.89*		*0.95*	*0.28*	*0.96*	*0.28*	
Q_1				*13.4*		*18.1*		*24.1*	*1.9*	*6.1*	*3.5*	
k_B				*0.7*		*0.7*		*0.7*	*1.0*	*0.4*	*0.9*	
Q_2				*1.9*		*3.9*		*5.6*	*0.8*	*0.8*	*0.9*	
Q avg.				*15.3*		*22.0*		*29.7*	*2.7*	*6.9*	*4.3*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$				*1.8*		*1.7*		*1.6*	*2.0*	*1.9*	*2.0*	
BOQ, $Q_{\%}$				*26.9*		*36.9*		*48.0*	*5.5*	*13.1*	*8.5*	
Queue Storage Ratio												
Q spacing				*25.0*		*25.0*		*25.0*	*25.0*	*25.0*	*25.0*	
Q storage				*0*		*0*		*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*HERITAGE RD./AIRWAY RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/13/11*	Jurisdiction	*HERAIR30A3BNLM/NO MIT*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	1	3	0	0	0	0	2	0	1
Lane group	L	T		L	TR					L		R
Volume (vph)	185	2285		10	1220	1920				1565		230
% Heavy veh	10	10		1	10	10				10		10
PHF	0.95	0.95		0.95	0.95	0.95				0.95		0.95
Actuated (P/A)	A	A		A	A	A				A		A
Startup lost time	2.0	2.0		2.0	2.0					2.0		2.0
Ext. eff. green	2.0	2.0		2.0	2.0					2.0		2.0
Arrival type	5	5		5	5					5		5
Unit Extension	3.0	3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0			10	5	0	10			10	5	0
Lane Width	12.0	12.0		12.0	12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0					0		0
Unit Extension	3.0	3.0		3.0	3.0					3.0		3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 80.0	G =	G =	G = 47.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	195	2405		11	3305					1647		242
Lane group cap.	212	2642		119	2371					999		583
v/c ratio	0.92	0.91		0.09	1.39					1.65		0.42
Green ratio	0.07	0.53		0.07	0.53					0.31		0.41
Unif. delay d1	69.6	31.7		65.7	35.0					51.5		31.8
Delay factor k	0.44	0.43		0.11	0.50					0.50		0.11
Increm. delay d2	31.7	3.8		0.2	179.1					296.4		0.5
PF factor	0.952	0.238		0.952	0.683					0.696		0.543
Control delay	98.0	11.4		62.8	203.0					332.2		17.7
Lane group LOS	F	B		E	F					F		B
Apprch. delay	17.9			202.6						291.9		
Approach LOS	B			F						F		
Intersec. delay	162.7			Intersection LOS						F		

HCS2000™

Version 4.1f

12
A
N/M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*		*L*	*TR*					*L*		*R*
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*					*0.0*		*0.0*
Flow rate/lane	*195*	*2405*		*11*	*3305*					*1647*		*242*
Satflow per lane	*1641*	*1818*		*1787*	*1631*					*1641*		*1433*
Capacity/lane	*212*	*2642*		*119*	*2371*					*999*		*583*
Flow ratio	*0.06*	*0.49*		*0.01*	*0.74*					*0.52*		*0.17*
v/c ratio	*0.92*	*0.91*		*0.09*	*1.39*					*1.65*		*0.42*
I factor	*0.700*	*0.700*		*0.700*	*0.700*					*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*		*5*	*5*					*5*		*5*
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.28*					*1.67*		*1.67*
PF factor	*1.00*	*0.64*		*0.96*	*1.00*					*1.00*		*0.63*
Q_1	*4.1*	*21.3*		*0.4*	*50.5*					*35.3*		*4.5*
k_B	*0.2*	*0.6*		*0.2*	*0.6*					*0.6*		*0.7*
Q_2	*1.0*	*4.6*		*0.0*	*44.9*					*43.3*		*0.5*
Q avg.	*5.1*	*25.9*		*0.4*	*95.5*					*78.6*		*5.0*

Percentile Back of Queue (95th percentile)

	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
$f_{B\%}$	*2.0*	*1.6*		*2.1*	*1.5*					*1.5*		*2.0*
BOQ, $Q_{\%}$	*10.0*	*42.6*		*0.9*	*143*					*119*		*9.8*

Queue Storage Ratio

	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*					*25.0*		*25.0*
Q storage	*0*	*0*		*0*	*0*					*0*		*0*
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™ Version 4.1f

12-A
w/
M

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	HERITAGE RD./AIRWAY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	HERAIR30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	1	3	2	0	0	0	2	0	1
Lane group	L	T		L	T	R				L		R
Volume (vph)	185	2285		10	1220	1920				1565		230
% Heavy veh	10	10		1	10	10				10		10
PHF	0.95	0.95		0.95	0.95	0.95				0.95		0.95
Actuated (P/A)	A	A		A	A	A				A		A
Startup lost time	2.0	2.0		2.0	2.0	2.0				2.0		2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0				2.0		2.0
Arrival type	5	5		5	5	5				5		5
Unit Extension	3.0	3.0		3.0	3.0	3.0				3.0		3.0
Ped/Bike/RTOR Volume	0			10	5	0	10			10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0				12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0				0		0
Unit Extension	3.0	3.0		3.0	3.0	3.0				3.0		3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 80.0	G =	G =	G = 47.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	195	2405		11	1284	2021				1647		242
Lane group cap.	212	2642		119	2642	1341				999		583
v/c ratio	0.92	0.91		0.09	0.49	1.51				1.65		0.42
Green ratio	0.07	0.53		0.07	0.53	0.53				0.31		0.41
Unif. delay d1	69.6	31.7		65.7	22.0	35.0				51.5		31.8
Delay factor k	0.44	0.43		0.11	0.11	0.50				0.50		0.11
Increm. delay d2	31.7	3.8		0.2	0.1	230.9				296.4		0.5
PF factor	0.952	0.238		0.952	0.238	0.791				0.696		0.543
Control delay	98.0	11.4		62.8	5.3	258.6				332.2		17.7
Lane group LOS	F	B		E	A	F				F		B
Apprch. delay	17.9			159.9						291.9		
Approach LOS	B			F						F		
Intersec. delay	144.5			Intersection LOS						F		

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Version 4.1f

12-A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT.-3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T		L	T	R				L		R
Init. queue/lane	0.0	0.0		0.0	0.0	0.0				0.0		0.0
Flow rate/lane	195	2405		11	1284	2021				1647		242
Satflow per lane	1641	1818		1787	1818	1421				1641		1433
Capacity/lane	212	2642		119	2642	1341				999		583
Flow ratio	0.06	0.49		0.01	0.26	0.80				0.52		0.17
v/c ratio	0.92	0.91		0.09	0.49	1.51				1.65		0.42
I factor	0.700	0.700		0.700	0.700	0.700				1.000	1.000	1.000
Arrival type	5	5		5	5	5				5		5
Platoon ratio	1.67	1.67		1.67	1.67	1.18				1.67		1.67
PF factor	1.00	0.64		0.96	0.31	1.00				1.00		0.63
Q_1	4.1	21.3		0.4	3.8	47.5				35.3		4.5
k_B	0.2	0.6		0.2	0.6	0.6				0.6		0.7
Q_2	1.0	4.6		0.0	0.6	49.6				43.3		0.5
Q avg.	5.1	25.9		0.4	4.4	97.1				78.6		5.0
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	2.0	1.6		2.1	2.0	1.5				1.5		2.0
BOQ, $Q_\%$	10.0	42.6		0.9	8.7	146				119		9.8
Queue Storage Ratio												
Q spacing	25.0	25.0		25.0	25.0	25.0				25.0		25.0
Q storage	0	0		0	0	0				0		0
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™ Version 4.1f

12- P
N
M

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	HERITAGE RD./AIRWAY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	HERAIR30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/NO MIT.

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	1	3	0	0	0	0	2	0	1
Lane group	L	T		L	TR					L		R
Volume (vph)	230	1220		10	2065	1900				1940		185
% Heavy veh	10	10		1	10	10				10		10
PHF	0.95	0.95		0.95	0.95	0.95				0.95		0.95
Actuated (P/A)	A	A		A	A	A				A		A
Startup lost time	2.0	2.0		2.0	2.0					2.0		2.0
Ext. eff. green	2.0	2.0		2.0	2.0					2.0		2.0
Arrival type	5	5		5	5					5		5
Unit Extension	3.0	3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0			10	5	0	10			10	5	0
Lane Width	12.0	12.0		12.0	12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0					0		0
Unit Extension	3.0	3.0		3.0	3.0					3.0		3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 59.0	G =	G =	G = 68.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	242	1284		11	4174					2042		195
Lane group cap.	212	1948		119	1789					1445		786
v/c ratio	1.14	0.66		0.09	2.33					1.41		0.25
Green ratio	0.07	0.39		0.07	0.39					0.45		0.55
Unif. delay d1	70.0	37.3		65.7	45.5					41.0		17.8
Delay factor k	0.50	0.23		0.11	0.50					0.50		0.11
Increm. delay d2	95.6	0.6		0.2	601.1					190.1		0.2
PF factor	0.952	0.568		0.952	0.977					0.599		0.196
Control delay	162.3	21.7		62.8	645.6					214.7		3.7
Lane group LOS	F	C		E	F					F		A
Apprch. delay	44.0			644.1						196.3		
Approach LOS	D			F						F		
Intersec. delay	402.8			Intersection LOS						F		

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12-P
NM

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T		L	TR					L		R
Init. queue/lane	0.0	0.0		0.0	0.0					0.0		0.0
Flow rate/lane	242	1284		11	4174					2042		195
Satflow per lane	1641	1818		1787	1669					1641		1438
Capacity/lane	212	1948		119	1789					1445		786
Flow ratio	0.08	0.26		0.01	0.92					0.64		0.14
v/c ratio	1.14	0.66		0.09	2.33					1.41		0.25
I factor	0.700	0.700		0.700	0.700					1.000	1.000	1.000
Arrival type	5	5		5	5					5		5
Platoon ratio	1.67	1.67		1.67	1.03					1.48		1.67
PF factor	1.00	0.74		0.96	1.00					1.00		0.22
Q_1	5.2	11.9		0.4	63.8					43.8		0.9
k_B	0.2	0.5		0.2	0.5					0.8		0.8
Q_2	2.8	1.0		0.0	110.4					40.9		0.3
Q avg.	8.0	12.9		0.4	174.2					84.7		1.2

Percentile Back of Queue (95th percentile)

$f_{B\%}$	1.9	1.8		2.1	1.5					1.5		2.1
BOQ, $Q_{\%}$	15.1	23.1		0.9	261					127		2.5

Queue Storage Ratio

Q spacing	25.0	25.0		25.0	25.0					25.0		25.0
Q storage	0	0		0	0					0		0
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

12-P
w/
M

SHORT REPORT

General Information

Analyst USAI
Agency or Co. USAI
Date Performed 03/13/11
Time Period PM PEAK HOUR

Site Information

Intersection HERITAGE RD./AIRWAY RD.
Area Type All other areas
Jurisdiction HERAIR30P3BNLM/WITH MIT
Analysis Year YEAR 2030 ALT.-3B/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	1	3	2	0	0	0	2	0	1
Lane group	L	T		L	T	R				L		R
Volume (vph)	230	1220		10	2065	1900				1940		185
% Heavy veh	10	10		1	10	10				10		10
PHF	0.95	0.95		0.95	0.95	0.95				0.95		0.95
Actuated (P/A)	A	A		A	A	A				A		A
Startup lost time	2.0	2.0		2.0	2.0	2.0				2.0		2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0				2.0		2.0
Arrival type	5	5		5	5	5				5		5
Unit Extension	3.0	3.0		3.0	3.0	3.0				3.0		3.0
Ped/Bike/RTOR Volume	0			10	5	0	10			10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0				12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0				0		0
Unit Extension	3.0	3.0		3.0	3.0	3.0				3.0		3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 59.0	G =	G =	G = 68.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	242	1284		11	2174	2000				2042		195
Lane group cap.	212	1948		119	1948	2208				1445		786
v/c ratio	1.14	0.66		0.09	1.12	0.91				1.41		0.25
Green ratio	0.07	0.39		0.07	0.39	0.88				0.45		0.55
Unif. delay d1	70.0	37.3		65.7	45.5	5.3				41.0		17.8
Delay factor k	0.50	0.23		0.11	0.50	0.43				0.50		0.11
Increm. delay d2	95.6	0.6		0.2	57.8	4.3				190.1		0.2
PF factor	0.952	0.568		0.952	0.568	0.417				0.599		0.196
Control delay	162.3	21.7		62.8	83.7	6.5				214.7		3.7
Lane group LOS	F	C		E	F	A				F		A
Apprch. delay	44.0			46.7						196.3		
Approach LOS	D			D						F		
Intersec. delay	88.3			Intersection LOS						F		

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12-P
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*		*L*	*T*	*R*				*L*		*R*
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*				*0.0*		*0.0*
Flow rate/lane	*242*	*1284*		*11*	*2174*	*2000*				*2042*		*195*
Satflow per lane	*1641*	*1818*		*1787*	*1818*	*1418*				*1641*		*1438*
Capacity/lane	*212*	*1948*		*119*	*1948*	*2208*				*1445*		*786*
Flow ratio	*0.08*	*0.26*		*0.01*	*0.44*	*0.80*				*0.64*		*0.14*
v/c ratio	*1.14*	*0.66*		*0.09*	*1.12*	*0.91*				*1.41*		*0.25*
I factor	*0.700*	*0.700*		*0.700*	*0.700*	*0.700*				*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*		*5*	*5*	*5*				*5*		*5*
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*	*1.08*				*1.48*		*1.67*
PF factor	*1.00*	*0.74*		*0.96*	*1.00*	*0.60*				*1.00*		*0.22*
Q_1	*5.2*	*11.9*		*0.4*	*33.3*	*16.8*				*43.8*		*0.9*
k_B	*0.2*	*0.5*		*0.2*	*0.5*	*0.7*				*0.8*		*0.8*
Q_2	*2.8*	*1.0*		*0.0*	*14.2*	*5.3*				*40.9*		*0.3*
Q avg.	*8.0*	*12.9*		*0.4*	*47.4*	*22.1*				*84.7*		*1.2*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.9*	*1.8*		*2.1*	*1.5*	*1.7*				*1.5*		*2.1*
BOQ, $Q_{\%}$	*15.1*	*23.1*		*0.9*	*73.2*	*37.0*				*127*		*2.5*
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*	*25.0*				*25.0*		*25.0*
Q storage	*0*	*0*		*0*	*0*	*0*				*0*		*0*
Avg. R_Q												
95% $R_{Q\%}$												

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Version 4.1f

⑬

No Intersection
With Alternative 3-B

Heritage Road at
Siempre Viva Road

14 A
NO MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./CACTUS RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/07/10	Jurisdiction	OMCAC30A3BNLMNM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	2	3	0	2	1	1	1	1	0
Lane group	L	TR		L	TR		L	TR	R	L	TR	
Volume (vph)	195	2085	1500	930	1470	85	975	70	700	55	25	55
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5		5	5		5	5	5	5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 33.0	G = 45.0	G =	G =	G = 40.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	205	3774		979	1636		1026	74	737	58	84	
Lane group cap.	361	1378		701	1470		850	485	696	164	157	
v/c ratio	0.57	2.74		1.40	1.11		1.21	0.15	1.06	0.35	0.54	
Green ratio	0.22	0.30		0.22	0.30		0.27	0.27	0.49	0.10	0.10	
Unif. delay d1	52.1	52.5		58.5	52.5		55.0	42.0	38.5	63.0	64.2	
Delay factor k	0.16	0.50		0.50	0.50		0.50	0.11	0.50	0.11	0.14	
Increm. delay d2	2.1	784.5		187.1	60.9		104.2	0.1	50.8	1.3	3.6	
PF factor	0.812	0.933		0.812	0.714		0.758	0.758	0.368	0.926	0.926	
Control delay	44.5	833.5		234.6	98.4		145.9	32.0	64.9	59.6	63.0	
Lane group LOS	D	F		F	F		F	C	E	E	E	
Apprch. delay	792.8			149.4			108.8			61.6		
Approach LOS	F			F			F			E		
Intersec. delay	437.9			Intersection LOS						F		

14A
WITH
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./CACTUS RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/09/10	Jurisdiction	OMCAC30A3BNLMWM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LA MEDIA/WITH

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	2	2	3	1	2	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	195	2085	1500	930	1470	85	975	70	700	55	25	55
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 33.0	G = 45.0	G =	G =	G = 40.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	205	2195	1579	979	1547	89	1026	74	737	58	84	
Lane group cap.	361	1486	1498	701	1486	422	850	485	696	164	157	
v/c ratio	0.57	1.48	1.05	1.40	1.04	0.21	1.21	0.15	1.06	0.35	0.54	
Green ratio	0.22	0.30	0.60	0.22	0.30	0.30	0.27	0.27	0.49	0.10	0.10	
Unif. delay d1	52.1	52.5	30.0	58.5	52.5	39.2	55.0	42.0	38.5	63.0	64.2	
Delay factor k	0.16	0.50	0.50	0.50	0.50	0.11	0.50	0.11	0.50	0.11	0.14	
Increm. delay d2	2.1	218.4	39.0	187.1	34.8	0.3	104.2	0.1	50.8	1.3	3.6	
PF factor	0.812	0.714	0.246	0.812	0.714	0.714	0.758	0.758	0.368	0.926	0.926	
Control delay	44.5	255.9	46.3	234.6	72.3	28.3	145.9	32.0	64.9	59.6	63.0	
Lane group LOS	D	F	D	F	E	C	F	C	E	E	E	
Apprch. delay	161.8			131.5			108.8			61.6		
Approach LOS	F			F			F			E		
Intersec. delay	139.6			Intersection LOS						F		

14-P
NO
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./CACTUS RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/07/10	Jurisdiction	OMCAC30P3BNLMNM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	2	3	0	2	1	1	1	1	0
Lane group	L	TR		L	TR		L	TR	R	L	TR	
Volume (vph)	140	1165	975	645	2040	60	1500	50	930	175	80	180
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5		5	5		5	5	5	5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 33.0	G = 45.0	G =	G =	G = 40.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	147	2252		679	2210		1579	53	979	184	273	
Lane group cap.	361	1368		701	1478		850	485	696	164	157	
v/c ratio	0.41	1.65		0.97	1.50		1.86	0.11	1.41	1.12	1.74	
Green ratio	0.22	0.30		0.22	0.30		0.27	0.27	0.49	0.10	0.10	
Unif. delay d1	50.1	52.5		58.0	52.5		55.0	41.5	38.5	67.5	67.5	
Delay factor k	0.11	0.50		0.48	0.50		0.50	0.11	0.50	0.50	0.50	
Increm. delay d2	0.8	294.1		26.3	226.5		390.5	0.1	191.5	106.8	357.6	
PF factor	0.812	0.714		0.812	0.714		0.758	0.758	0.632	0.926	0.926	
Control delay	41.4	331.6		73.4	264.0		432.1	31.6	215.8	169.3	420.1	
Lane group LOS	D	F		E	F		F	C	F	F	F	
Apprch. delay	313.8			219.2			342.9			319.1		
Approach LOS	F			F			F			F		
Intersec. delay	290.5			Intersection LOS						F		

14P
WITH
MIT

SHORT REPORT

General Information

Analyst USAI
Agency or Co. USAI
Date Performed 12/09/10
Time Period PM PEAK HOUR

Site Information

Intersection OTAY MESA RD./CACTUS RD.
Area Type All other areas
Jurisdiction OMCAC30P3BNLMWM
Analysis Year YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	2	2	3	1	2	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	140	1165	975	645	2040	60	1500	50	930	175	80	180
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 33.0	G = 45.0	G =	G =	G = 40.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25
Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	147	1226	1026	679	2147	63	1579	53	979	184	273	
Lane group cap.	361	1486	1498	701	1486	422	850	485	696	164	157	
v/c ratio	0.41	0.83	0.68	0.97	1.44	0.15	1.86	0.11	1.41	1.12	1.74	
Green ratio	0.22	0.30	0.60	0.22	0.30	0.30	0.27	0.27	0.49	0.10	0.10	
Unif. delay d1	50.1	48.8	20.4	58.0	52.5	38.5	55.0	41.5	38.5	67.5	67.5	
Delay factor k	0.11	0.36	0.25	0.48	0.50	0.11	0.50	0.11	0.50	0.50	0.50	
Increm. delay d2	0.8	4.0	1.3	26.3	204.0	0.2	390.5	0.1	191.5	106.8	357.6	
PF factor	0.812	0.714	0.125	0.812	0.714	0.714	0.758	0.758	0.632	0.926	0.926	
Control delay	41.4	38.8	3.9	73.4	241.5	27.6	432.1	31.6	215.8	169.3	420.1	
Lane group LOS	D	D	A	E	F	C	F	C	F	F	F	
Apprch. delay	24.0			197.3			342.9			319.1		
Approach LOS	C			F			F			F		
Intersec. delay	199.7			Intersection LOS						F		

15-A
N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./CACTUS RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/07/10	Jurisdiction	AIRCAC30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	2	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	770	1260	1900	275	1370	1095	855	375	425	800	345	510
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	50
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 55.0	G =	G =	G = 32.0	G = 23.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	811	3326		289	2595		900	842		842	847	
Lane group cap.	467	1629		467	1678		680	479		680	475	
v/c ratio	1.74	2.04		0.62	1.55		1.32	1.76		1.24	1.78	
Green ratio	0.15	0.37		0.15	0.37		0.21	0.15		0.21	0.15	
Unif. delay d1	64.0	47.5		60.1	47.5		59.0	63.5		59.0	63.5	
Delay factor k	0.50	0.50		0.20	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	340.3	470.9		2.5	248.9		155.7	349.5		119.5	360.8	
PF factor	0.885	0.844		0.885	0.614		0.819	0.879		0.819	0.879	
Control delay	397.0	511.0		55.7	278.1		204.0	405.4		167.9	416.7	
Lane group LOS	F	F		E	F		F	F		F	F	
Apprch. delay	488.7			255.8			301.4			292.6		
Approach LOS	F			F			F			F		
Intersec. delay	361.5			Intersection LOS						F		

HCS2000™

Version 4.1f

15-A
W
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./CACTUS RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	AIRCAC30A3BNLMM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	2	2	2	1	2	2	1
Lane group	L	TR	R	L	T	R	L	T	R	L	TR	R
Volume (vph)	770	1260	1900	275	1370	1095	855	375	425	800	345	510
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	50
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 55.0	G =	G =	G = 32.0	G = 23.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	811	2226	1100	289	1442	1153	900	395	447	842	460	387
Lane group cap.	467	1679	518	467	1816	1536	680	531	473	680	510	217
v/c ratio	1.74	1.33	2.12	0.62	0.79	0.75	1.32	0.74	0.95	1.24	0.90	1.78
Green ratio	0.15	0.37	0.37	0.15	0.37	0.61	0.21	0.15	0.33	0.21	0.15	0.15
Unif. delay d1	64.0	47.5	47.5	60.1	42.4	20.8	59.0	60.7	48.7	59.0	62.4	63.5
Delay factor k	0.50	0.50	0.50	0.20	0.34	0.31	0.50	0.30	0.46	0.50	0.42	0.50
Increm. delay d2	340.3	150.8	512.1	2.5	2.5	2.1	155.7	5.6	28.0	119.5	19.2	370.5
PF factor	0.885	0.614	0.873	0.885	0.614	0.129	0.819	0.879	0.667	0.819	0.879	1.000
Control delay	397.0	180.0	553.5	55.7	28.6	4.8	204.0	59.0	60.5	167.9	74.0	434.0
Lane group LOS	F	F	F	E	C	A	F	E	E	F	E	F
Apprch. delay	321.9			21.8			134.3			203.3		
Approach LOS	F			C			F			F		
Intersec. delay	188.6			Intersection LOS						F		

HCS2000™ Version 4.1f

15P
N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./CACTUS RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	AIRCAC30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	2	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	510	1055	495	500	1450	550	1665	350	750	690	765	750
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	50
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 55.0	G =	G =	G = 32.0	G = 23.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	537	1632		526	2105		1753	1157		726	1542	
Lane group cap.	467	1716		467	1730		680	464		680	484	
v/c ratio	1.15	0.95		1.13	1.22		2.58	2.49		1.07	3.19	
Green ratio	0.15	0.37		0.15	0.37		0.21	0.15		0.21	0.15	
Unif. delay d1	64.0	46.2		64.0	47.5		59.0	63.5		59.0	63.5	
Delay factor k	0.50	0.46		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	89.7	12.1		81.0	103.1		714.4	678.5		54.0	989.1	
PF factor	0.885	0.614		0.885	0.614		0.819	0.879		0.819	0.879	
Control delay	146.4	40.5		137.6	132.2		762.7	734.3		102.3	1045	
Lane group LOS	F	D		F	F		F	F		F	F	
Apprch. delay	66.7			133.3			751.4			743.2		
Approach LOS	E			F			F			F		
Intersec. delay	437.7			Intersection LOS						F		

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W

M

SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*AIRWAY RD./CACTUS RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/13/11*	Jurisdiction	*AIRCAC30P3BNLM*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM/WITH M*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	2	2	2	1	2	2	1
Lane group	L	TR	R	L	T	R	L	T	R	L	TR	R
Volume (vph)	510	1055	495	500	1450	550	1665	350	750	690	765	750
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	50
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 55.0	G =	G =	G = 32.0	G = 23.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	537	1111	521	526	1526	579	1753	368	789	726	805	737
Lane group cap.	467	1816	518	467	1816	1536	680	531	473	680	531	217
v/c ratio	1.15	0.61	1.01	1.13	0.84	0.38	2.58	0.69	1.67	1.07	1.52	3.40
Green ratio	0.15	0.37	0.37	0.15	0.37	0.61	0.21	0.15	0.33	0.21	0.15	0.15
Unif. delay d1	64.0	38.8	47.5	64.0	43.5	14.6	59.0	60.2	50.0	59.0	63.5	63.5
Delay factor k	0.50	0.20	0.50	0.50	0.38	0.11	0.50	0.26	0.50	0.50	0.50	0.50
Increm. delay d2	89.7	0.6	41.0	81.0	3.7	0.2	714.4	3.9	309.9	54.0	241.8	1090
PF factor	0.885	0.614	0.614	0.885	0.614	0.129	0.819	0.879	0.667	0.819	0.879	1.000
Control delay	146.4	24.4	70.1	137.6	30.4	2.0	762.7	56.8	343.2	102.3	297.6	1153
Lane group LOS	F	C	E	F	C	A	F	E	F	F	F	F
Apprch. delay	65.6			45.6			559.7			513.2		
Approach LOS	E			D			F			F		
Intersec. delay	306.2			Intersection LOS						F		

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./CACTUS ROAD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	SIEMPCAC30A3BNLM/NOMIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	2	0	2	0	2	2	0
Lane group				L		R		TR		L	TR	
Volume (vph)				310		1475		85	80	2215	350	130
% Heavy veh				10		10		10	10	10	10	5
PHF				0.95		0.95		0.95	0.95	0.95	0.95	0.95
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10		0	0		50
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 30.0	G =	G =	G =	G = 90.0	G = 10.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 142.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				326		1553		173		2332	452	
Lane group cap.				673		2270		226		2020	2486	
v/c ratio				0.48		0.68		0.77		1.15	0.18	
Green ratio				0.21		0.87		0.07		0.63	0.73	
Unif. delay d1				49.2		2.8		64.8		26.0	5.9	
Delay factor k				0.11		0.25		0.32		0.50	0.11	
Increm. delay d2				0.6		0.9		14.5		75.6	0.0	
PF factor				0.821		0.394		0.949		0.482	0.187	
Control delay				41.0		2.0		76.1		88.2	1.1	
Lane group LOS				D		A		E		F	A	
Apprch. delay				8.7			76.1			74.0		
Approach LOS				A			E			E		
Intersec. delay	48.7			Intersection LOS						D		

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SHORT REPORT

General Information

Analyst USAI
Agency or Co. USAI
Date Performed 03/13/11
Time Period AM PEAK HOUR

Site Information

Intersection SIEMPRE VIVA RD./CACTUS ROAD
Area Type All other areas
Jurisdiction SIEMPCAC30A3BNLM/WITH MIT
Analysis Year YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	2	0	2	1	2	2	0
Lane group				L		R		T	R	L	TR	
Volume (vph)				310		1475		85	80	2215	350	130
% Heavy veh				10		10		10	10	10	10	5
PHF				0.95		0.95		0.95	0.95	0.95	0.95	0.95
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0	2.0	2.0	2.0	
Ext. eff. green				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type				5		5		5	5	5	5	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10		0	0		50
Lane Width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0	0	0	0	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 30.0	G =	G =	G =	G = 90.0	G = 10.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25
Cycle Length C = 142.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				326		1553		89	84	2332	452	
Lane group cap.				673		2270		244	455	2020	2486	
v/c ratio				0.48		0.68		0.36	0.18	1.15	0.18	
Green ratio				0.21		0.87		0.07	0.31	0.63	0.73	
Unif. delay d1				49.2		2.8		63.0	35.9	26.0	5.9	
Delay factor k				0.11		0.25		0.11	0.11	0.50	0.11	
Increm. delay d2				0.6		0.9		0.9	0.2	75.6	0.0	
PF factor				0.821		0.394		0.949	0.701	0.482	0.187	
Control delay				41.0		2.0		60.7	25.3	88.2	1.1	
Lane group LOS				D		A		E	C	F	A	
Apprch. delay				8.7			43.5			74.0		
Approach LOS				A			D			E		
Intersec. delay	47.6			Intersection LOS						D		

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M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./CACTUS ROAD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	SIEMPCAC30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	2	0	2	0	2	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				80		2300		350	310	1845	85	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10		0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 35.0	G =	G =	G =	G = 73.0	G = 30.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				84		2421		694		1942	89	
Lane group cap.				744		1941		644		1551	2470	
v/c ratio				0.11		1.25		1.08		1.25	0.04	
Green ratio				0.23		0.75		0.20		0.49	0.71	
Unif. delay d1				45.3		19.0		60.0		38.5	6.3	
Delay factor k				0.11		0.50		0.50		0.50	0.11	
Increm. delay d2				0.1		115.8		58.2		118.9	0.0	
PF factor				0.797		0.940		0.833		0.469	0.174	
Control delay				36.2		133.6		108.2		137.0	1.1	
Lane group LOS				D		F		F		F	A	
Apprch. delay				130.4			108.2			131.0		
Approach LOS				F			F			F		
Intersec. delay	127.7			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./CACTUS ROAD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	SIEMPCAC30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	2	0	2	1	2	2	0
Lane group				L		R		T	R	L	T	
Volume (vph)				80		2300		350	310	1845	85	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0	2.0	2.0	2.0	
Ext. eff. green				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type				5		5		5	5	5	5	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10		0			
Lane Width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0	0	0	0	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 35.0	G =	G =	G =	G = 73.0	G = 30.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				84		2421		368	326	1942	89	
Lane group cap.				744		1941		692	675	1551	2470	
v/c ratio				0.11		1.25		0.53	0.48	1.25	0.04	
Green ratio				0.23		0.75		0.20	0.46	0.49	0.71	
Unif. delay d1				45.3		19.0		53.7	28.1	38.5	6.3	
Delay factor k				0.11		0.50		0.13	0.11	0.50	0.11	
Increm. delay d2				0.1		115.8		0.8	0.5	118.9	0.0	
PF factor				0.797		0.940		0.833	0.432	0.469	0.174	
Control delay				36.2		133.6		45.6	12.7	137.0	1.1	
Lane group LOS				D		F		D	B	F	A	
Apprch. delay				130.4			30.1			131.0		
Approach LOS				F			C			F		
Intersec. delay	117.3			Intersection LOS						F		

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M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/06/11	Jurisdiction	OMBRIT30A3BNLM/NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT. 3B WITH LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	2	3	0	2	1	1	1	1	0
Lane group	L	TR		L	TR		L	TR	R	L	TR	
Volume (vph)	20	2160	385	475	2045	10	560	35	680	5	15	10
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5		5	5		5	5	5	5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	NB Only	SB Only	07	08
Timing	G = 5.0	G = 25.0	G = 60.0	G =	G = 30.0	G = 8.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	21	2679		500	2164		589	359	394	5	27	
Lane group cap.	55	1936		722	2969		637	306	332	88	91	
v/c ratio	0.38	1.38		0.69	0.73		0.92	1.17	1.19	0.06	0.30	
Green ratio	0.03	0.40		0.23	0.60		0.20	0.20	0.23	0.05	0.05	
Unif. delay d1	71.0	45.0		53.2	21.3		58.9	60.0	57.5	67.4	68.3	
Delay factor k	0.11	0.50		0.26	0.29		0.44	0.50	0.50	0.11	0.11	
Increm. delay d2	4.4	176.0		2.9	0.9		19.4	107.0	110.3	0.3	1.8	
PF factor	0.977	0.556		0.805	0.125		0.833	0.833	0.797	0.962	0.962	
Control delay	73.7	201.0		45.7	3.6		68.5	157.0	156.1	65.2	67.6	
Lane group LOS	E	F		D	A		E	F	F	E	E	
Apprch. delay	200.0			11.5			117.9			67.2		
Approach LOS	F			B			F			E		
Intersec. delay	108.5			Intersection LOS						F		

17-A
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*21*	*2679*		*500*	*2164*		*589*	*359*	*394*	*5*	*27*	
Satflow per lane	*1641*	*1776*		*1641*	*1816*		*1641*	*1529*	*1422*	*1641*	*1707*	
Capacity/lane	*55*	*1936*		*722*	*2969*		*637*	*306*	*332*	*88*	*91*	
Flow ratio	*0.01*	*0.55*		*0.16*	*0.44*		*0.18*	*0.23*	*0.28*	*0.00*	0.02	
v/c ratio	*0.38*	*1.38*		*0.69*	*0.73*		*0.92*	*1.17*	*1.19*	*0.06*	*0.30*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.58*		*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*0.99*	*1.00*		*0.92*	*0.23*		*0.98*	*1.00*	*1.00*	*0.96*	*0.97*	
Q_1	*0.8*	*41.0*		*9.0*	*5.4*		*12.2*	*15.0*	*16.4*	*0.2*	*1.1*	
k_B	*0.2*	*0.8*		*0.5*	*1.0*		*0.5*	*0.5*	*0.5*	*0.2*	*0.2*	
Q_2	*0.1*	*36.7*		*1.1*	*2.5*		*3.0*	*8.9*	*10.1*	*0.0*	*0.1*	
Q avg.	*0.9*	*77.6*		*10.1*	*7.9*		*15.1*	*23.9*	*26.5*	*0.2*	*1.1*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.1*	*1.5*		*1.8*	*1.9*		*1.8*	*1.7*	*1.6*	*2.1*	*2.1*	
BOQ, $Q_{\%}$	*2.0*	*117*		*18.6*	*14.8*		*26.6*	*39.6*	*43.4*	*0.4*	*2.4*	
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

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W
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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/06/11	Jurisdiction	OMBRIT30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B WITH LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	2	3	1	2	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	20	2160	385	475	2045	10	560	35	680	5	15	10
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10		0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	NB Only	SB Only	07	08
Timing	G = 5.0	G = 25.0	G = 60.0	G =	G = 30.0	G = 8.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	21	2274	405	500	2153	11	589	359	394	5	27	
Lane group cap.	55	1981	587	722	2972	566	637	306	332	88	91	
v/c ratio	0.38	1.15	0.69	0.69	0.72	0.02	0.92	1.17	1.19	0.06	0.30	
Green ratio	0.03	0.40	0.40	0.23	0.60	0.40	0.20	0.20	0.23	0.05	0.05	
Unif. delay d1	71.0	45.0	37.3	53.2	21.2	27.2	58.9	60.0	57.5	67.4	68.3	
Delay factor k	0.11	0.50	0.26	0.26	0.29	0.11	0.44	0.50	0.50	0.11	0.11	
Increm. delay d2	4.4	73.0	3.4	2.9	0.9	0.0	19.4	107.0	110.3	0.3	1.8	
PF factor	0.977	0.556	0.556	0.805	0.125	0.556	0.833	0.833	0.797	0.962	0.962	
Control delay	73.7	98.0	24.2	45.7	3.6	15.1	68.5	157.0	156.1	65.2	67.6	
Lane group LOS	E	F	C	D	A	B	E	F	F	E	E	
Apprch. delay	86.7			11.5			117.9			67.2		
Approach LOS	F			B			F			E		
Intersec. delay	63.1			Intersection LOS						E		

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W
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Flow rate/lane	21	2274	405	500	2153	11	589	359	394	5	27	
Satflow per lane	1641	1818	1468	1641	1818	1414	1641	1529	1422	1641	1707	
Capacity/lane	55	1981	587	722	2972	566	637	306	332	88	91	
Flow ratio	0.01	0.46	0.28	0.16	0.43	0.01	0.18	0.23	0.28	0.00	0.02	
v/c ratio	0.38	1.15	0.69	0.69	0.72	0.02	0.92	1.17	1.19	0.06	0.30	
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Platoon ratio	1.67	1.67	1.67	1.67	1.58	1.67	1.67	1.67	1.67	1.67	1.67	
PF factor	0.99	1.00	0.74	0.92	0.23	0.56	0.98	1.00	1.00	0.96	0.97	
Q_1	0.8	34.8	10.4	9.0	5.3	0.2	12.2	15.0	16.4	0.2	1.1	
k_B	0.2	0.8	0.7	0.5	1.0	0.7	0.5	0.5	0.5	0.2	0.2	
Q_2	0.1	17.9	1.4	1.1	2.4	0.0	3.0	8.9	10.1	0.0	0.1	
Q avg.	0.9	52.6	11.8	10.1	7.7	0.2	15.1	23.9	26.5	0.2	1.1	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	2.1	1.5	1.8	1.8	1.9	2.1	1.8	1.7	1.6	2.1	2.1	
BOQ, $Q_{\%}$	2.0	80.7	21.4	18.6	14.6	0.4	26.6	39.6	43.4	0.4	2.4	
Queue Storage Ratio												
Q spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	
Q storage	0	0	0	0	0	0	0	0	0	0	0	
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

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SHORT REPORT

General Information

Analyst USAI
Agency or Co. USAI
Date Performed 03/13/11
Time Period PM PEAK HOUR

Site Information

Intersection OTAY MESA RD./BRITANNIA BLVD.
Area Type All other areas
Jurisdiction OMBRIT30P3BNLM/NO MIT
Analysis Year YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	2	3	0	2	1	1	1	1	0
Lane group	L	TR		L	TR		L	TR	R	L	TR	
Volume (vph)	15	1920	540	780	2120	10	370	20	475	15	40	35
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5		5	5		5	5	5	5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	150	10		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	NB Only	SB Only	07	08
Timing	G = 10.0	G = 25.0	G = 55.0	G =	G = 23.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	16	2589		821	2243		389	192	171	16	79	
Lane group cap.	109	1756		829	2804		489	233	217	164	169	
v/c ratio	0.15	1.47		0.99	0.80		0.80	0.82	0.79	0.10	0.47	
Green ratio	0.07	0.37		0.26	0.57		0.15	0.15	0.15	0.10	0.10	
Unif. delay d1	66.0	47.5		55.3	25.8		61.2	61.5	61.2	61.3	63.7	
Delay factor k	0.11	0.50		0.49	0.34		0.34	0.36	0.33	0.11	0.11	
Increm. delay d2	0.6	216.6		28.8	1.7		8.9	20.8	17.4	0.3	2.0	
PF factor	0.952	0.614		0.766	0.128		0.879	0.879	0.879	0.926	0.926	
Control delay	63.5	245.8		71.1	5.0		62.7	74.9	71.2	57.1	61.0	
Lane group LOS	E	F		E	A		E	E	E	E	E	
Apprch. delay	244.7			22.7			67.8			60.4		
Approach LOS	F			C			E			E		
Intersec. delay	117.2			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*16*	*2589*		*821*	*2243*		*389*	*192*	*171*	*16*	*79*	
Satflow per lane	*1641*	*1758*		*1641*	*1816*		*1641*	*1522*	*1412*	*1641*	*1690*	
Capacity/lane	*109*	*1756*		*829*	*2804*		*489*	*233*	*217*	*164*	*169*	
Flow ratio	*0.01*	*0.54*		*0.26*	*0.45*		*0.12*	*0.13*	*0.12*	*0.01*	0.05	
v/c ratio	*0.15*	*1.47*		*0.99*	*0.80*		*0.80*	*0.82*	*0.79*	*0.10*	*0.47*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*		*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*0.96*	*1.00*		*1.00*	*0.29*		*0.97*	*0.97*	*0.97*	*0.93*	*0.96*	
Q_1	*0.6*	*39.6*		*17.4*	*7.8*		*7.8*	*7.5*	*6.6*	*0.6*	*3.0*	
k_B	*0.2*	*0.7*		*0.6*	*1.0*		*0.4*	*0.4*	*0.4*	*0.3*	*0.3*	
Q_2	*0.0*	*40.4*		*5.2*	*3.4*		*1.3*	*1.4*	*1.2*	*0.0*	*0.3*	
Q avg.	*0.6*	*80.0*		*22.6*	*11.2*		*9.1*	*9.0*	*7.8*	*0.6*	*3.3*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.1*	*1.5*		*1.7*	*1.8*		*1.9*	*1.9*	*1.9*	*2.1*	*2.0*	
BOQ, $Q_{\%}$	*1.3*	*120*		*37.8*	*20.3*		*17.0*	*16.7*	*14.7*	*1.2*	*6.5*	
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

17-P
W
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	OMBRIT30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	2	3	1	2	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	15	1920	540	780	2120	10	370	20	475	15	40	35
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	150	10		0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	NB Only	SB Only	07	08
Timing	G = 10.0	G = 25.0	G = 55.0	G =	G = 23.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	16	2021	568	821	2232	11	389	192	171	16	79	
Lane group cap.	109	1816	812	829	2807	659	489	233	217	164	169	
v/c ratio	0.15	1.11	0.70	0.99	0.80	0.02	0.80	0.82	0.79	0.10	0.47	
Green ratio	0.07	0.37	0.55	0.26	0.57	0.47	0.15	0.15	0.15	0.10	0.10	
Unif. delay d1	66.0	47.5	24.4	55.3	25.6	21.5	61.2	61.5	61.2	61.3	63.7	
Delay factor k	0.11	0.50	0.27	0.49	0.34	0.11	0.34	0.36	0.33	0.11	0.11	
Increm. delay d2	0.6	59.2	2.7	28.8	1.7	0.0	8.9	20.8	17.4	0.3	2.0	
PF factor	0.952	0.614	0.174	0.766	0.128	0.417	0.879	0.879	0.879	0.926	0.926	
Control delay	63.5	88.4	6.9	71.1	5.0	9.0	62.7	74.9	71.2	57.1	61.0	
Lane group LOS	E	F	A	E	A	A	E	E	E	E	E	
Apprch. delay	70.4			22.7			67.8			60.4		
Approach LOS	E			C			E			E		
Intersec. delay	47.5			Intersection LOS						D		

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17-P
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*16*	*2021*	*568*	*821*	*2232*	*11*	*389*	*192*	*171*	*16*	*79*	
Satflow per lane	*1641*	*1818*	*1468*	*1641*	*1818*	*1413*	*1641*	*1522*	*1412*	*1641*	*1690*	
Capacity/lane	*109*	*1816*	*812*	*829*	*2807*	*659*	*489*	*233*	*217*	*164*	*169*	
Flow ratio	*0.01*	*0.41*	*0.39*	*0.26*	*0.45*	*0.01*	*0.12*	*0.13*	*0.12*	*0.01*	0.05	
v/c ratio	*0.15*	*1.11*	*0.70*	*0.99*	*0.80*	*0.02*	*0.80*	*0.82*	*0.79*	*0.10*	*0.47*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*0.96*	*1.00*	*0.30*	*1.00*	*0.28*	*0.42*	*0.97*	*0.97*	*0.97*	*0.93*	*0.96*	
Q_1	*0.6*	*30.9*	*5.2*	*17.4*	*7.6*	*0.1*	*7.8*	*7.5*	*6.6*	*0.6*	*3.0*	
k_B	*0.2*	*0.7*	*0.8*	*0.6*	*1.0*	*0.7*	*0.4*	*0.4*	*0.4*	*0.3*	*0.3*	
Q_2	*0.0*	*14.2*	*1.8*	*5.2*	*3.3*	*0.0*	*1.3*	*1.4*	*1.2*	*0.0*	*0.3*	
Q avg.	*0.6*	*45.1*	*7.0*	*22.6*	*10.9*	*0.1*	*9.1*	*9.0*	*7.8*	*0.6*	*3.3*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.1*	*1.5*	*1.9*	*1.7*	*1.8*	*2.1*	*1.9*	*1.9*	*1.9*	*2.1*	*2.0*	
BOQ, $Q_{\%}$	*1.3*	*69.8*	*13.4*	*37.8*	*19.9*	*0.2*	*17.0*	*16.7*	*14.7*	*1.2*	*6.5*	
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™ Version 4.1f

18-A

N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905WB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	1	2	3	0	0	2	1
Lane group				L	TR	R	L	T			TR	R
Volume (vph)				1500	5	220	1000	1055			525	350
% Heavy veh				10	10	10	10	10			10	10
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Ext. eff. green				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Arrival type				5	5	5	5	5			5	3
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10			10		0				10	5	0
Lane Width				12.0	12.0	12.0	12.0	12.0			12.0	12.0
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0	0	0	0			0	0
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 60.0	G =	G =	G =	G = 42.0	G = 25.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				1579	5	232	1053	1111			645	276
Lane group cap.				703	779	629	956	2512			600	247
v/c ratio				2.25	0.01	0.37	1.10	0.44			1.08	1.12
Green ratio				0.43	0.43	0.43	0.30	0.51			0.18	0.18
Unif. delay d1				40.0	22.9	27.1	49.0	21.9			57.5	57.5
Delay factor k				0.50	0.11	0.11	0.50	0.11			0.50	0.50
Increm. delay d2				565.3	0.0	0.4	61.0	0.1			58.5	92.5
PF factor				1.000	0.500	0.500	0.714	0.314			0.855	1.000
Control delay				605.3	11.5	13.9	96.0	7.0			107.7	150.0
Lane group LOS				F	B	B	F	A			F	F
Apprch. delay				528.1			50.3			120.4		
Approach LOS				F			D			F		
Intersec. delay	240.5			Intersection LOS						F		

HCS2000™ Version 4.1f

18-A
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-AM-NO LA MEDIA-SR905WB RAMPS/BRITANNIA BLVD*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*	*TR*	*R*	*L*	*T*			*TR*	*R*
Init. queue/lane				*0.0*	*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane				*1579*	*0*	*232*	*1053*	*1111*			*645*	*276*
Satflow per lane				*1641*	*1818*	*1468*	*1641*	*1818*			*1764*	*1384*
Capacity/lane				*703*	*779*	*629*	*956*	*2512*			*600*	*247*
Flow ratio				*0.96*	*0.00*	*0.16*	*0.33*	*0.22*			0.19	*0.20*
v/c ratio				*2.25*	*0.00*	*0.37*	*1.10*	*0.44*			*1.08*	*1.12*
I factor				*1.000*	*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	*1.000*
Arrival type				*5*	*5*	*5*	*5*	*5*			*5*	*3*
Platoon ratio				*1.00*	*1.00*	*1.67*	*1.67*	*1.67*			*1.67*	*1.00*
PF factor				*1.00*	*1.00*	*0.57*	*1.00*	*0.39*			*1.00*	*1.00*
Q_1				*61.4*	*0.0*	*3.5*	*21.1*	*3.9*			*13.1*	*10.7*
k_B				*0.7*	*0.8*	*0.7*	*0.6*	*0.9*			*0.4*	*0.4*
Q_2				*110.8*	*0.0*	*0.4*	*10.2*	*0.7*			*6.0*	*5.9*
Q avg.				*172.2*	*0.0*	*3.9*	*31.2*	*4.6*			*19.2*	*16.6*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$				*1.5*	*2.1*	*2.0*	*1.6*	*2.0*			*1.7*	*1.7*
BOQ, $Q_{\%}$				*258*	*0.0*	*7.7*	*50.2*	*9.0*			*32.7*	*28.9*
Queue Storage Ratio												
Q spacing				*25.0*	*25.0*	*25.0*	*25.0*	*25.0*			*25.0*	*25.0*
Q storage				*0*	*0*	*0*	*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™ Version 4.1f

18-A
W
M

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SR-905WB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	1	2	3	0	0	3	1
Lane group				L	LTR	R	L	T			TR	R
Volume (vph)				1500	5	220	1000	1055			525	350
% Heavy veh				10	10	10	10	10			10	10
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Ext. eff. green				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Arrival type				5	5	5	5	5			5	3
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10			10		0				10	5	0
Lane Width				12.0	12.0	12.0	12.0	12.0			12.0	12.0
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0	0	0	0			0	0
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 60.0	G =	G =	G =	G = 42.0	G = 25.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				868	716	232	1053	1111			737	184
Lane group cap.				703	742	629	956	2512			839	247
v/c ratio				1.23	0.96	0.37	1.10	0.44			0.88	0.74
Green ratio				0.43	0.43	0.43	0.30	0.51			0.18	0.18
Unif. delay d1				40.0	39.0	27.1	49.0	21.9			56.0	54.5
Delay factor k				0.50	0.47	0.11	0.50	0.11			0.41	0.30
Increm. delay d2				117.7	24.6	0.4	61.0	0.1			10.5	11.6
PF factor				0.500	0.500	0.500	0.714	0.314			0.855	1.000
Control delay				137.7	44.1	13.9	96.0	7.0			58.4	66.1
Lane group LOS				F	D	B	F	A			E	E
Apprch. delay				85.0			50.3			60.0		
Approach LOS				F			D			E		
Intersec. delay	65.0			Intersection LOS						E		

HCS2000™ Version 4.1f

18-A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-AM-NO LA MEDIA-SR905WB RAMPS/BRITANNIA BLVD/W-MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*	*LTR*	*R*	*L*	*T*			*TR*	*R*
Init. queue/lane				*0.0*	*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane				*868*	*711*	*232*	*1053*	*1111*			*737*	*184*
Satflow per lane				*1641*	*1732*	*1468*	*1641*	*1818*			*1725*	*1384*
Capacity/lane				*703*	*742*	*629*	*956*	*2512*			*839*	*247*
Flow ratio				*0.53*	*0.41*	*0.16*	*0.33*	*0.22*			0.16	*0.13*
v/c ratio				*1.23*	*0.96*	*0.37*	*1.10*	*0.44*			*0.88*	*0.74*
I factor				*1.000*	*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	*1.000*
Arrival type				*5*	*5*	*5*	*5*	*5*			*5*	*3*
Platoon ratio				*1.67*	*1.67*	*1.67*	*1.67*	*1.67*			*1.67*	*1.00*
PF factor				*1.00*	*0.93*	*0.57*	*1.00*	*0.39*			*0.98*	*1.00*
Q_1				*33.8*	*25.0*	*3.5*	*21.1*	*3.9*			*10.0*	*6.8*
k_B				*0.7*	*0.8*	*0.7*	*0.6*	*0.9*			*0.4*	*0.4*
Q_2				*23.9*	*6.5*	*0.4*	*10.2*	*0.7*			*2.2*	*1.0*
Q avg.				*57.7*	*31.5*	*3.9*	*31.2*	*4.6*			*12.1*	*7.8*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$				*1.5*	*1.6*	*2.0*	*1.6*	*2.0*			*1.8*	*1.9*
BOQ, $Q_{\%}$				*87.9*	*50.5*	*7.7*	*50.2*	*9.0*			*21.9*	*14.7*
Queue Storage Ratio												
Q spacing				*25.0*	*25.0*	*25.0*	*25.0*	*25.0*			*25.0*	*25.0*
Q storage				*0*	*0*	*0*	*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™ Version 4.1f

18-P
N
MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*SR-905WB RAMPS/BRITANNIA BLVD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/13/11*	Jurisdiction	*905WBBRIT30PNLM*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	1	2	3	0	0	2	1
Lane group				L	TR	R	L	T			TR	R
Volume (vph)				600	5	390	2910	475			920	440
% Heavy veh				10	10	10	10	10			10	10
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Ext. eff. green				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Arrival type				5	5	5	5	5			5	3
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10			10		0				10	5	0
Lane Width				12.0	12.0	12.0	12.0	12.0			12.0	12.0
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0	0	0	0			0	0
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 35.0	G =	G =	G =	G = 42.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				632	5	411	3063	500			1084	347
Lane group cap.				410	455	367	956	3396			1211	504
v/c ratio				1.54	0.01	1.12	3.20	0.15			0.90	0.69
Green ratio				0.25	0.25	0.25	0.30	0.69			0.36	0.36
Unif. delay d1				52.5	39.5	52.5	49.0	7.7			42.5	38.4
Delay factor k				0.50	0.11	0.50	0.50	0.11			0.42	0.26
Increm. delay d2				255.6	0.0	83.5	994.5	0.0			8.9	3.9
PF factor				0.778	0.778	0.778	1.000	0.159			0.630	1.000
Control delay				296.4	30.7	124.4	1044	1.2			35.7	42.3
Lane group LOS				F	C	F	F	A			D	D
Apprch. delay				227.7			897.3			37.3		
Approach LOS				F			F			D		
Intersec. delay	577.4			Intersection LOS						F		

18-P
NO
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-PM-NO LA MEDIA-SR905WB RAMPS/BRITANNIA BLVD/CALTRANS*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*	*TR*	*R*	*L*	*T*			*TR*	*R*
Init. queue/lane				*0.0*	*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane				*632*	*0*	*411*	*3063*	*500*			*1084*	*347*
Satflow per lane				*1641*	*1818*	*1468*	*1641*	*1818*			*1781*	*1411*
Capacity/lane				*410*	*455*	*367*	*956*	*3396*			*1211*	*504*
Flow ratio				*0.39*	*0.00*	*0.28*	*0.96*	*0.10*			0.32	*0.25*
v/c ratio				*1.54*	*0.00*	*1.12*	*3.20*	*0.15*			*0.90*	*0.69*
I factor				*1.000*	*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	*1.000*
Arrival type				*5*	*5*	*5*	*5*	*5*			*5*	*3*
Platoon ratio				*1.67*	*1.00*	*1.67*	*1.00*	*1.39*			*1.67*	*1.00*
PF factor				*1.00*	*1.00*	*1.00*	*1.00*	*0.17*			*0.92*	*1.00*
Q_1				*24.6*	*0.0*	*16.0*	*61.3*	*0.4*			*19.2*	*11.5*
k_B				*0.5*	*0.6*	*0.5*	*0.6*	*1.0*			*0.7*	*0.6*
Q_2				*29.2*	*0.0*	*8.5*	*136.5*	*0.2*			*4.0*	*1.2*
Q avg.				*53.8*	*0.0*	*24.5*	*197.8*	*0.6*			*23.1*	*12.7*

Percentile Back of Queue (95th percentile)

$f_{B\%}$				*1.5*	*2.1*	*1.7*	*1.5*	*2.1*			*1.7*	*1.8*
BOQ, $Q_\%$				*82.3*	*0.0*	*40.5*	*297*	*1.2*			*38.5*	*22.9*

Queue Storage Ratio

Q spacing				*25.0*	*25.0*	*25.0*	*25.0*	*25.0*			*25.0*	*25.0*
Q storage				*0*	*0*	*0*	*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™ Version 4.1f

18-P
W
MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SR-905WB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBBRIT30PNLM/MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	1	2	3	0	0	3	1
Lane group				L	LTR	R	L	T			TR	R
Volume (vph)				600	5	390	2910	475			920	440
% Heavy veh				10	10	10	10	10			10	10
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Ext. eff. green				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Arrival type				5	5	5	5	5			5	3
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10			10		0				10	5	0
Lane Width				12.0	12.0	12.0	12.0	12.0			12.0	12.0
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0	0	0	0			0	0
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 35.0	G =	G =	G =	G = 42.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				411	349	288	3063	500			1084	347
Lane group cap.				410	417	367	956	3396			1733	504
v/c ratio				1.00	0.84	0.78	3.20	0.15			0.63	0.69
Green ratio				0.25	0.25	0.25	0.30	0.69			0.36	0.36
Unif. delay d1				52.5	49.8	49.0	49.0	7.7			37.3	38.4
Delay factor k				0.50	0.37	0.33	0.50	0.11			0.21	0.26
Increm. delay d2				45.1	13.9	10.7	994.5	0.0			0.7	3.9
PF factor				0.778	0.778	0.778	1.000	0.159			0.630	1.000
Control delay				85.9	52.6	48.8	1044	1.2			24.2	42.3
Lane group LOS				F	D	D	F	A			C	D
Apprch. delay				64.6			897.3			28.6		
Approach LOS				E			F			C		
Intersec. delay	547.1			Intersection LOS						F		

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18-P
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-PM-NO LA MEDIA-SR905WB RAMPS/BRITANNIA BLVD/MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				L	LTR	R	L	T			TR	R
Init. queue/lane				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Flow rate/lane				411	344	288	3063	500			1084	347
Satflow per lane				1641	1667	1468	1641	1818			1781	1411
Capacity/lane				410	417	367	956	3396			1733	504
Flow ratio				0.25	0.21	0.20	0.96	0.10			0.22	0.25
v/c ratio				1.00	0.82	0.78	3.20	0.15			0.63	0.69
I factor				1.000	1.000	1.000	1.000	1.000			1.000	1.000
Arrival type				5	5	5	5	5			5	3
Platoon ratio				1.67	1.67	1.67	1.00	1.39			1.67	1.00
PF factor				1.00	0.94	0.93	1.00	0.17			0.78	1.00
Q_1				16.0	11.9	9.7	61.3	0.4			9.9	11.5
k_B				0.5	0.5	0.5	0.6	1.0			0.7	0.6
Q_2				5.3	2.0	1.6	136.5	0.2			1.1	1.2
Q avg.				21.2	13.9	11.3	197.8	0.6			11.0	12.7

Percentile Back of Queue (95th percentile)

$f_{B\%}$				1.7	1.8	1.8	1.5	2.1			1.8	1.8
BOQ, $Q_{\%}$				35.8	24.8	20.5	297	1.2			20.1	22.9

Queue Storage Ratio

Q spacing				25.0	25.0	25.0	25.0	25.0			25.0	25.0
Q storage				0	0	0	0	0			0	0
Avg. R_Q												
95% $R_{Q\%}$												

19-A
NO
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905EB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/07/10	Jurisdiction	905EBBRIT30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	2	0	0	0	0	3	0	2	3	0
Lane group		LT	R					TR		L	T	
Volume (vph)	400	5	3400					1655	500	210	1815	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time		2.0	2.0					2.0		2.0	2.0	
Ext. eff. green		2.0	2.0					2.0		2.0	2.0	
Arrival type		5	5					5		5	5	
Unit Extension		3.0	3.0					3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10		300	10			10	5	0			
Lane Width		12.0	12.0					12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0	0					0		0	0	
Unit Extension		3.0	3.0					3.0		3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 77.0	G =	G =	G =	G = 10.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		426	3263					2268		221	1911	
Lane group cap.		890	1334					1585		212	2113	
v/c ratio		0.48	2.45					1.43		1.04	0.90	
Green ratio		0.51	0.51					0.33		0.07	0.43	
Unif. delay d1		23.5	36.5					50.0		70.0	40.1	
Delay factor k		0.11	0.50					0.50		0.50	0.43	
Increm. delay d2		0.4	653.0					197.6		73.4	6.0	
PF factor		0.297	1.000					0.667		0.952	0.504	
Control delay		7.4	689.5					230.9		140.0	26.2	
Lane group LOS		A	F					F		F	C	
Apprch. delay	610.7						230.9			38.0		
Approach LOS	F						F			D		
Intersec. delay	353.3			Intersection LOS						F		

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NO MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT.-3B AM NO LA MEDIA - ---SR905EB RAMPS/BRITANNIA

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		LT	R					TR		L	T	
Init. queue/lane		0.0	0.0					0.0		0.0	0.0	
Flow rate/lane		421	3263					2268		221	1911	
Satflow per lane		1732	1468					1745		1641	1818	
Capacity/lane		889	1334					1585		212	2113	
Flow ratio		0.24	1.26					0.48		0.07	0.39	
v/c ratio		0.47	2.45					1.43		1.04	0.90	
I factor		1.000	1.000					1.000		1.000	1.000	
Arrival type		5	5					5		5	5	
Platoon ratio		1.67	1.00					1.67		1.67	1.67	
PF factor		0.38	1.00					1.00		1.00	0.87	
Q_1		4.3	76.8					34.7		4.7	23.6	
k_B		0.9	0.8					0.7		0.2	0.8	
Q_2		0.8	137.6					33.5		2.1	5.0	
Q avg.		5.0	214.4					68.1		6.8	28.6	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		2.0	1.5					1.5		1.9	1.6	
BOQ, $Q_{\%}$		9.8	322					103		13.1	46.4	
Queue Storage Ratio												
Q spacing		25.0	25.0					25.0		25.0	25.0	
Q storage		0	0					0		0	0	
Avg. R_Q												
95% $R_{Q\%}$												

19- A
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905EB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905EBBRIT30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	2	0	0	0	0	3	2	2	3	0
Lane group		LT	R					T	R	L	T	
Volume (vph)	400	5	3400					1655	500	210	1815	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time		2.0	2.0					2.0	2.0	2.0	2.0	
Ext. eff. green		2.0	2.0					2.0	2.0	2.0	2.0	
Arrival type		5	5					5	5	5	5	
Unit Extension		3.0	3.0					3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10		300	10			10	5	0			
Lane Width		12.0	12.0					12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0	0					0	0	0	0	
Unit Extension		3.0	3.0					3.0	3.0	3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 77.0	G =	G =	G =	G = 10.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		426	3263					1742	526	221	1911	
Lane group cap.		890	1334					1651	831	212	2113	
v/c ratio		0.48	2.45					1.06	0.63	1.04	0.90	
Green ratio		0.51	0.51					0.33	0.33	0.07	0.43	
Unif. delay d1		23.5	36.5					50.0	42.2	70.0	40.1	
Delay factor k		0.11	0.50					0.50	0.21	0.50	0.43	
Increm. delay d2		0.4	653.0					38.3	1.6	73.4	6.0	
PF factor		0.297	1.000					0.667	0.667	0.952	0.504	
Control delay		7.4	689.5					71.6	29.7	140.0	26.2	
Lane group LOS		A	F					E	C	F	C	
Apprch. delay	610.7						61.9			38.0		
Approach LOS	F						E			D		
Intersec. delay	305.9			Intersection LOS						F		

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W
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM NO LA MEDIA - ---SR905EB RAMPS/BRITANNIA/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*LT*	*R*					*T*	*R*	*L*	*T*	
Init. queue/lane		*0.0*	*0.0*					*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane		*421*	*3263*					*1742*	*526*	*221*	*1911*	
Satflow per lane		*1732*	*1468*					*1818*	*1409*	*1641*	*1818*	
Capacity/lane		*889*	*1334*					*1651*	*831*	*212*	*2113*	
Flow ratio		*0.24*	*1.26*					*0.35*	*0.21*	*0.07*	0.39	
v/c ratio		*0.47*	*2.45*					*1.06*	*0.63*	*1.04*	*0.90*	
I factor		*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type		*5*	*5*					*5*	*5*	*5*	*5*	
Platoon ratio		*1.67*	*1.00*					*1.67*	*1.67*	*1.67*	*1.67*	
PF factor		*0.38*	*1.00*					*1.00*	*0.81*	*1.00*	*0.87*	
Q_1		*4.3*	*76.8*					*26.6*	*8.5*	*4.7*	*23.6*	
k_B		*0.9*	*0.8*					*0.7*	*0.6*	*0.2*	*0.8*	
Q_2		*0.8*	*137.6*					*9.8*	*1.0*	*2.1*	*5.0*	
Q avg.		*5.0*	*214.4*					*36.4*	*9.5*	*6.8*	*28.6*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$		*2.0*	*1.5*					*1.6*	*1.9*	*1.9*	*1.6*	
BOQ, $Q_\%$		*9.8*	*322*					*57.5*	*17.6*	*13.1*	*46.4*	

Queue Storage Ratio

Q spacing		*25.0*	*25.0*					*25.0*	*25.0*	*25.0*	*25.0*	
Q storage		*0*	*0*					*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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19-P
NO MIT

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SR-905EB RAMPS/BRITANNIA BLVD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*12/13/10*	Jurisdiction	*905EBBRIT30P3BNLM*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*1*	*2*	*0*	*0*	*0*	*0*	*3*	*0*	*2*	*3*	*0*
Lane group		*LT*	*R*					*TR*		*L*	*T*	
Volume (vph)	*400*	*5*	*1200*					*2985*	*1200*	*200*	*1320*	
% Heavy veh	*10*	*10*	*10*					*10*	*10*	*10*	*10*	
PHF	*0.95*	*0.95*	*0.95*					*0.95*	*0.95*	*0.95*	*0.95*	
Actuated (P/A)	*A*	*A*	*A*					*A*	*A*	*A*	*A*	
Startup lost time		*2.0*	*2.0*					*2.0*		*2.0*	*2.0*	
Ext. eff. green		*2.0*	*2.0*					*2.0*		*2.0*	*2.0*	
Arrival type		*5*	*5*					*5*		*5*	*5*	
Unit Extension		*3.0*	*3.0*					*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*10*		*300*	*10*			*10*	*5*	*0*			
Lane Width		*12.0*	*12.0*					*12.0*		*12.0*	*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr		*0*	*0*					*0*		*0*	*0*	
Unit Extension		*3.0*	*3.0*					*3.0*		*3.0*	*3.0*	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = *40.0*	G =	G =	G =	G = *10.0*	G = *77.0*	G =	G =
	Y = *4*	Y =	Y =	Y =	Y = *4*	Y = *5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*					Cycle Length C = *140.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		*426*	*947*					*4405*		*211*	*1389*	
Lane group cap.		*495*	*743*					*2593*		*228*	*3219*	
v/c ratio		*0.86*	*1.27*					*1.70*		*0.93*	*0.43*	
Green ratio		*0.29*	*0.29*					*0.55*		*0.07*	*0.65*	
Unif. delay d1		*47.4*	*50.0*					*31.5*		*64.6*	*11.9*	
Delay factor k		*0.39*	*0.50*					*0.50*		*0.44*	*0.11*	
Increm. delay d2		*14.3*	*133.9*					*316.1*		*39.7*	*0.1*	
PF factor		*0.733*	*0.733*					*0.980*		*0.949*	*0.143*	
Control delay		*49.0*	*170.6*					*347.0*		*101.0*	*1.8*	
Lane group LOS		*D*	*F*					*F*		*F*	*A*	
Apprch. delay	*132.9*						*347.0*			*14.9*		
Approach LOS	*F*						*F*			*B*		
Intersec. delay	*235.1*			Intersection LOS						*F*		

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NO
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM NO LA MEDIA - ---SR905EB RAMPS/BRITANNIA*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*LT*	*R*					*TR*		*L*	*T*	
Init. queue/lane		*0.0*	*0.0*					*0.0*		*0.0*	*0.0*	
Flow rate/lane		*421*	*947*					*4405*		*211*	*1389*	
Satflow per lane		*1732*	*1468*					*1730*		*1641*	*1818*	
Capacity/lane		*495*	*743*					*2593*		*228*	*3219*	
Flow ratio		*0.24*	*0.36*					*0.93*		*0.07*	0.28	
v/c ratio		*0.85*	*1.27*					*1.70*		*0.93*	*0.43*	
I factor		*1.000*	*1.000*					*1.000*		*1.000*	*1.000*	
Arrival type		*5*	*5*					*5*		*5*	*5*	
Platoon ratio		*1.67*	*1.67*					*1.02*		*1.67*	*1.46*	
PF factor		*0.93*	*1.00*					*1.00*		*1.00*	*0.17*	
Q_1		*14.4*	*20.8*					*62.9*		*4.2*	*1.7*	
k_B		*0.6*	*0.5*					*0.9*		*0.2*	*1.0*	
Q_2		*2.6*	*16.6*					*85.3*		*1.4*	*0.7*	
Q avg.		*17.0*	*37.5*					*148.2*		*5.5*	*2.4*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		*1.7*	*1.6*					*1.5*		*1.9*	*2.0*	
BOQ, $Q_{\%}$		*29.5*	*59.0*					*222*		*10.7*	*4.9*	
Queue Storage Ratio												
Q spacing		*25.0*	*25.0*					*25.0*		*25.0*	*25.0*	
Q storage		*0*	*0*					*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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Version 4.1f

19-P
w
MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SR-905EB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905EBBRIT30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	2	0	0	0	0	3	2	2	3	0
Lane group		LT	R					T	R	L	T	
Volume (vph)	400	5	1200					2985	1200	200	1320	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time		2.0	2.0					2.0	2.0	2.0	2.0	
Ext. eff. green		2.0	2.0					2.0	2.0	2.0	2.0	
Arrival type		5	5					5	5	5	5	
Unit Extension		3.0	3.0					3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10		300	10			10	5	0			
Lane Width		12.0	12.0					12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0	0					0	0	0	0	
Unit Extension		3.0	3.0					3.0	3.0	3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 40.0	G =	G =	G =	G = 10.0	G = 77.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		426	947					3142	1263	211	1389	
Lane group cap.		495	743					2724	1383	228	3219	
v/c ratio		0.86	1.27					1.15	0.91	0.93	0.43	
Green ratio		0.29	0.29					0.55	0.55	0.07	0.65	
Unif. delay d1		47.4	50.0					31.5	28.5	64.6	11.9	
Delay factor k		0.39	0.50					0.50	0.43	0.44	0.11	
Increm. delay d2		14.3	133.9					73.7	9.5	39.7	0.1	
PF factor		0.733	0.733					0.391	0.185	0.949	0.143	
Control delay		49.0	170.6					86.0	14.8	101.0	1.8	
Lane group LOS		D	F					F	B	F	A	
Apprch. delay	132.9						65.6			14.9		
Approach LOS	F						E			B		
Intersec. delay	67.1			Intersection LOS						E		

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MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM NO LA MEDIA - ---SR905EB RAMPS/BRITANNIA/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*LT*	*R*					*T*	*R*	*L*	*T*	
Init. queue/lane		*0.0*	*0.0*					*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane		*421*	*947*					*3142*	*1263*	*211*	*1389*	
Satflow per lane		*1732*	*1468*					*1818*	*1421*	*1641*	*1818*	
Capacity/lane		*495*	*743*					*2724*	*1383*	*228*	*3219*	
Flow ratio		*0.24*	*0.36*					*0.63*	*0.50*	*0.07*	0.28	
v/c ratio		*0.85*	*1.27*					*1.15*	*0.91*	*0.93*	*0.43*	
I factor		*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type		*5*	*5*					*5*	*5*	*5*	*5*	
Platoon ratio		*1.67*	*1.67*					*1.50*	*1.67*	*1.67*	*1.46*	
PF factor		*0.93*	*1.00*					*1.00*	*0.56*	*1.00*	*0.17*	
Q_1		*14.4*	*20.8*					*44.8*	*14.1*	*4.2*	*1.7*	
k_B		*0.6*	*0.5*					*0.9*	*0.8*	*0.2*	*1.0*	
Q_2		*2.6*	*16.6*					*24.4*	*5.1*	*1.4*	*0.7*	
Q avg.		*17.0*	*37.5*					*69.3*	*19.2*	*5.5*	*2.4*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$		*1.7*	*1.6*					*1.5*	*1.7*	*1.9*	*2.0*	
BOQ, $Q_{\%}$		*29.5*	*59.0*					*105*	*32.8*	*10.7*	*4.9*	

Queue Storage Ratio

Q spacing		*25.0*	*25.0*					*25.0*	*25.0*	*25.0*	*25.0*	
Q storage		*0*	*0*					*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/15/11	Jurisdiction	AIRBRIT30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	285	540	375	380	875	825	875	1045	200	985	2480	1750
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 23.0	G =	G =	G = 32.0	G = 52.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	300	963		400	1789		921	1311		1037	4453	
Lane group cap.	531	702		531	483		680	1669		680	1595	
v/c ratio	0.56	1.37		0.75	3.70		1.35	0.79		1.52	2.79	
Green ratio	0.17	0.15		0.17	0.15		0.21	0.35		0.21	0.35	
Unif. delay d1	57.5	63.5		59.6	63.5		59.0	44.0		59.0	49.0	
Delay factor k	0.16	0.50		0.31	0.50		0.50	0.33		0.50	0.50	
Increm. delay d2	1.4	176.3		6.0	1222		169.0	2.6		243.7	808.1	
PF factor	0.867	0.879		0.867	0.879		0.819	0.646		0.819	1.000	
Control delay	51.2	232.1		57.7	1278		217.4	31.0		292.0	857.1	
Lane group LOS	D	F		E	F		F	C		F	F	
Apprch. delay	189.2			1055			107.9			750.4		
Approach LOS	F			F			F			F		
Intersec. delay	618.2			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-AM NO LA MEDIA-AIRWAY RD./BRITANNIA BLVD./NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	TR		L	TR		L	TR		L	TR	
Init. queue/lane	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Flow rate/lane	300	963		400	1789		921	1311		1037	4453	
Satflow per lane	1641	1679		1641	1654		1641	1767		1641	1689	
Capacity/lane	531	702		531	483		680	1669		680	1595	
Flow ratio	0.09	0.21		0.12	0.57		0.29	0.27		0.32	0.97	
v/c ratio	0.56	1.37		0.75	3.70		1.35	0.79		1.52	2.79	
I factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Arrival type	5	5		5	5		5	5		5	5	
Platoon ratio	1.67	1.67		1.67	1.67		1.67	1.67		1.67	1.00	
PF factor	0.93	1.00		0.96	1.00		1.00	0.86		1.00	1.00	
Q_1	5.5	14.7		7.8	39.1		19.8	15.5		22.2	68.1	
k_B	0.4	0.4		0.4	0.4		0.5	0.7		0.5	0.7	
Q_2	0.5	13.4		1.1	86.3		17.2	2.3		24.2	132.2	
Q avg.	6.0	28.1		8.9	125.4		37.0	17.7		46.5	200.3	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	1.9	1.6		1.9	1.5		1.6	1.7		1.5	1.5	
BOQ, $Q_{\%}$	11.6	45.7		16.7	188		58.3	30.6		71.8	300	
Queue Storage Ratio												
Q spacing	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Q storage	0	0		0	0		0	0		0	0	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*AIRWAY RD./BRITANNIA BLVD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*11/15/11*	Jurisdiction	*AIRBRIT30A3BNLM*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B/WITH MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	2	2	2	3	1	2	3	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	285	540	375	380	875	825	875	1045	200	985	2480	1750
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 23.0	G =	G =	G = 32.0	G = 52.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	300	568	395	400	921	868	921	1100	211	1037	2611	1842
Lane group cap.	531	759	568	531	531	1004	680	1717	785	680	1717	1368
v/c ratio	0.56	0.75	0.70	0.75	1.73	0.86	1.35	0.64	0.27	1.52	1.52	1.35
Green ratio	0.17	0.15	0.40	0.17	0.15	0.40	0.21	0.35	0.55	0.21	0.35	0.55
Unif. delay d1	57.5	60.7	37.4	59.6	63.5	41.3	59.0	41.2	18.1	59.0	49.0	34.0
Delay factor k	0.16	0.30	0.26	0.31	0.50	0.39	0.50	0.22	0.11	0.50	0.50	0.50
Increm. delay d2	1.4	4.1	3.7	6.0	338.3	8.0	169.0	0.8	0.2	243.7	237.3	160.9
PF factor	0.867	0.879	0.556	0.867	0.879	0.556	0.819	0.646	0.196	0.819	0.646	1.000
Control delay	51.2	57.5	24.5	57.7	394.2	30.9	217.4	27.4	3.7	292.0	269.0	194.9
Lane group LOS	D	E	C	E	F	C	F	C	A	F	F	F
Apprch. delay	45.7			188.6			103.6			248.5		
Approach LOS	D			F			F			F		
Intersec. delay	184.9			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-AM NO LA MEDIA-AIRWAY RD./BRITANNIA BLVD./WITH*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow rate/lane	300	568	395	400	921	868	921	1100	211	1037	2611	1842
Satflow per lane	1641	1818	1419	1641	1818	1419	1641	1818	1436	1641	1818	1414
Capacity/lane	531	759	568	531	531	1004	680	1717	785	680	1717	1368
Flow ratio	0.09	0.11	0.28	0.12	0.27	0.35	0.29	0.22	0.15	0.32	0.53	0.74
v/c ratio	0.56	0.75	0.70	0.75	1.73	0.86	1.35	0.64	0.27	1.52	1.52	1.35
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Platoon ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.00
PF factor	0.93	0.96	0.75	0.96	1.00	0.86	1.00	0.80	0.22	1.00	1.00	1.00
Q_1	5.5	8.0	10.2	7.8	20.1	16.0	19.8	11.2	1.0	22.2	39.9	43.3
k_B	0.4	0.4	0.7	0.4	0.4	0.7	0.5	0.7	0.8	0.5	0.7	0.8
Q_2	0.5	1.1	1.4	1.1	26.6	3.2	17.2	1.2	0.3	24.2	43.0	36.4
Q avg.	6.0	9.1	11.7	8.9	46.7	19.2	37.0	12.5	1.3	46.5	82.9	79.7
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	1.9	1.9	1.8	1.9	1.5	1.7	1.6	1.8	2.1	1.5	1.5	1.5
BOQ, $Q_\%$	11.6	17.0	21.2	16.7	72.2	32.8	58.3	22.4	2.7	71.8	125	120
Queue Storage Ratio												
Q spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Q storage	0	0	0	0	0	0	0	0	0	0	0	0
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	AIRWAY RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/15/11	Jurisdiction	AIRBRIT30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	1350	1090	735	145	1000	900	800	1935	830	800	1000	720
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 23.0	G =	G =	G = 32.0	G = 52.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1421	1921		153	2000		842	2911		842	1811	
Lane group cap.	531	703		531	484		680	1628		680	1594	
v/c ratio	2.68	2.73		0.29	4.13		1.24	1.79		1.24	1.14	
Green ratio	0.17	0.15		0.17	0.15		0.21	0.35		0.21	0.35	
Unif. delay d1	62.5	63.5		54.7	63.5		59.0	49.0		59.0	49.0	
Delay factor k	0.50	0.50		0.11	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	759.6	783.7		0.3	1414		119.5	357.1		119.5	69.6	
PF factor	0.867	0.879		0.867	0.909		0.819	0.717		0.819	0.646	
Control delay	813.8	839.5		47.7	1472		167.9	392.3		167.9	101.2	
Lane group LOS	F	F		D	F		F	F		F	F	
Apprch. delay	828.6			1371			341.9			122.4		
Approach LOS	F			F			F			F		
Intersec. delay	615.8			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-PM NO LA MEDIA-AIRWAY RD./BRITANNIA BLVD.*

Average Back of Queue	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*1421*	*1921*		*153*	*2000*		*842*	*2911*		*842*	*1811*	
Satflow per lane	*1641*	*1682*		*1641*	*1658*		*1641*	*1724*		*1641*	*1687*	
Capacity/lane	*531*	*703*		*531*	*484*		*680*	*1628*		*680*	*1594*	
Flow ratio	*0.45*	*0.42*		*0.05*	*0.63*		*0.26*	*0.62*		*0.26*	0.39	
v/c ratio	*2.68*	*2.73*		*0.29*	*4.13*		*1.24*	*1.79*		*1.24*	*1.14*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.50*		*1.67*	*1.53*		*1.67*	*1.67*	
PF factor	*1.00*	*1.00*		*0.90*	*1.00*		*1.00*	*1.00*		*1.00*	*1.00*	
Q_1	*30.5*	*29.4*		*2.5*	*43.8*		*18.0*	*44.5*		*18.0*	*27.7*	
k_B	*0.4*	*0.4*		*0.4*	*0.4*		*0.5*	*0.7*		*0.5*	*0.7*	
Q_2	*57.9*	*56.5*		*0.2*	*100.0*		*12.5*	*60.4*		*12.5*	*13.9*	
Q avg.	*88.4*	*85.9*		*2.7*	*143.8*		*30.6*	*104.9*		*30.6*	*41.6*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.5*	*1.5*		*2.0*	*1.5*		*1.6*	*1.5*		*1.6*	*1.6*	
BOQ, $Q_{\%}$	*133*	*129*		*5.5*	*216*		*49.2*	*158*		*49.2*	*64.9*	
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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WM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/15/11	Jurisdiction	AIRBRIT30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	2	2	2	3	1	2	3	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	1350	1090	735	145	1000	900	800	1935	830	800	1000	720
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 23.0	G =	G =	G = 32.0	G = 52.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1421	1147	774	153	1053	947	842	2037	874	842	1053	758
Lane group cap.	531	759	568	531	531	1004	680	1717	785	680	1717	1368
v/c ratio	2.68	1.51	1.36	0.29	1.98	0.94	1.24	1.19	1.11	1.24	0.61	0.55
Green ratio	0.17	0.15	0.40	0.17	0.15	0.40	0.21	0.35	0.55	0.21	0.35	0.55
Unif. delay d1	62.5	63.5	45.0	54.7	63.5	43.4	59.0	49.0	34.0	59.0	40.7	22.1
Delay factor k	0.50	0.50	0.50	0.11	0.50	0.46	0.50	0.50	0.50	0.50	0.20	0.15
Increm. delay d2	759.6	236.8	174.3	0.3	449.1	16.5	119.5	90.1	67.9	119.5	0.7	0.5
PF factor	0.867	0.879	0.556	0.867	0.879	0.556	0.819	0.646	0.324	0.819	0.646	1.000
Control delay	813.8	292.7	199.3	47.7	504.9	40.6	167.9	121.7	78.9	167.9	26.9	22.6
Lane group LOS	F	F	F	D	F	D	F	F	E	F	C	C
Apprch. delay	492.6			268.2			122.1			70.4		
Approach LOS	F			F			F			E		
Intersec. delay	241.1			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-PM NO LA MEDIA-AIRWAY RD./BRITANNIA BLVD./WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*1421*	*1147*	*774*	*153*	*1053*	*947*	*842*	*2037*	*874*	*842*	*1053*	*758*
Satflow per lane	*1641*	*1818*	*1419*	*1641*	*1818*	*1419*	*1641*	*1818*	*1436*	*1641*	*1818*	*1414*
Capacity/lane	*531*	*759*	*568*	*531*	*531*	*1004*	*680*	*1717*	*785*	*680*	*1717*	*1368*
Flow ratio	*0.45*	*0.23*	*0.55*	*0.05*	*0.30*	*0.38*	*0.26*	*0.41*	*0.61*	*0.26*	0.21	*0.30*
v/c ratio	*2.68*	*1.51*	*1.36*	*0.29*	*1.98*	*0.94*	*1.24*	*1.19*	*1.11*	*1.24*	*0.61*	*0.55*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*3*
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.56*	*1.67*	*1.67*	*1.00*
PF factor	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.93*	*1.00*	*1.00*	*1.00*	*1.00*	*0.79*	*1.00*
Q_1	*30.5*	*17.5*	*32.3*	*2.5*	*23.0*	*20.0*	*18.0*	*31.1*	*36.4*	*18.0*	*10.5*	*11.6*
k_B	*0.4*	*0.4*	*0.7*	*0.4*	*0.4*	*0.7*	*0.5*	*0.7*	*0.8*	*0.5*	*0.7*	*0.8*
Q_2	*57.9*	*19.1*	*28.1*	*0.2*	*35.2*	*5.0*	*12.5*	*18.3*	*16.5*	*12.5*	*1.1*	*1.0*
Q avg.	*88.4*	*36.6*	*60.3*	*2.7*	*58.3*	*25.0*	*30.6*	*49.4*	*52.9*	*30.6*	*11.6*	*12.6*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.5*	*1.6*	*1.5*	*2.0*	*1.5*	*1.6*	*1.6*	*1.5*	*1.5*	*1.6*	*1.8*	*1.8*
BOQ, $Q_{\%}$	*133*	*57.8*	*91.7*	*5.5*	*88.8*	*41.2*	*49.2*	*76.0*	*81.0*	*49.2*	*21.0*	*22.6*

Queue Storage Ratio

Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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M

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SIEMPRE VIVA RD./BRITANNIA BLV*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*05/13/12*	Jurisdiction	*SIEMBRIT3BANLM*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM/NO MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	2	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	225	1310	370	450	1215	700	150	105	50	1235	1100	900
% Heavy veh	10	10	10	10	10	10	10	10	10	10	50	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G = 38.0	G =	G =	G = 36.0	G = 38.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	237	1768		474	2016		158	164		1300	2105	
Lane group cap.	425	1206		425	1174		765	827		765	963	
v/c ratio	0.56	1.47		1.12	1.72		0.21	0.20		1.70	2.19	
Green ratio	0.13	0.25		0.13	0.25		0.24	0.25		0.24	0.25	
Unif. delay d1	60.9	56.0		65.0	56.0		45.6	44.0		57.0	56.0	
Delay factor k	0.15	0.50		0.50	0.50		0.11	0.11		0.50	0.50	
Increm. delay d2	1.6	214.3		78.8	326.4		0.1	0.1		320.3	537.1	
PF factor	0.897	0.774		0.897	0.774		0.789	0.774		0.789	0.774	
Control delay	56.3	257.6		137.2	369.7		36.1	34.2		365.3	580.4	
Lane group LOS	E	F		F	F		D	C		F	F	
Apprch. delay	233.8			325.4			35.1			498.3		
Approach LOS	F			F			D			F		
Intersec. delay	363.3			Intersection LOS						F		

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W
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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./BRITANNIA BLV
Agency or Co.	USAI	Area Type	All other areas
Date Performed	04/10/11	Jurisdiction	SIEMBRIT3BANLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	2	2	2	1	2	2	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	225	1310	370	450	1215	700	150	105	50	1235	1100	900
% Heavy veh	10	10	10	10	10	10	10	10	10	10	50	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 24.0	G = 38.0	G =	G =	G = 40.0	G = 30.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	237	1379	389	474	1279	737	158	111	53	1300	1158	947
Lane group cap.	510	1255	792	510	1255	1377	850	692	561	850	508	992
v/c ratio	0.46	1.10	0.49	0.93	1.02	0.54	0.19	0.16	0.09	1.53	2.28	0.95
Green ratio	0.16	0.25	0.55	0.16	0.25	0.55	0.27	0.20	0.39	0.27	0.20	0.39
Unif. delay d1	57.2	56.0	20.5	62.2	56.0	21.3	42.4	49.6	28.7	55.0	60.0	44.2
Delay factor k	0.11	0.50	0.11	0.44	0.50	0.14	0.11	0.11	0.11	0.50	0.50	0.46
Increm. delay d2	0.7	56.9	0.5	23.7	30.3	0.4	0.1	0.1	0.1	244.2	582.0	18.6
PF factor	0.873	0.774	0.174	0.873	0.774	0.174	0.758	0.833	0.568	0.758	0.833	1.000
Control delay	50.6	100.3	4.1	78.0	73.6	4.1	32.3	41.4	16.4	285.9	632.0	62.8
Lane group LOS	D	F	A	E	E	A	C	D	B	F	F	E
Apprch. delay	75.7			53.9			32.8			341.5		
Approach LOS	E			D			C			F		
Intersec. delay	177.5			Intersection LOS						F		

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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*SIEMPRE VIVA RD./BRITANNIA BLV*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*05/13/12*	Jurisdiction	*SIEMBRIT3BPNLM/NO MIT*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM/NO MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	2	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	780	1680	100	160	800	1500	440	300	480	800	775	690
% Heavy veh	10	10	10	10	10	10	10	10	10	10	50	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 24.0	G = 38.0	G =	G =	G = 40.0	G = 30.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	821	1873		168	2421		463	821		842	1542	
Lane group cap.	510	1242		510	1111		850	616		850	760	
v/c ratio	1.61	1.51		0.33	2.18		0.54	1.33		0.99	2.03	
Green ratio	0.16	0.25		0.16	0.25		0.27	0.20		0.27	0.20	
Unif. delay d1	63.0	56.0		55.9	56.0		47.2	60.0		54.8	60.0	
Delay factor k	0.50	0.50		0.11	0.50		0.14	0.50		0.49	0.50	
Increm. delay d2	283.4	232.8		0.4	533.6		0.7	160.7		28.5	467.7	
PF factor	0.873	0.774		0.873	0.774		0.758	0.833		0.758	0.833	
Control delay	338.4	276.2		49.2	576.9		36.5	210.7		70.0	517.7	
Lane group LOS	F	F		D	F		D	F		E	F	
Apprch. delay	295.2			542.7			147.9			359.5		
Approach LOS	F			F			F			F		
Intersec. delay	362.8			Intersection LOS						F		

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W
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./BRITANNIA BLV
Agency or Co.	USAI	Area Type	All other areas
Date Performed	04/10/11	Jurisdiction	SIEMBRIT3BPNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	2	2	2	1	2	2	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	780	1680	100	160	800	1500	440	300	480	800	775	690
% Heavy veh	10	10	10	10	10	10	10	10	10	10	50	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 24.0	G = 38.0	G =	G =	G = 40.0	G = 30.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	821	1768	105	168	842	1579	463	316	505	842	816	726
Lane group cap.	510	1255	792	510	1255	1377	850	692	561	850	508	992
v/c ratio	1.61	1.41	0.13	0.33	0.67	1.15	0.54	0.46	0.90	0.99	1.61	0.73
Green ratio	0.16	0.25	0.55	0.16	0.25	0.55	0.27	0.20	0.39	0.27	0.20	0.39
Unif. delay d1	63.0	56.0	16.1	55.9	50.4	33.5	47.2	52.8	42.7	54.8	60.0	38.8
Delay factor k	0.50	0.50	0.11	0.11	0.24	0.50	0.14	0.11	0.42	0.49	0.50	0.29
Increm. delay d2	283.4	188.8	0.1	0.4	1.4	75.0	0.7	0.5	17.6	28.5	281.9	2.8
PF factor	0.873	0.774	0.174	0.873	0.774	0.384	0.758	0.833	0.568	0.758	0.833	1.000
Control delay	338.4	232.1	2.9	49.2	40.4	87.9	36.5	44.5	41.8	70.0	331.9	41.6
Lane group LOS	F	F	A	D	D	F	D	D	D	E	F	D
Apprch. delay	255.6			69.9			40.6			151.0		
Approach LOS	F			E			D			F		
Intersec. delay	143.2			Intersection LOS						F		

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N
M

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	OTAY MESA RD/LA MEDIA RD.
Agency or Co.	USAI		
Date Performed	03/13/11	Area Type	All other areas
Time Period	YEAR 2030 AM PEAK HOUR	Jurisdiction	OMLM30A3BNLM/NO MIT.
		Analysis Year	YEAR 2030 - ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	3	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	135	1475	665	860	1165	590	975	1105	980	775	520	825
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10		0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 35.0	G = 35.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	142	2253		905	1847		1026	2195		816	1415	
Lane group cap.	637	944		637	930		744	1060		744	721	
v/c ratio	0.22	2.39		1.42	1.99		1.38	2.07		1.10	1.96	
Green ratio	0.20	0.20		0.20	0.20		0.23	0.23		0.23	0.23	
Unif. delay d1	50.2	60.0		60.0	60.0		57.5	57.5		57.5	57.5	
Delay factor k	0.11	0.50		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	0.2	627.3		198.4	447.6		179.0	485.1		62.6	438.2	
PF factor	0.833	0.833		0.833	0.833		0.797	0.797		0.797	0.797	
Control delay	42.0	677.3		248.4	497.6		224.8	530.9		108.5	484.0	
Lane group LOS	D	F		F	F		F	F		F	F	
Apprch. delay	639.6			415.6			433.4			346.6		
Approach LOS	F			F			F			F		
Intersec. delay	457.1			Intersection LOS						F		

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N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *AM OM/LM 3B NO LM/ NO MIT.*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	TR		L	TR		L	TR		L	TR	
Init. queue/lane	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Flow rate/lane	142	2253		905	1847		1026	2195		816	1415	
Satflow per lane	1641	1733		1641	1707		1641	1667		1641	1621	
Capacity/lane	637	944		637	930		744	1060		744	721	
Flow ratio	0.04	0.48		0.28	0.40		0.32	0.48		0.26	0.46	
v/c ratio	0.22	2.39		1.42	1.99		1.38	2.07		1.10	1.96	
I factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Arrival type	5	5		5	5		5	5		5	5	
Platoon ratio	1.67	1.67		1.67	1.67		1.67	1.67		1.67	1.67	
PF factor	0.86	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Q_1	2.2	34.5		19.4	28.3		22.0	33.5		17.5	31.0	
k_B	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Q_2	0.1	61.0		18.7	43.1		19.9	53.0		8.1	46.7	
Q avg.	2.3	95.4		38.2	71.3		41.9	86.6		25.6	77.6	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	2.0	1.5		1.6	1.5		1.6	1.5		1.6	1.5	
BOQ, $Q_{\%}$	4.7	143		60.0	108		65.3	130		42.0	117	
Queue Storage Ratio												
Q spacing	24.9	24.9		24.9	24.9		24.9	24.9		24.9	24.9	
Q storage	0	0		0	0		0	0		0	0	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD/LA MEDIA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	OMLM30A3BNLM/WITH MIT
Time Period	YEAR 2030 AM PEAK HOUR	Analysis Year	YEAR 2030 - ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	2	2	3	2	2	3	2	2	2	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	135	1475	665	860	1165	590	975	1105	980	775	520	825
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10		0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 35.0	G = 35.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	142	1553	700	905	1226	621	1026	1163	1032	816	547	868
Lane group cap.	637	991	1213	637	991	1177	744	1156	1180	744	808	1180
v/c ratio	0.22	1.57	0.58	1.42	1.24	0.53	1.38	1.01	0.87	1.10	0.68	0.74
Green ratio	0.20	0.20	0.47	0.20	0.20	0.47	0.23	0.23	0.47	0.23	0.23	0.47
Unif. delay d1	50.2	60.0	29.2	60.0	60.0	28.3	57.5	57.5	36.0	57.5	52.4	32.5
Delay factor k	0.11	0.50	0.17	0.50	0.50	0.13	0.50	0.50	0.40	0.50	0.25	0.29
Increm. delay d2	0.2	260.1	0.7	198.4	115.5	0.4	179.0	27.9	7.5	62.6	2.3	2.4
PF factor	0.833	0.833	0.417	0.833	0.833	0.417	0.797	0.797	0.417	0.797	0.797	0.417
Control delay	42.0	310.1	12.9	248.4	165.5	12.2	224.8	73.8	22.6	108.5	44.0	16.0
Lane group LOS	D	F	B	F	F	B	F	E	C	F	D	B
Apprch. delay	207.3			158.2			105.5			56.7		
Approach LOS	F			F			F			E		
Intersec. delay	131.9			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *AM OM/LM 3B NO LM/ WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*142*	*1553*	*700*	*905*	*1226*	*621*	*1026*	*1163*	*1032*	*816*	*547*	*868*
Satflow per lane	*1641*	*1818*	*1468*	*1641*	*1818*	*1425*	*1641*	*1818*	*1429*	*1641*	*1818*	*1429*
Capacity/lane	*637*	*991*	*1213*	*637*	*991*	*1177*	*744*	*1156*	*1180*	*744*	*808*	*1180*
Flow ratio	*0.04*	*0.31*	*0.27*	*0.28*	*0.25*	*0.25*	*0.32*	*0.23*	*0.41*	*0.26*	0.16	*0.34*
v/c ratio	*0.22*	*1.57*	*0.58*	*1.42*	*1.24*	*0.53*	*1.38*	*1.01*	*0.87*	*1.10*	*0.68*	*0.74*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*
PF factor	*0.86*	*1.00*	*0.55*	*1.00*	*1.00*	*0.53*	*1.00*	*1.00*	*0.77*	*1.00*	*0.91*	*0.64*
Q_1	*2.2*	*23.8*	*6.6*	*19.4*	*18.8*	*5.5*	*22.0*	*17.8*	*16.9*	*17.5*	*9.9*	*10.6*
k_B	*0.5*	*0.5*	*0.7*	*0.5*	*0.5*	*0.7*	*0.5*	*0.6*	*0.7*	*0.5*	*0.6*	*0.7*
Q_2	*0.1*	*27.2*	*1.0*	*18.7*	*13.1*	*0.8*	*19.9*	*5.6*	*3.8*	*8.1*	*1.1*	*1.9*
Q avg.	*2.3*	*51.0*	*7.6*	*38.2*	*31.8*	*6.3*	*41.9*	*23.3*	*20.7*	*25.6*	*11.0*	*12.5*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.5*	*1.9*	*1.6*	*1.6*	*1.9*	*1.6*	*1.7*	*1.7*	*1.6*	*1.8*	*1.8*
BOQ, $Q_{\%}$	*4.7*	*78.2*	*14.4*	*60.0*	*51.0*	*12.1*	*65.3*	*38.8*	*34.9*	*42.0*	*20.1*	*22.5*

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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M

SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*OTAY MESA RD/LA MEDIA RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/13/11*	Jurisdiction	*OMLM30P3BNLM/NO MIT.*
Time Period	*YEAR 2030 PM PEAK HOUR*	Analysis Year	*YEAR 2030 - ALT-3B NO LM/NO MI*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	3	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	665	1000	1100	990	1500	780	670	620	850	400	630	120
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10		0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 35.0	G = 35.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	700	2211		1042	2400		705	1548		421	789	
Lane group cap.	637	913		637	929		744	1038		744	785	
v/c ratio	1.10	2.42		1.64	2.58		0.95	1.49		0.57	1.01	
Green ratio	0.20	0.20		0.20	0.20		0.23	0.23		0.23	0.23	
Unif. delay d1	60.0	60.0		60.0	60.0		56.6	57.5		50.8	57.5	
Delay factor k	0.50	0.50		0.50	0.50		0.46	0.50		0.16	0.50	
Increm. delay d2	65.8	643.1		293.2	715.7		21.2	226.2		1.0	33.4	
PF factor	0.833	0.833		0.833	0.833		0.797	0.797		0.797	0.797	
Control delay	115.8	693.1		343.2	765.7		66.3	272.1		41.5	79.2	
Lane group LOS	F	F		F	F		E	F		D	E	
Apprch. delay	554.3			637.8			207.7			66.1		
Approach LOS	F			F			F			E		
Intersec. delay	443.8			Intersection LOS						F		

22-P
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *2030 3B NO LA MEDIA PM PEAK HOUR/NO MITIGATION-OM/LM*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*700*	*2211*		*1042*	*2400*		*705*	*1548*		*421*	*789*	
Satflow per lane	*1641*	*1675*		*1641*	*1705*		*1641*	*1632*		*1641*	*1766*	
Capacity/lane	*637*	*913*		*637*	*929*		*744*	*1038*		*744*	*785*	
Flow ratio	*0.22*	*0.48*		*0.33*	*0.52*		*0.22*	*0.35*		*0.13*	0.23	
v/c ratio	*1.10*	*2.42*		*1.64*	*2.58*		*0.95*	*1.49*		*0.57*	*1.01*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*		*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*1.00*	*1.00*		*1.00*	*1.00*		*0.98*	*1.00*		*0.89*	*1.00*	
Q_1	*15.0*	*33.8*		*22.3*	*36.7*		*14.6*	*23.7*		*7.0*	*17.3*	
k_B	*0.5*	*0.5*		*0.5*	*0.5*		*0.5*	*0.5*		*0.5*	*0.6*	
Q_2	*7.1*	*60.3*		*27.2*	*68.3*		*3.8*	*24.9*		*0.7*	*5.5*	
Q avg.	*22.1*	*94.1*		*49.5*	*105.0*		*18.4*	*48.5*		*7.7*	*22.7*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.7*	*1.5*		*1.5*	*1.5*		*1.7*	*1.5*		*1.9*	*1.7*	
BOQ, $Q_{\%}$	*37.0*	*141*		*76.2*	*158*		*31.6*	*74.8*		*14.6*	*37.9*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*		*24.9*	*24.9*		*24.9*	*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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22-P
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M

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*OTAY MESA RD/LA MEDIA RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/13/11*	Jurisdiction	*OMLM30P3BNLM/WITH MIT*
Time Period	*YEAR 2030 PM PEAK HOUR*	Analysis Year	*YEAR 2030 - ALT-3B NO LM/WITH*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	2	2	3	2	2	3	2	2	2	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	665	1000	1100	990	1500	780	670	620	850	400	630	120
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10		0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 35.0	G = 35.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	700	1053	1158	1042	1579	821	705	653	895	421	663	126
Lane group cap.	637	991	1213	637	991	1177	744	1156	1180	744	808	1180
v/c ratio	1.10	1.06	0.95	1.64	1.59	0.70	0.95	0.56	0.76	0.57	0.82	0.11
Green ratio	0.20	0.20	0.47	0.20	0.20	0.47	0.23	0.23	0.47	0.23	0.23	0.47
Unif. delay d1	60.0	60.0	38.5	60.0	60.0	31.6	56.6	50.8	33.0	50.8	54.5	22.5
Delay factor k	0.50	0.50	0.46	0.50	0.50	0.26	0.46	0.16	0.31	0.16	0.36	0.11
Increm. delay d2	65.8	46.7	16.2	293.2	271.8	1.8	21.2	0.6	2.9	1.0	6.8	0.0
PF factor	0.833	0.833	0.417	0.833	0.833	0.417	0.797	0.797	0.417	0.797	0.797	0.417
Control delay	115.8	96.7	32.2	343.2	321.8	15.0	66.3	41.1	16.7	41.5	50.2	9.4
Lane group LOS	F	F	C	F	F	B	E	D	B	D	D	A
Apprch. delay	75.6			255.1			39.3			42.9		
Approach LOS	E			F			D			D		
Intersec. delay	126.2			Intersection LOS						F		

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M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description 2030 3B NO LA MEDIA PM PEAK HOUR/WITH MIT/OM-LM

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow rate/lane	700	1053	1158	1042	1579	821	705	653	895	421	663	126
Satflow per lane	1641	1818	1468	1641	1818	1425	1641	1818	1429	1641	1818	1429
Capacity/lane	637	991	1213	637	991	1177	744	1156	1180	744	808	1180
Flow ratio	0.22	0.21	0.45	0.33	0.32	0.32	0.22	0.13	0.35	0.13	0.19	0.05
v/c ratio	1.10	1.06	0.95	1.64	1.59	0.70	0.95	0.56	0.76	0.57	0.82	0.11
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Platoon ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
PF factor	1.00	1.00	0.90	1.00	1.00	0.61	0.98	0.89	0.66	0.89	0.95	0.43
Q_1	15.0	16.1	23.5	22.3	24.1	9.4	14.6	7.8	11.4	7.0	13.0	0.7
k_B	0.5	0.5	0.7	0.5	0.5	0.7	0.5	0.6	0.7	0.5	0.6	0.7
Q_2	7.1	6.6	6.1	27.2	28.3	1.6	3.8	0.7	2.1	0.7	2.1	0.1
Q avg.	22.1	22.7	29.6	49.5	52.4	10.9	18.4	8.5	13.5	7.7	15.1	0.8
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	1.7	1.7	1.6	1.5	1.5	1.8	1.7	1.9	1.8	1.9	1.8	2.1
BOQ, $Q_{\%}$	37.0	37.9	47.9	76.2	80.4	20.0	31.6	15.9	24.0	14.6	26.6	1.7
Queue Storage Ratio												
Q spacing	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9
Q storage	0	0	0	0	0	0	0	0	0	0	0	0
Avg. R_Q												
95% $R_{Q\%}$												

23-A
N
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR905 WB RAMPS/LA MEDIA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBLAMED30A3BNLM/NOMIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	1	1	1	1	2	2	1	0	3	1
Lane group		LT	R	L	LT	R	L	T	R		T	R
Volume (vph)	85	100	130	1325	50	1035	110	1940	1300		1945	100
% Heavy veh	5	5	5	10	5	10	5	10	10		10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A		A	A
Startup lost time		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Arrival type		5	5	5	5	5	5	5	5		5	3
Unit Extension		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Ped/Bike/RTOR Volume	10		0	10		0	10	5	0	10	5	0
Lane Width		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0	0	0	0	0		0	0
Unit Extension		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0

Phasing	EB Only	WB Only	03	04	NB Only	Thru & RT	07	08
Timing	G = 10.0	G = 47.0	G =	G =	G = 10.0	G = 55.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		194	137	698	750	1089	116	2042	1368		2047	105
Lane group cap.		133	220	551	585	493	238	1706	555		1946	753
v/c ratio		1.46	0.62	1.27	1.28	2.21	0.49	1.20	2.46		1.05	0.14
Green ratio		0.07	0.14	0.34	0.34	0.34	0.07	0.49	0.39		0.39	0.50
Unif. delay d1		65.0	56.5	46.5	46.5	46.5	62.5	35.5	42.5		42.5	18.8
Delay factor k		0.50	0.21	0.50	0.50	0.50	0.11	0.50	0.50		0.50	0.11
Increm. delay d2		243.0	5.4	134.0	139.6	550.6	1.6	94.6	664.6		35.6	0.1
PF factor		0.949	0.889	0.663	0.663	0.858	0.949	0.406	1.000		0.569	1.000
Control delay		304.6	55.6	164.8	170.5	590.5	60.9	109.1	707.1		59.8	18.9
Lane group LOS		F	E	F	F	F	E	F	F		E	B
Apprch. delay	201.5			349.2			339.5			57.8		
Approach LOS	F			F			F			E		
Intersec. delay	266.1			Intersection LOS						F		

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MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/NO MIT*

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Average Back of Queue												
Lane group		*LT*	*R*	*L*	*LT*	*R*	*L*	*T*	*R*		*T*	*R*
Init. queue/lane		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Flow rate/lane		194	137	698	750	1089	116	2042	1368		2047	105
Satflow per lane		1862	1538	1641	1743	1468	1719	1818	1414		1818	1505
Capacity/lane		133	220	551	585	493	238	1706	555		1946	753
Flow ratio		0.10	0.09	0.43	0.43	0.74	0.03	0.59	0.97		0.41	0.07
v/c ratio		1.46	0.62	1.27	1.28	2.21	0.49	1.20	2.46		1.05	0.14
I factor		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000
Arrival type		5	5	5	5	5	5	5	5		5	3
Platoon ratio		1.67	1.67	1.67	1.67	1.28	1.67	1.61	1.00		1.67	1.00
PF factor		1.00	0.95	1.00	1.00	1.00	0.97	1.00	1.00		1.00	1.00
Q_1		7.5	4.8	27.1	29.2	42.3	2.1	41.7	53.2		29.2	2.2
k_B		0.3	0.4	0.6	0.7	0.6	0.3	0.8	0.6		0.7	0.8
Q_2		8.4	0.6	21.0	23.3	75.6	0.2	26.3	102.7		10.9	0.1
Q avg.		15.9	5.3	48.1	52.4	117.9	2.4	68.0	155.9		40.1	2.3
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		1.7	1.9	1.5	1.5	1.5	2.0	1.5	1.5		1.6	2.0
BOQ, $Q_{\%}$		27.9	10.4	74.2	80.3	177	4.8	103	234		62.8	4.7
Queue Storage Ratio												
Q spacing		25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0
Q storage		0	0	0	0	0	0	0	0		0	0
Avg. R_Q												
95% $R_{Q\%}$												

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23A
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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR905 WB RAMPS/LA MEDIA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	905WBLAMED30A3BNLM/MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	1	1	1	2	3	1	0	3	1
Lane group	L		R	L	LT	R	L	T	R		T	R
Volume (vph)	85		230	1325	50	1035	110	1940	1300		1945	100
% Heavy veh	5		5	10	5	10	5	10	10		10	5
PHF	0.95		0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95
Actuated (P/A)	A		A	A	A	A	A	A	A		A	A
Startup lost time	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Ext. eff. green	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Arrival type	5		5	5	5	5	5	5	5		5	3
Unit Extension	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Ped/Bike/RTOR Volume	10		0	10		0	10	5	0	10	5	0
Lane Width	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0	0	0	0	0	0	0		0	0
Unit Extension	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0

Phasing	EB Only	WB Only	03	04	NB Only	Thru & RT	07	08
Timing	G = 10.0	G = 47.0	G =	G =	G = 10.0	G = 55.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	89		242	698	750	1089	116	2042	1368		2047	105
Lane group cap.	123		220	551	585	493	238	2441	1418		1946	753
v/c ratio	0.72		1.10	1.27	1.28	2.21	0.49	0.84	0.96		1.05	0.14
Green ratio	0.07		0.14	0.34	0.34	0.34	0.07	0.49	1.00		0.39	0.50
Unif. delay d1	63.6		60.0	46.5	46.5	46.5	62.5	30.6	0.0		42.5	18.8
Delay factor k	0.28		0.50	0.50	0.50	0.50	0.11	0.37	0.47		0.50	0.11
Increm. delay d2	18.9		90.0	134.0	139.6	550.6	1.6	2.7	16.2		35.6	0.1
PF factor	0.949		0.889	0.663	0.663	0.858	0.949	0.352	0.950		0.569	1.000
Control delay	79.3		143.3	164.8	170.5	590.5	60.9	13.5	16.2		59.8	18.9
Lane group LOS	E		F	F	F	F	E	B	B		E	B
Apprch. delay	126.1			349.2			16.1			57.8		
Approach LOS	F			F			B			E		
Intersec. delay	129.8			Intersection LOS						F		

23A
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M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L		R	L	LT	R	L	T	R		T	R
Init. queue/lane	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Flow rate/lane	89		242	698	750	1089	116	2042	1368		2047	105
Satflow per lane	1719		1538	1641	1743	1468	1719	1818	1418		1818	1505
Capacity/lane	123		220	551	585	493	238	2441	1418		1946	753
Flow ratio	0.05		0.16	0.43	0.43	0.74	0.03	0.41	0.96		0.41	0.07
v/c ratio	0.72		1.10	1.27	1.28	2.21	0.49	0.84	0.96		1.05	0.14
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000
Arrival type	5		5	5	5	5	5	5	5		5	3
Platoon ratio	1.67		1.67	1.67	1.67	1.28	1.67	1.67	1.00		1.67	1.00
PF factor	0.98		1.00	1.00	1.00	1.00	0.97	0.66			1.00	1.00
Q_1	3.3		9.4	27.1	29.2	42.3	2.1	16.6			29.2	2.2
k_B	0.3		0.4	0.6	0.7	0.6	0.3	0.8	1.1		0.7	0.8
Q_2	0.6		5.0	21.0	23.3	75.6	0.2	3.6	11.0		10.9	0.1
Q avg.	3.9		14.4	48.1	52.4	117.9	2.4	20.2			40.1	2.3

Percentile Back of Queue (95th percentile)

$f_{B\%}$	2.0		1.8	1.5	1.5	1.5	2.0	1.7			1.6	2.0
BOQ, $Q_{\%}$	7.8		25.4	74.2	80.3	177	4.8	34.2			62.8	4.7

Queue Storage Ratio

Q spacing	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0
Q storage	0		0	0	0	0	0	0	0		0	0
Avg. R_Q												
95% $R_{Q\%}$												

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N
MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SR905 WB RAMPS/LA MEDIA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBLAMED30P3BNLM/NOMIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	1	1	1	1	2	2	1	0	3	1
Lane group		LT	R	L	LT	R	L	T	R		T	R
Volume (vph)	270	100	405	525	125	350	225	1520	1605		2470	250
% Heavy veh	5	5	5	10	10	10	5	10	10		10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A		A	A
Startup lost time		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Arrival type		5	5	5	5	5	5	5	5		5	3
Unit Extension		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Ped/Bike/RTOR Volume	10		0	10		0	10	5	0	10	5	0
Lane Width		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0	0	0	0	0		0	0
Unit Extension		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0

Phasing	EB Only	WB Only	03	04	NB Only	Thru & RT	07	08
Timing	G = 20.0	G = 40.0	G =	G =	G = 12.0	G = 60.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		389	426	277	408	368	237	1600	1689		2600	263
Lane group cap.		245	328	438	469	391	267	1754	717		1981	853
v/c ratio		1.59	1.30	0.63	0.87	0.94	0.89	0.91	2.36		1.31	0.31
Green ratio		0.13	0.21	0.27	0.27	0.27	0.08	0.51	0.51		0.40	0.57
Unif. delay d1		65.0	59.0	48.5	52.5	53.8	68.3	33.9	37.0		45.0	17.1
Delay factor k		0.50	0.50	0.21	0.40	0.45	0.41	0.43	0.50		0.50	0.11
Increm. delay d2		283.0	155.1	3.0	16.1	30.9	28.2	7.7	614.4		144.3	0.2
PF factor		0.897	0.819	0.758	0.758	0.758	0.942	0.315	1.000		0.556	1.000
Control delay		341.4	203.5	39.7	55.8	71.7	92.6	18.4	651.4		169.3	17.3
Lane group LOS		F	F	D	E	E	F	B	F		F	B
Apprch. delay	269.3			57.1			326.6			155.4		
Approach LOS	F			E			F			F		
Intersec. delay	227.2			Intersection LOS						F		

HCS2000™ Version 4.1f

23-P
N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*LT*	*R*	*L*	*LT*	*R*	*L*	*T*	*R*		*T*	*R*
Init. queue/lane		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*
Flow rate/lane		*389*	*426*	*277*	*408*	*368*	*237*	*1600*	*1689*		*2600*	*263*
Satflow per lane		*1838*	*1538*	*1641*	*1759*	*1468*	*1719*	*1818*	*1415*		*1818*	*1505*
Capacity/lane		*245*	*328*	*438*	*469*	*391*	*267*	*1754*	*717*		*1981*	*853*
Flow ratio		*0.21*	*0.28*	*0.17*	*0.23*	*0.25*	*0.07*	*0.46*	*1.19*		0.52	*0.17*
v/c ratio		*1.59*	*1.30*	*0.63*	*0.87*	*0.94*	*0.89*	*0.91*	*2.36*		*1.31*	*0.31*
I factor		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*
Arrival type		*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*		*5*	*3*
Platoon ratio		*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.00*		*1.67*	*1.00*
PF factor		*1.00*	*1.00*	*0.88*	*0.95*	*0.98*	*0.99*	*0.74*	*1.00*		*1.00*	*1.00*
Q_1		*16.2*	*17.8*	*8.9*	*15.4*	*14.6*	*5.0*	*23.7*	*70.4*		*39.8*	*5.8*
k_B		*0.4*	*0.5*	*0.6*	*0.6*	*0.5*	*0.3*	*0.9*	*0.8*		*0.8*	*0.9*
Q_2		*19.0*	*14.1*	*0.9*	*2.9*	*3.7*	*1.3*	*5.9*	*122.8*		*31.3*	*0.4*
Q avg.		*35.2*	*31.8*	*9.9*	*18.3*	*18.4*	*6.3*	*29.5*	*193.2*		*71.1*	*6.1*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		*1.6*	*1.6*	*1.8*	*1.7*	*1.7*	*1.9*	*1.6*	*1.5*		*1.5*	*1.9*
BOQ, $Q_{\%}$		*55.8*	*51.0*	*18.2*	*31.4*	*31.5*	*12.2*	*47.7*	*290*		*107*	*11.8*
Queue Storage Ratio												
Q spacing		*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*		*25.0*	*25.0*
Q storage		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

23P
W
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR905 WB RAMPS/LA MEDIA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	905WBLAMED30P3BNLM/MIT.
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	1	1	1	2	3	1	0	3	1
Lane group	L		R	L	LT	R	L	T	R		T	R
Volume (vph)	270		505	525	125	350	225	1520	1605		2470	250
% Heavy veh	5		5	10	10	10	5	10	10		10	5
PHF	0.95		0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95
Actuated (P/A)	A		A	A	A	A	A	A	A		A	A
Startup lost time	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Ext. eff. green	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Arrival type	5		5	5	5	5	5	5	5		5	5
Unit Extension	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Ped/Bike/RTOR Volume	10		0	10		0	10	5	0	10	5	0
Lane Width	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0	0	0	0	0	0	0		0	0
Unit Extension	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0

Phasing	EB Only	WB Only	03	04	NB Only	Thru & RT	07	08
Timing	G = 20.0	G = 40.0	G =	G =	G = 12.0	G = 60.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	284		532	277	408	368	237	1600	1689		2600	263
Lane group cap.	229		328	438	469	391	267	2510	1422		1981	853
v/c ratio	1.24		1.62	0.63	0.87	0.94	0.89	0.64	1.19		1.31	0.31
Green ratio	0.13		0.21	0.27	0.27	0.27	0.08	0.51	1.00		0.40	0.57
Unif. delay d1	65.0		59.0	48.5	52.5	53.8	68.3	27.0	0.0		45.0	17.1
Delay factor k	0.50		0.50	0.21	0.40	0.45	0.41	0.22	0.50		0.50	0.11
Increm. delay d2	139.5		293.5	3.0	16.1	30.9	28.2	0.5	91.9		144.3	0.2
PF factor	0.897		0.819	0.758	0.758	0.758	0.942	0.315	0.950		0.556	0.128
Control delay	197.9		341.9	39.7	55.8	71.7	92.6	9.0	91.9		169.3	2.4
Lane group LOS	F		F	D	E	E	F	A	F		F	A
Apprch. delay	291.7			57.1			54.3			154.0		
Approach LOS	F			E			D			F		
Intersec. delay	112.7			Intersection LOS						F		

23P
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L		R	L	LT	R	L	T	R		T	R
Init. queue/lane	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Flow rate/lane	284		532	277	408	368	237	1600	1689		2600	263
Satflow per lane	1719		1538	1641	1759	1468	1719	1818	1422		1818	1505
Capacity/lane	229		328	438	469	391	267	2510	1422		1981	853
Flow ratio	0.17		0.35	0.17	0.23	0.25	0.07	0.32	1.19		0.52	0.17
v/c ratio	1.24		1.62	0.63	0.87	0.94	0.89	0.64	1.19		1.31	0.31
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000
Arrival type	5		5	5	5	5	5	5	5		5	5
Platoon ratio	1.67		1.67	1.67	1.67	1.67	1.67	1.67	1.00		1.67	1.67
PF factor	1.00		1.00	0.88	0.95	0.98	0.99	0.46			1.00	0.15
Q_1	11.8		22.2	8.9	15.4	14.6	5.0	8.2			39.8	0.9
k_B	0.4		0.5	0.6	0.6	0.5	0.3	0.9	1.2		0.8	0.9
Q_2	8.5		26.7	0.9	2.9	3.7	1.3	1.5	39.6		31.3	0.4
Q avg.	20.3		48.9	9.9	18.3	18.4	6.3	9.8			71.1	1.2

Percentile Back of Queue (95th percentile)

$f_{B\%}$	1.7		1.5	1.8	1.7	1.7	1.9	1.8			1.5	2.1
BOQ, $Q_{\%}$	34.4		75.2	18.2	31.4	31.5	12.2	18.0			107	2.5

Queue Storage Ratio

Q spacing	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0
Q storage	0		0	0	0	0	0	0	0		0	0
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

24-A

NO MIT

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SR-905 EB/ LA MEDIA*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*11/08/10*	Jurisdiction	*905EBLAMED30A3BNLM/CALTRANS*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030/ALT. 3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	0	2	0	0	0	2	3	0	0	2	1
Lane group	L		R				L	T			T	R
Volume (vph)	1235		2300				600	2115			2350	400
% Heavy veh	10		10				10	10			10	10
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A		A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	2.0
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	2.0
Arrival type	3		3				5	5			5	5
Unit Extension	3.0		3.0				3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10		0	10						10	5	0
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	0
Unit Extension	3.0		3.0				3.0	3.0			3.0	3.0

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 60.0	G =	G =	G =	G = 20.0	G = 52.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 145.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1300		2421				632	2226			2474	421
Lane group cap.	1319		1506				440	2596			1242	1160
v/c ratio	0.99		1.61				1.44	0.86			1.99	0.36
Green ratio	0.41		0.58				0.14	0.52			0.36	0.81
Unif. delay d1	42.1		30.5				62.5	29.8			46.5	3.8
Delay factor k	0.49		0.50				0.50	0.39			0.50	0.11
Increm. delay d2	21.3		276.5				209.0	3.1			449.3	0.2
PF factor	1.000		1.000				0.893	0.266			0.816	0.259
Control delay	63.4		307.0				264.8	11.0			487.2	1.2
Lane group LOS	E		F				F	B			F	A
Apprch. delay	221.9						67.1			416.5		
Approach LOS	F						E			F		
Intersec. delay	234.7			Intersection LOS						F		

24-A
NO MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA AM PEAK HOUR/CALTRANS LANES*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L		R				L	T			T	R
Init. queue/lane	0.0		0.0				0.0	0.0			0.0	0.0
Flow rate/lane	1300		2421				632	2226			2474	421
Satflow per lane	1641		1468				1641	1818			1818	1437
Capacity/lane	1319		1506				440	2596			1242	1160
Flow ratio	0.41		0.93				0.20	0.45			0.71	0.29
v/c ratio	0.99		1.61				1.44	0.86			1.99	0.36
I factor	1.000	1.000	1.000				1.000	1.000			1.000	1.000
Arrival type	3		3				5	5			5	5
Platoon ratio	1.00		1.00				1.67	1.67			1.33	1.18
PF factor	1.00		1.00				1.00	0.58			1.00	0.28
Q_1	26.7		55.1				13.1	16.6			52.3	1.3
k_B	0.7		0.8				0.4	0.9			0.7	1.0
Q_2	7.2		66.8				13.5	4.3			82.3	0.6
Q avg.	33.9		121.8				26.6	20.9			134.6	1.9
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	1.6		1.5				1.6	1.7			1.5	2.0
BOQ, $Q_{\%}$	53.9		183				43.5	35.2			202	3.8
Queue Storage Ratio												
Q spacing	24.9		24.9				24.9	24.9			24.9	24.9
Q storage	0		0				0	0			0	0
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™ Version 4.1f

2A-A
WITH
MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*SR-905 EB/ LA MEDIA*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*11/08/10*	Jurisdiction	*905EBLAMED30A3BNLM/MIT*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030/ALT. 3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	0	2	0	0	0	2	3	0	0	3	1
Lane group	L		R				L	T			T	R
Volume (vph)	1235		2300				600	2115			2350	400
% Heavy veh	10		10				10	10			10	10
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A		A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	2.0
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	2.0
Arrival type	3		3				5	5			5	5
Unit Extension	3.0		3.0				3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10		0	10						10	5	0
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	0
Unit Extension	3.0		3.0				3.0	3.0			3.0	3.0

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 60.0	G =	G =	G =	G = 20.0	G = 52.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 145.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1300		2421				632	2226			2474	421
Lane group cap.	1319		1506				440	2596			1776	1160
v/c ratio	0.99		1.61				1.44	0.86			1.39	0.36
Green ratio	0.41		0.58				0.14	0.52			0.36	0.81
Unif. delay d1	42.1		30.5				62.5	29.8			46.5	3.8
Delay factor k	0.49		0.50				0.50	0.39			0.50	0.11
Increm. delay d2	21.3		276.5				209.0	3.1			180.4	0.2
PF factor	1.000		1.000				0.893	0.266			0.627	0.259
Control delay	63.4		307.0				264.8	11.0			209.5	1.2
Lane group LOS	E		F				F	B			F	A
Apprch. delay	221.9						67.1			179.2		
Approach LOS	F						E			F		
Intersec. delay	162.2			Intersection LOS						F		

HCS2000™

Version 4.1f

24-A
WITH
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA AM PEAK HOUR/MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*		*R*				*L*	*T*			*T*	*R*
Init. queue/lane	*0.0*		*0.0*				*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane	*1300*		*2421*				*632*	*2226*			*2474*	*421*
Satflow per lane	*1641*		*1468*				*1641*	*1818*			*1818*	*1437*
Capacity/lane	*1319*		*1506*				*440*	*2596*			*1776*	*1160*
Flow ratio	*0.41*		*0.93*				*0.20*	*0.45*			0.50	*0.29*
v/c ratio	*0.99*		*1.61*				*1.44*	*0.86*			*1.39*	*0.36*
I factor	*1.000*	*1.000*	*1.000*				*1.000*	*1.000*			*1.000*	*1.000*
Arrival type	*3*		*3*				*5*	*5*			*5*	*5*
Platoon ratio	*1.00*		*1.00*				*1.67*	*1.67*			*1.67*	*1.18*
PF factor	*1.00*		*1.00*				*1.00*	*0.58*			*1.00*	*0.28*
Q_1	*26.7*		*55.1*				*13.1*	*16.6*			*36.6*	*1.3*
k_B	*0.7*		*0.8*				*0.4*	*0.9*			*0.7*	*1.0*
Q_2	*7.2*		*66.8*				*13.5*	*4.3*			*34.5*	*0.6*
Q avg.	*33.9*		*121.8*				*26.6*	*20.9*			*71.0*	*1.9*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.6*		*1.5*				*1.6*	*1.7*			*1.5*	*2.0*
BOQ, $Q_{\%}$	*53.9*		*183*				*43.5*	*35.2*			*107*	*3.8*

Queue Storage Ratio

Q spacing	*24.9*		*24.9*				*24.9*	*24.9*			*24.9*	*24.9*
Q storage	*0*		*0*				*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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NO
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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*SR-905 EB/ LA MEDIA*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*11/08/10*	Jurisdiction	*905EBLAMED30P3BNLMCALTRANS*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030/ALT. 3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*2*	*0*	*2*	*0*	*0*	*0*	*2*	*3*	*0*	*0*	*2*	*1*
Lane group	*L*		*R*				*L*	*T*			*T*	*R*
Volume (vph)	*825*		*1500*				*1300*	*2525*			*1430*	*650*
% Heavy veh	*10*		*10*				*10*	*10*			*10*	*10*
PHF	*0.95*		*0.95*				*0.95*	*0.95*			*0.95*	*0.95*
Actuated (P/A)	*A*		*A*				*A*	*A*			*A*	*A*
Startup lost time	*2.0*		*2.0*				*2.0*	*2.0*			*2.0*	*2.0*
Ext. eff. green	*2.0*		*2.0*				*2.0*	*2.0*			*2.0*	*2.0*
Arrival type	*3*		*3*				*5*	*5*			*5*	*5*
Unit Extension	*3.0*		*3.0*				*3.0*	*3.0*			*3.0*	*3.0*
Ped/Bike/RTOR Volume	*10*		*200*	*10*						*10*	*5*	*0*
Lane Width	*12.0*		*12.0*				*12.0*	*12.0*			*12.0*	*12.0*
Parking/Grade/Parking	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr	*0*		*0*				*0*	*0*			*0*	*0*
Unit Extension	*3.0*		*3.0*				*3.0*	*3.0*			*3.0*	*3.0*

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = *37.0*	G =	G =	G =	G = *58.0*	G = *42.0*	G =	G =
	Y = *4*	Y =	Y =	Y =	Y = *4*	Y = *5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*					Cycle Length C = *150.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	*868*		*1368*				*1368*	*2658*			*1505*	*684*
Lane group cap.	*786*		*1715*				*1232*	*3434*			*969*	*802*
v/c ratio	*1.10*		*0.80*				*1.11*	*0.77*			*1.55*	*0.85*
Green ratio	*0.25*		*0.66*				*0.39*	*0.69*			*0.28*	*0.56*
Unif. delay d1	*56.5*		*18.3*				*46.0*	*15.2*			*54.0*	*27.8*
Delay factor k	*0.50*		*0.34*				*0.50*	*0.32*			*0.50*	*0.39*
Increm. delay d2	*64.6*		*2.7*				*61.5*	*1.1*			*254.0*	*8.8*
PF factor	*1.000*		*1.000*				*0.580*	*0.163*			*0.741*	*0.152*
Control delay	*121.1*		*21.1*				*88.2*	*3.6*			*294.0*	*13.1*
Lane group LOS	*F*		*C*				*F*	*A*			*F*	*B*
Apprch. delay	*59.9*						*32.4*			*206.2*		
Approach LOS	*E*						*C*			*F*		
Intersec. delay	*84.7*			Intersection LOS						*F*		

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NO
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA PM PEAK HOUR/CALTRANS LANES*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*		*R*				*L*	*T*			*T*	*R*
Init. queue/lane	*0.0*		*0.0*				*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane	*868*		*1368*				*1368*	*2658*			*1505*	*684*
Satflow per lane	*1641*		*1468*				*1641*	*1818*			*1818*	*1433*
Capacity/lane	*786*		*1715*				*1232*	*3434*			*969*	*802*
Flow ratio	*0.27*		*0.53*				*0.43*	*0.54*			0.43	*0.48*
v/c ratio	*1.10*		*0.80*				*1.11*	*0.77*			*1.55*	*0.85*
I factor	*1.000*	*1.000*	*1.000*				*1.000*	*1.000*			*1.000*	*1.000*
Arrival type	*3*		*3*				*5*	*5*			*5*	*5*
Platoon ratio	*1.00*		*1.00*				*1.67*	*1.37*			*1.67*	*1.67*
PF factor	*1.00*		*1.00*				*1.00*	*0.29*			*1.00*	*0.39*
Q_1	*18.6*		*23.1*				*29.3*	*7.7*			*32.9*	*9.3*
k_B	*0.5*		*0.9*				*0.7*	*1.1*			*0.6*	*0.8*
Q_2	*8.7*		*3.2*				*13.4*	*3.4*			*36.9*	*3.8*
Q avg.	*27.3*		*26.3*				*42.8*	*11.0*			*69.8*	*13.1*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.6*		*1.6*				*1.6*	*1.8*			*1.5*	*1.8*
BOQ, $Q_{\%}$	*44.6*		*43.1*				*66.5*	*20.1*			*106*	*23.4*
Queue Storage Ratio												
Q spacing	*24.9*		*24.9*				*24.9*	*24.9*			*24.9*	*24.9*
Q storage	*0*		*0*				*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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24-P
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905 EB/ LA MEDIA
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/08/10	Jurisdiction	905EBLAMED30P3BNLMMIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030/ALT. 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	0	2	0	0	0	2	3	0	0	3	1
Lane group	L		R				L	T			T	R
Volume (vph)	825		1500				1300	2525			1430	650
% Heavy veh	10		10				10	10			10	10
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A		A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	2.0
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	2.0
Arrival type	3		3				5	5			5	5
Unit Extension	3.0		3.0				3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10		200	10						10	5	0
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	0
Unit Extension	3.0		3.0				3.0	3.0			3.0	3.0

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 37.0	G =	G =	G =	G = 58.0	G = 42.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	868		1368				1368	2658			1505	684
Lane group cap.	786		1715				1232	3434			1387	802
v/c ratio	1.10		0.80				1.11	0.77			1.09	0.85
Green ratio	0.25		0.66				0.39	0.69			0.28	0.56
Unif. delay d1	56.5		18.3				46.0	15.2			54.0	27.8
Delay factor k	0.50		0.34				0.50	0.32			0.50	0.39
Increm. delay d2	64.6		2.7				61.5	1.1			50.8	8.8
PF factor	1.000		1.000				0.580	0.163			0.741	0.152
Control delay	121.1		21.1				88.2	3.6			90.8	13.1
Lane group LOS	F		C				F	A			F	B
Apprch. delay	59.9						32.4			66.5		
Approach LOS	E						C			E		
Intersec. delay	48.5			Intersection LOS						D		

24-P
w
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA PM PEAK HOUR/MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*		*R*				*L*	*T*			*T*	*R*
Init. queue/lane	*0.0*		*0.0*				*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane	*868*		*1368*				*1368*	*2658*			*1505*	*684*
Satflow per lane	*1641*		*1468*				*1641*	*1818*			*1818*	*1433*
Capacity/lane	*786*		*1715*				*1232*	*3434*			*1387*	*802*
Flow ratio	*0.27*		*0.53*				*0.43*	*0.54*			0.30	*0.48*
v/c ratio	*1.10*		*0.80*				*1.11*	*0.77*			*1.09*	*0.85*
I factor	*1.000*	*1.000*	*1.000*				*1.000*	*1.000*			*1.000*	*1.000*
Arrival type	*3*		*3*				*5*	*5*			*5*	*5*
Platoon ratio	*1.00*		*1.00*				*1.67*	*1.37*			*1.67*	*1.67*
PF factor	*1.00*		*1.00*				*1.00*	*0.29*			*1.00*	*0.39*
Q_1	*18.6*		*23.1*				*29.3*	*7.7*			*23.0*	*9.3*
k_B	*0.5*		*0.9*				*0.7*	*1.1*			*0.6*	*0.8*
Q_2	*8.7*		*3.2*				*13.4*	*3.4*			*9.8*	*3.8*
Q avg.	*27.3*		*26.3*				*42.8*	*11.0*			*32.8*	*13.1*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.6*		*1.6*				*1.6*	*1.8*			*1.6*	*1.8*
BOQ, $Q_{\%}$	*44.6*		*43.1*				*66.5*	*20.1*			*52.4*	*23.4*
Queue Storage Ratio												
Q spacing	*24.9*		*24.9*				*24.9*	*24.9*			*24.9*	*24.9*
Q storage	*0*		*0*				*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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25-A
No
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA MEDIA RD./AIRWAY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/07/10	Jurisdiction	LAMEDIAAIR30A3BNLMNM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	0	2	2	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	700	615	350	350	450	635	250	1380	150	1600	1850	1200
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 17.0	G =	G =	G = 43.0	G = 55.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	737	1015		368	1142		263	1611		1684	3210	
Lane group cap.	361	365		361	348		914	1248		914	1693	
v/c ratio	2.04	2.78		1.02	3.28		0.29	1.29		1.84	1.90	
Green ratio	0.11	0.11		0.11	0.11		0.29	0.37		0.29	0.37	
Unif. delay d1	66.5	66.5		66.5	66.5		41.6	47.5		53.5	47.5	
Delay factor k	0.50	0.50		0.50	0.50		0.11	0.50		0.50	0.50	
Increm. delay d2	478.3	809.0		52.4	1034		0.2	137.0		383.4	405.5	
PF factor	0.915	0.915		0.915	0.915		0.732	0.614		0.732	0.788	
Control delay	539.1	869.8		113.2	1095		30.6	166.2		422.5	442.9	
Lane group LOS	F	F		F	F		C	F		F	F	
Apprch. delay	730.7			855.7			147.1			435.9		
Approach LOS	F			F			F			F		
Intersec. delay	496.6			Intersection LOS						F		

25-A
NO
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	TR		L	TR		L	TR		L	TR	
Init. queue/lane	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Flow rate/lane	737	1015		368	1142		263	1611		1684	3210	
Satflow per lane	1641	1690		1641	1612		1641	1787		1641	1695	
Capacity/lane	361	365		361	348		914	1248		914	1693	
Flow ratio	0.23	0.32		0.12	0.37		0.08	0.47		0.53	0.69	
v/c ratio	2.04	2.78		1.02	3.28		0.29	1.29		1.84	1.90	
I factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Arrival type	5	5		5	5		5	5		5	5	
Platoon ratio	1.67	1.67		1.67	1.67		1.67	1.67		1.67	1.37	
PF factor	1.00	1.00		1.00	1.00		0.78	1.00		1.00	1.00	
Q_1	15.8	22.2		7.9	25.0		3.4	35.3		36.1	49.1	
k_B	0.3	0.3		0.3	0.3		0.6	0.7		0.6	0.7	
Q_2	24.9	43.3		3.1	52.6		0.2	26.8		50.9	71.1	
Q avg.	40.7	65.5		11.0	77.6		3.6	62.0		87.0	120.2	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	1.6	1.5		1.8	1.5		2.0	1.5		1.5	1.5	
BOQ, $Q_{\%}$	63.6	99.3		20.0	117		7.3	94.2		131	180	
Queue Storage Ratio												
Q spacing	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Q storage	0	0		0	0		0	0		0	0	
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™ Version 4.1f

25-A
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MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA MEDIA RD./AIRWAY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	LAMEDIAAIR30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/MI

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	2	2	2	1	2	3	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	700	615	350	350	450	635	250	1380	150	1600	1850	1200
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 17.0	G =	G =	G = 43.0	G = 55.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	737	647	368	368	474	668	263	1453	158	1684	1947	1263
Lane group cap.	361	392	611	361	392	1050	914	1269	737	914	1816	1285
v/c ratio	2.04	1.65	0.60	1.02	1.21	0.64	0.29	1.14	0.21	1.84	1.07	0.98
Green ratio	0.11	0.11	0.43	0.11	0.11	0.43	0.29	0.37	0.51	0.29	0.37	0.51
Unif. delay d1	66.5	66.5	32.6	66.5	66.5	33.2	41.6	47.5	20.0	53.5	47.5	35.9
Delay factor k	0.50	0.50	0.19	0.50	0.50	0.22	0.11	0.50	0.11	0.50	0.50	0.49
Increm. delay d2	478.3	304.0	1.7	52.4	115.7	1.3	0.2	75.0	0.1	383.4	43.5	21.0
PF factor	0.915	0.915	0.490	0.915	0.915	0.490	0.732	0.614	0.297	0.732	0.614	0.297
Control delay	539.1	364.8	17.7	113.2	176.6	17.6	30.6	104.2	6.1	422.5	72.6	31.6
Lane group LOS	F	F	B	F	F	B	C	F	A	F	E	C
Apprch. delay	365.2			90.8			85.6			182.5		
Approach LOS	F			F			F			F		
Intersec. delay	182.5			Intersection LOS						F		

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Version 4.1f

25-A
w
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow rate/lane	737	647	368	368	474	668	263	1453	158	1684	1947	1263
Satflow per lane	1641	1818	1409	1641	1818	1369	1641	1818	1436	1641	1818	1414
Capacity/lane	361	392	611	361	392	1050	914	1269	737	914	1816	1285
Flow ratio	0.23	0.19	0.26	0.12	0.14	0.28	0.08	0.42	0.11	0.53	0.39	0.50
v/c ratio	2.04	1.65	0.60	1.02	1.21	0.64	0.29	1.14	0.21	1.84	1.07	0.98
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Platoon ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
PF factor	1.00	1.00	0.64	1.00	1.00	0.66	0.78	1.00	0.32	1.00	1.00	0.92
Q_1	15.8	14.1	7.5	7.9	10.3	8.1	3.4	31.8	1.2	36.1	29.8	26.9
k_B	0.3	0.4	0.7	0.3	0.4	0.7	0.6	0.7	0.8	0.6	0.7	0.8
Q_2	24.9	17.6	1.0	3.1	7.0	1.1	0.2	16.4	0.2	50.9	11.6	7.6
Q avg.	40.7	31.7	8.6	11.0	17.3	9.2	3.6	48.2	1.4	87.0	41.4	34.5

Percentile Back of Queue (95th percentile)

$f_{B\%}$	1.6	1.6	1.9	1.8	1.7	1.9	2.0	1.5	2.1	1.5	1.6	1.6
BOQ, $Q_{\%}$	63.6	50.9	16.0	20.0	30.0	17.1	7.3	74.3	2.8	131	64.6	54.8

Queue Storage Ratio

Q spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Q storage	0	0	0	0	0	0	0	0	0	0	0	0
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

25-P
NO
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA MEDIA RD./AIRWAY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	LAMEDIAAIR30P3BNLMNM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	0	2	2	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	800	500	500	200	300	700	295	2325	300	800	1430	700
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 17.0	G =	G =	G = 43.0	G = 55.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	842	1052		211	1053		311	2763		842	2242	
Lane group cap.	361	354		361	340		914	1244		914	1713	
v/c ratio	2.33	2.97		0.58	3.10		0.34	2.22		0.92	1.31	
Green ratio	0.11	0.11		0.11	0.11		0.29	0.37		0.29	0.37	
Unif. delay d1	66.5	66.5		63.1	66.5		42.3	47.5		51.9	47.5	
Delay factor k	0.50	0.50		0.18	0.50		0.11	0.50		0.44	0.50	
Increm. delay d2	608.2	894.9		2.4	951.4		0.2	552.1		14.4	143.3	
PF factor	0.915	0.915		0.915	0.915		0.732	0.903		0.732	0.614	
Control delay	669.0	955.7		60.2	1012		31.2	595.0		52.3	172.5	
Lane group LOS	F	F		E	F		C	F		D	F	
Apprch. delay	828.3			853.3			538.0			139.7		
Approach LOS	F			F			F			F		
Intersec. delay	507.9			Intersection LOS						F		

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NO
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/LA MEDIA AIRWAY/NO MITIGATI*

Average Back of Queue	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*842*	*1052*		*211*	*1053*		*311*	*2763*		*842*	*2242*	
Satflow per lane	*1641*	*1642*		*1641*	*1573*		*1641*	*1782*		*1641*	*1715*	
Capacity/lane	*361*	*354*		*361*	*340*		*914*	*1244*		*914*	*1713*	
Flow ratio	*0.26*	*0.34*		*0.07*	*0.35*		*0.10*	*0.81*		*0.26*	0.48	
v/c ratio	*2.33*	*2.97*		*0.58*	*3.10*		*0.34*	*2.22*		*0.92*	*1.31*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*		*1.67*	*1.17*		*1.67*	*1.67*	
PF factor	*1.00*	*1.00*		*0.96*	*1.00*		*0.79*	*1.00*		*0.96*	*1.00*	
Q_1	*18.0*	*23.0*		*4.1*	*23.0*		*4.2*	*60.5*		*16.8*	*34.3*	
k_B	*0.3*	*0.3*		*0.3*	*0.3*		*0.6*	*0.7*		*0.6*	*0.7*	
Q_2	*31.6*	*46.4*		*0.5*	*47.4*		*0.3*	*101.1*		*3.8*	*27.1*	
Q avg.	*49.6*	*69.4*		*4.6*	*70.4*		*4.5*	*161.5*		*20.6*	*61.4*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.5*	*1.5*		*2.0*	*1.5*		*2.0*	*1.5*		*1.7*	*1.5*	
BOQ, $Q_{\%}$	*76.3*	*105*		*9.0*	*106*		*8.8*	*242*		*34.9*	*93.3*	
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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25-P
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA MEDIA RD./AIRWAY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	LAMEDIAAIR30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	2	2	2	1	2	3	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	800	500	500	200	300	700	295	2325	300	800	1430	700
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 17.0	G =	G =	G = 43.0	G = 55.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	842	526	526	211	316	737	311	2447	316	842	1505	737
Lane group cap.	361	392	611	361	392	1050	914	1269	737	914	1816	1285
v/c ratio	2.33	1.34	0.86	0.58	0.81	0.70	0.34	1.93	0.43	0.92	0.83	0.57
Green ratio	0.11	0.11	0.43	0.11	0.11	0.43	0.29	0.37	0.51	0.29	0.37	0.51
Unif. delay d1	66.5	66.5	38.4	63.1	64.9	34.6	42.3	47.5	22.8	51.9	43.2	25.2
Delay factor k	0.50	0.50	0.39	0.18	0.35	0.27	0.11	0.50	0.11	0.44	0.37	0.17
Increm. delay d2	608.2	170.1	12.0	2.4	11.7	2.1	0.2	420.7	0.4	14.4	3.4	0.6
PF factor	0.915	0.915	0.490	0.915	0.915	0.490	0.732	0.801	0.297	0.732	0.614	0.297
Control delay	669.0	231.0	30.8	60.2	71.1	19.1	31.2	458.7	7.2	52.3	29.9	8.1
Lane group LOS	F	F	C	E	E	B	C	F	A	D	C	A
Apprch. delay	370.1			39.0			369.0			30.8		
Approach LOS	F			D			F			C		
Intersec. delay	212.5			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/LA MEDIA AIRWAY/MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow rate/lane	842	526	526	211	316	737	311	2447	316	842	1505	737
Satflow per lane	1641	1818	1409	1641	1818	1369	1641	1818	1436	1641	1818	1414
Capacity/lane	361	392	611	361	392	1050	914	1269	737	914	1816	1285
Flow ratio	0.26	0.15	0.37	0.07	0.09	0.30	0.10	0.71	0.22	0.26	0.30	0.29
v/c ratio	2.33	1.34	0.86	0.58	0.81	0.70	0.34	1.93	0.43	0.92	0.83	0.57
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Platoon ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.34	1.67	1.67	1.67	1.67
PF factor	1.00	1.00	0.81	0.96	0.98	0.69	0.79	1.00	0.37	0.96	0.87	0.41
Q_1	18.0	11.5	16.1	4.1	6.6	9.8	4.2	53.5	3.0	16.8	18.1	4.9
k_B	0.3	0.4	0.7	0.3	0.4	0.7	0.6	0.7	0.8	0.6	0.7	0.8
Q_2	31.6	10.1	3.3	0.5	1.2	1.5	0.3	78.9	0.6	3.8	2.9	1.0
Q avg.	49.6	21.6	19.4	4.6	7.8	11.3	4.5	132.4	3.6	20.6	21.1	5.9

Percentile Back of Queue (95th percentile)

$f_{B\%}$	1.5	1.7	1.7	2.0	1.9	1.8	2.0	1.5	2.0	1.7	1.7	1.9
BOQ, $Q_{\%}$	76.3	36.3	33.1	9.0	14.7	20.5	8.8	199	7.1	34.9	35.5	11.5

Queue Storage Ratio

Q spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Q storage	0	0	0	0	0	0	0	0	0	0	0	0
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA MEDIA RD./SIEMPRE VIVA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	LMSV30A3BNLM/NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	0	3	0	0	0	0	2	3	0
Lane group	L	T			TR					L	TR	
Volume (vph)	1000	800			2100	900				400	350	1100
% Heavy veh	10	10			10	10				10	99	10
PHF	0.95	0.95			0.95	0.95				0.95	0.95	0.95
Actuated (P/A)	A	A			A	A				A	A	A
Startup lost time	2.0	2.0			2.0					2.0	2.0	
Ext. eff. green	2.0	2.0			2.0					2.0	2.0	
Arrival type	5	5			5					5	5	
Unit Extension	3.0	3.0			3.0					3.0	3.0	
Ped/Bike/RTOR Volume				10	5	0	10			10	5	0
Lane Width	12.0	12.0			12.0					12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0	0	
Unit Extension	3.0	3.0			3.0					3.0	3.0	

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 25.0	G = 57.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1053	842			3158					421	1526	
Lane group cap.	613	3277			2061					858	968	
v/c ratio	1.72	0.26			1.53					0.49	1.58	
Green ratio	0.19	0.66			0.44					0.27	0.27	
Unif. delay d1	52.5	9.0			36.5					40.0	47.5	
Delay factor k	0.50	0.11			0.50					0.11	0.50	
Increm. delay d2	329.9	0.0			242.0					0.4	264.4	
PF factor	0.841	0.148			0.677					0.754	0.754	
Control delay	374.0	1.4			266.7					30.6	300.2	
Lane group LOS	F	A			F					C	F	
Apprch. delay	208.5			266.7						241.9		
Approach LOS	F			F						F		
Intersec. delay	244.0			Intersection LOS						F		

26-A
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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	LA MEDIA RD./SIEMPRE VIVA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	04/10/11	Jurisdiction	LMSV30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B WI LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	0	3	2	0	0	0	2	1	2
Lane group	L	T			T	R				L	T	R
Volume (vph)	1000	800			2100	900				400	350	1100
% Heavy veh	10	10			10	10				10	99	10
PHF	0.95	0.95			0.95	0.95				0.95	0.95	0.95
Actuated (P/A)	A	A			A	A				A	A	A
Startup lost time	2.0	2.0			2.0	2.0				2.0	2.0	2.0
Ext. eff. green	2.0	2.0			2.0	2.0				2.0	2.0	2.0
Arrival type	5	5			5	5				5	5	5
Unit Extension	3.0	3.0			3.0	3.0				3.0	3.0	3.0
Ped/Bike/RTOR Volume				10	5	0	10			10	5	0
Lane Width	12.0	12.0			12.0	12.0				12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0	0				0	0	0
Unit Extension	3.0	3.0			3.0	3.0				3.0	3.0	3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 27.0	G = 55.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1053	842			2211	947				421	368	1158
Lane group cap.	662	3277			2096	1835				858	271	1286
v/c ratio	1.59	0.26			1.05	0.52				0.49	1.36	0.90
Green ratio	0.21	0.66			0.42	0.73				0.27	0.27	0.51
Unif. delay d1	51.5	9.0			37.5	7.6				40.0	47.5	29.0
Delay factor k	0.50	0.11			0.50	0.12				0.11	0.50	0.42
Increm. delay d2	272.9	0.0			36.0	0.3				0.4	183.2	8.9
PF factor	0.825	0.148			0.511	0.186				0.754	0.754	0.312
Control delay	315.4	1.4			55.2	1.7				30.6	219.1	18.0
Lane group LOS	F	A			E	A				C	F	B
Apprch. delay	175.9			39.1						58.7		
Approach LOS	F			D						E		
Intersec. delay	81.6			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA MEDIA RD./SIEMPRE VIVA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	LMSV30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	0	3	0	0	0	0	2	3	0
Lane group	L	T			TR					L	TR	
Volume (vph)	1100	1850			500	700				700	350	1400
% Heavy veh	10	10			10	10				10	99	10
PHF	0.95	0.95			0.95	0.95				0.95	0.95	0.95
Actuated (P/A)	A	A			A	A				A	A	A
Startup lost time	2.0	2.0			2.0					2.0	2.0	
Ext. eff. green	2.0	2.0			2.0					2.0	2.0	
Arrival type	5	5			5					5	5	
Unit Extension	3.0	3.0			3.0					3.0	3.0	
Ped/Bike/RTOR Volume				10	5	0	10			10		0
Lane Width	12.0	12.0			12.0					12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0	0	
Unit Extension	3.0	3.0			3.0					3.0	3.0	

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 37.0	G = 38.0	G =	G =	G = 42.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1158	1947			1263					737	1842	
Lane group cap.	907	3010			1301					1030	1212	
v/c ratio	1.28	0.65			0.97					0.72	1.52	
Green ratio	0.28	0.61			0.29					0.32	0.32	
Unif. delay d1	46.5	16.5			45.5					38.7	44.0	
Delay factor k	0.50	0.22			0.48					0.28	0.50	
Increm. delay d2	133.1	0.5			18.3					2.4	238.2	
PF factor	0.735	0.127			0.725					0.682	0.682	
Control delay	167.3	2.6			51.3					28.8	268.2	
Lane group LOS	F	A			D					C	F	
Apprch. delay	64.0			51.3						199.8		
Approach LOS	E			D						F		
Intersec. delay	112.1			Intersection LOS						F		

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SHORT REPORT

General Information

Analyst	*USAI*
Agency or Co.	*USAI*
Date Performed	*04/10/11*
Time Period	*PM PEAK HOUR*

Site Information

Intersection	*LA MEDIA RD./SIEMPRE VIVA RD.*
Area Type	*All other areas*
Jurisdiction	*LMSV30P3BNLM/WITH MIT.*
Analysis Year	*YEAR 2030 ALT.-3B NLM/WITH MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	0	3	2	0	0	0	2	1	2
Lane group	L	T			T	R				L	T	R
Volume (vph)	1100	1850			500	700				700	350	1400
% Heavy veh	10	10			10	10				10	99	10
PHF	0.95	0.95			0.95	0.95				0.95	0.95	0.95
Actuated (P/A)	A	A			A	A				A	A	A
Startup lost time	2.0	2.0			2.0	2.0				2.0	2.0	2.0
Ext. eff. green	2.0	2.0			2.0	2.0				2.0	2.0	2.0
Arrival type	5	5			5	5				5	5	5
Unit Extension	3.0	3.0			3.0	3.0				3.0	3.0	3.0
Ped/Bike/RTOR Volume				10	5	0	10			10		0
Lane Width	12.0	12.0			12.0	12.0				12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0	0				0	0	0
Unit Extension	3.0	3.0			3.0	3.0				3.0	3.0	3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 39.0	G = 36.0	G =	G =	G = 42.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1158	1947			526	737				737	368	1474
Lane group cap.	956	3010			1372	1592				1030	325	1699
v/c ratio	1.21	0.65			0.38	0.46				0.72	1.13	0.87
Green ratio	0.30	0.61			0.28	0.64				0.32	0.32	0.65
Unif. delay d1	45.5	16.5			38.0	12.1				38.7	44.0	18.0
Delay factor k	0.50	0.22			0.11	0.11				0.28	0.50	0.40
Increm. delay d2	104.9	0.5			0.2	0.2				2.4	90.7	5.1
PF factor	0.714	0.127			0.745	0.138				0.682	0.682	0.144
Control delay	137.4	2.6			28.5	1.9				28.8	120.7	7.7
Lane group LOS	F	A			C	A				C	F	A
Apprch. delay	52.9			13.0						29.8		
Approach LOS	D			B						C		
Intersec. delay	37.1			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-125SB OFF-RAMP/LONESTAR RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	125SBLONE30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	0	0	0	2	2	2	0
Lane group				L					R	L	T	
Volume (vph)				350					1400	1600	1630	
% Heavy veh				10					10	10	10	
PHF				0.95					0.95	0.95	0.95	
Actuated (P/A)				A					A	A	A	
Startup lost time				2.0					2.0	2.0	2.0	
Ext. eff. green				2.0					2.0	2.0	2.0	
Arrival type				5					5	5	5	
Unit Extension				3.0					3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0						10		0			
Lane Width				12.0					12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0					0	0	0	
Unit Extension				3.0					3.0	3.0	3.0	

Phasing	WB Only	02	03	04	Thru & RT	SB Only	07	08
Timing	G = 20.0	G =	G =	G =	G = 29.0	G = 54.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 115.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				368					1474	1684	1716	
Lane group cap.				554					1198	1497	2619	
v/c ratio				0.66					1.23	1.12	0.66	
Green ratio				0.17					0.46	0.47	0.76	
Unif. delay d1				44.4					31.0	30.5	6.8	
Delay factor k				0.24					0.50	0.50	0.23	
Increm. delay d2				3.0					111.2	65.5	0.6	
PF factor				0.860					0.430	0.410	0.205	
Control delay				41.1					124.5	78.0	2.0	
Lane group LOS				D					F	E	A	
Apprch. delay				41.1			124.5			39.6		
Approach LOS				D			F			D		
Intersec. delay	63.6			Intersection LOS						E		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM NO LA MEDIA/SR125-SB-LONESTAR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*					*R*	*L*	*T*	
Init. queue/lane				*0.0*					*0.0*	*0.0*	*0.0*	
Flow rate/lane				*368*					*1474*	*1684*	*1716*	
Satflow per lane				*1641*					*1468*	*1641*	*1818*	
Capacity/lane				*554*					*1198*	*1497*	*2619*	
Flow ratio				*0.12*					*0.57*	*0.53*	0.50	
v/c ratio				*0.66*					*1.23*	*1.12*	*0.66*	
I factor				*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type				*5*					*5*	*5*	*5*	
Platoon ratio				*1.67*					*1.67*	*1.67*	*1.26*	
PF factor				*0.94*					*1.00*	*1.00*	*0.27*	
Q_1				*5.3*					*26.6*	*27.7*	*3.8*	
k_B				*0.4*					*0.6*	*0.7*	*1.0*	
Q_2				*0.7*					*22.4*	*16.6*	*1.8*	
Q avg.				*6.0*					*49.0*	*44.3*	*5.6*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$				*1.9*					*1.5*	*1.6*	*1.9*	
BOQ, $Q_\%$				*11.6*					*75.4*	*68.7*	*10.9*	
Queue Storage Ratio												
Q spacing				*25.0*					*25.0*	*25.0*	*25.0*	
Q storage				*0*					*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SR-125SB OFF-RAMP/LONESTAR RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*05/13/12*	Jurisdiction	*125SBLONE30P3BNLM*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*2*	*2*	*2*	*0*
Lane group				*L*					*R*	*L*	*T*	
Volume (vph)				*1050*					*2365*	*500*	*350*	
% Heavy veh				*10*					*10*	*10*	*10*	
PHF				*0.95*					*0.95*	*0.95*	*0.95*	
Actuated (P/A)				*A*					*A*	*A*	*A*	
Startup lost time				*2.0*					*2.0*	*2.0*	*2.0*	
Ext. eff. green				*2.0*					*2.0*	*2.0*	*2.0*	
Arrival type				*5*					*5*	*5*	*5*	
Unit Extension				*3.0*					*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*						*10*		*0*			
Lane Width				*12.0*					*12.0*	*12.0*	*12.0*	
Parking/Grade/Parking	*N*		*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr				*0*					*0*	*0*	*0*	
Unit Extension				*3.0*					*3.0*	*3.0*	*3.0*	

Phasing	WB Only	02	03	04	Thru & RT	SB Only	07	08
Timing	G = *40.0*	G =	G =	G =	G = *43.0*	G = *20.0*	G =	G =
	Y = *4*	Y =	Y =	Y =	Y = *4*	Y = *4*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *115.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				*1105*					*2489*	*526*	*368*	
Lane group cap.				*1109*					*1966*	*554*	*2017*	
v/c ratio				*1.00*					*1.27*	*0.95*	*0.18*	
Green ratio				*0.35*					*0.76*	*0.17*	*0.58*	
Unif. delay d1				*37.4*					*14.0*	*47.0*	*11.2*	
Delay factor k				*0.50*					*0.50*	*0.46*	*0.11*	
Increm. delay d2				*26.1*					*123.9*	*26.2*	*0.0*	
PF factor				*0.644*					*1.000*	*0.860*	*0.120*	
Control delay				*50.2*					*137.9*	*66.6*	*1.4*	
Lane group LOS				*D*					*F*	*E*	*A*	
Apprch. delay				*50.2*			*137.9*			*39.7*		
Approach LOS				*D*			*F*			*D*		
Intersec. delay	*96.8*			Intersection LOS						*F*		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM NO LA MEDIA/SR125-SB-LONESTAR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*					*R*	*L*	*T*	
Init. queue/lane				*0.0*					*0.0*	*0.0*	*0.0*	
Flow rate/lane				*1105*					*2489*	*526*	*368*	
Satflow per lane				*1641*					*1468*	*1641*	*1818*	
Capacity/lane				*1109*					*1966*	*554*	*2017*	
Flow ratio				*0.35*					*0.96*	*0.16*	0.11	
v/c ratio				*1.00*					*1.27*	*0.95*	*0.18*	
I factor				*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type				*5*					*5*	*5*	*5*	
Platoon ratio				*1.67*					*1.00*	*1.67*	*1.63*	
PF factor				*1.00*					*1.00*	*0.99*	*0.13*	
Q_1				*18.1*					*44.9*	*8.4*	*0.4*	
k_B				*0.6*					*0.9*	*0.4*	*0.8*	
Q_2				*6.2*					*40.7*	*2.7*	*0.2*	
Q avg.				*24.3*					*85.6*	*11.2*	*0.6*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$				*1.7*					*1.5*	*1.8*	*2.1*	
BOQ, $Q_{\%}$				*40.3*					*129*	*20.4*	*1.2*	
Queue Storage Ratio												
Q spacing				*25.0*					*25.0*	*25.0*	*25.0*	
Q storage				*0*					*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LONESTAR RD./PIPER RANCH RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/23/11	Jurisdiction	LONEPIPER30A3BNLM/NOMIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	3	0	2	3	0	2	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		2410	240	240	790		60		60			
% Heavy veh		10	10	10	10		10		10			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A		A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		5		5			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	10	5	0				10	5	0	10		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 17.0	G = 75.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 115.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		2790		253	832		63		63			
Lane group cap.		3181		471	4135		277		120			
v/c ratio		0.88		0.54	0.20		0.23		0.52			
Green ratio		0.65		0.15	0.83		0.09		0.09			
Unif. delay d1		16.3		45.4	1.9		48.9		50.2			
Delay factor k		0.40		0.14	0.11		0.11		0.13			
Increm. delay d2		3.1		1.2	0.0		0.4		4.2			
PF factor		0.144		0.884	0.303		0.937		0.937			
Control delay		5.4		41.3	0.6		46.2		51.2			
Lane group LOS		A		D	A		D		D			
Apprch. delay	5.4			10.1			48.7					
Approach LOS	A			B			D					
Intersec. delay	8.1			Intersection LOS						A		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM LONESTAR/PIPER RD./NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		TR		L	T		L		R			
Init. queue/lane		0.0		0.0	0.0		0.0		0.0			
Flow rate/lane		2790		253	832		63		63			
Satflow per lane		1790		1641	1818		1641		1383			
Capacity/lane		3181		471	4135		277		120			
Flow ratio		0.57		0.08	0.17		0.02		0.05			
v/c ratio		0.88		0.54	0.20		0.23		0.52			
I factor		1.000		1.000	1.000		1.000	1.000	1.000			
Arrival type		5		5	5		5		5			
Platoon ratio		1.46		1.67	1.14		1.67		1.67			
PF factor		0.37		0.94	0.31		0.95		0.97			
Q_1		9.8		3.6	0.6		0.9		1.9			
k_B		0.9		0.3	1.0		0.2		0.2			
Q_2		4.9		0.4	0.3		0.1		0.2			
Q avg.		14.7		4.0	0.9		1.0		2.1			
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		1.8		2.0	2.1		2.1		2.0			
BOQ, $Q_{\%}$		26.0		7.9	1.8		2.0		4.3			
Queue Storage Ratio												
Q spacing		25.0		25.0	25.0		25.0		25.0			
Q storage		0		0	0		0		0			
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*LONESTAR RD./PIPER RANCH RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/23/11*	Jurisdiction	*LONEPIPER30P3BNLM/NOMIT*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*3*	*0*	*2*	*3*	*0*	*2*	*0*	*1*	*0*	*0*	*0*
Lane group		*TR*		*L*	*T*		*L*		*R*			
Volume (vph)		*790*	*60*	*60*	*2410*		*240*		*240*			
% Heavy veh		*10*	*10*	*10*	*10*		*10*		*10*			
PHF		*0.95*	*0.95*	*0.95*	*0.95*		*0.95*		*0.95*			
Actuated (P/A)		*A*	*A*	*A*	*A*		*A*		*A*			
Startup lost time		*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			
Ext. eff. green		*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			
Arrival type		*5*		*5*	*5*		*5*		*5*			
Unit Extension		*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			
Ped/Bike/RTOR Volume	*10*	*5*	*0*				*10*	*5*	*0*	*10*		
Lane Width		*12.0*		*12.0*	*12.0*		*12.0*		*12.0*			
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*
Parking/hr												
Bus stops/hr		*0*		*0*	*0*		*0*		*0*			
Unit Extension		*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = *17.0*	G = *70.0*	G =	G =	G = *25.0*	G =	G =	G =
	Y = *4*	Y = *5*	Y =	Y =	Y = *4*	Y =	Y =	Y =
Duration of Analysis (hrs) = *0.25*					Cycle Length C = *125.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		*895*		*63*	*2537*		*253*		*253*			
Lane group cap.		*2741*		*433*	*3606*		*637*		*284*			
v/c ratio		*0.33*		*0.15*	*0.70*		*0.40*		*0.89*			
Green ratio		*0.56*		*0.14*	*0.73*		*0.20*		*0.20*			
Unif. delay d1		*14.8*		*47.6*	*9.5*		*43.5*		*48.7*			
Delay factor k		*0.11*		*0.11*	*0.27*		*0.11*		*0.41*			
Increm. delay d2		*0.1*		*0.2*	*0.6*		*0.4*		*27.5*			
PF factor		*0.152*		*0.895*	*0.184*		*0.833*		*0.833*			
Control delay		*2.3*		*42.8*	*2.4*		*36.6*		*68.1*			
Lane group LOS		*A*		*D*	*A*		*D*		*E*			
Apprch. delay	*2.3*			*3.4*			*52.3*					
Approach LOS	*A*			*A*			*D*					
Intersec. delay	*9.3*			Intersection LOS						*A*		

HCS2000™ Version 4.1f

30P
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM LONESTAR/PIPER RD./NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*TR*		*L*	*T*		*L*		*R*			
Init. queue/lane		*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			
Flow rate/lane		*895*		*63*	*2537*		*253*		*253*			
Satflow per lane		*1796*		*1641*	*1818*		*1641*		*1421*			
Capacity/lane		*2741*		*433*	*3606*		*637*		*284*			
Flow ratio		*0.18*		*0.02*	*0.51*		*0.08*		*0.18*			
v/c ratio		*0.33*		*0.15*	*0.70*		*0.40*		*0.89*			
I factor		*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*			
Arrival type		*5*		*5*	*5*		*5*		*5*			
Platoon ratio		*1.67*		*1.67*	*1.30*		*1.67*		*1.67*			
PF factor		*0.18*		*0.91*	*0.27*		*0.88*		*0.97*			
Q_1		*1.1*		*0.9*	*4.9*		*3.5*		*8.3*			
k_B		*0.8*		*0.3*	*1.0*		*0.4*		*0.4*			
Q_2		*0.4*		*0.1*	*2.3*		*0.3*		*2.1*			
Q avg.		*1.5*		*0.9*	*7.1*		*3.7*		*10.4*			
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		*2.1*		*2.1*	*1.9*		*2.0*		*1.8*			
BOQ, $Q_\%$		*3.1*		*2.0*	*13.6*		*7.4*		*19.1*			
Queue Storage Ratio												
Q spacing		*25.0*		*25.0*	*25.0*		*25.0*		*25.0*			
Q storage		*0*		*0*	*0*		*0*		*0*			
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

31 A
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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*OTAY MESA RD./PIPER RANCH RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/15/11*	Jurisdiction	*OMPIPER30A3BNLM/NO MIT*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM/NO MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	680	1935	350	185	1165	370	160	50	85	245	110	455
% Heavy veh	10	10	2	2	10	10	2	2	2	10	2	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 55.0	G =	G =	G = 22.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	716	2405		195	1615		168	142		258	595	
Lane group cap.	683	1916		737	1865		278	351		258	318	
v/c ratio	1.05	1.26		0.26	0.87		0.60	0.40		1.00	1.87	
Green ratio	0.21	0.39		0.21	0.39		0.16	0.11		0.16	0.11	
Unif. delay d1	55.0	42.5		45.8	39.1		54.9	58.3		59.0	62.5	
Delay factor k	0.50	0.50		0.11	0.40		0.19	0.11		0.50	0.50	
Increm. delay d2	47.8	119.3		0.2	4.6		3.7	0.8		56.0	403.8	
PF factor	0.818	0.569		0.818	0.569		1.000	1.000		1.000	1.000	
Control delay	92.8	143.5		37.7	26.8		58.7	59.1		115.0	466.3	
Lane group LOS	F	F		D	C		E	E		F	F	
Apprch. delay	131.8			28.0			58.9			360.0		
Approach LOS	F			C			E			F		
Intersec. delay	129.2			Intersection LOS						F		

HCS2000™

Version 4.1f

31 A

N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM NO LA MEDIA OTAY MESA/PIPER RANCH RD./NO MITIGATI*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*716*	*2405*		*195*	*1615*		*168*	*142*		*258*	*595*	
Satflow per lane	*1641*	*1790*		*1770*	*1743*		*1770*	*1721*		*1641*	*1557*	
Capacity/lane	*683*	*1916*		*737*	*1865*		*278*	*351*		*258*	*318*	
Flow ratio	*0.22*	*0.49*		*0.06*	*0.34*		*0.09*	*0.04*		*0.16*	0.20	
v/c ratio	*1.05*	*1.26*		*0.26*	*0.87*		*0.60*	*0.40*		*1.00*	*1.87*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*3*	*3*		*3*	*3*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*		*1.00*	*1.00*		*1.00*	*1.00*	
PF factor	*1.00*	*1.00*		*0.85*	*0.87*		*1.00*	*1.00*		*1.00*	*1.00*	
Q_1	*14.3*	*34.3*		*2.8*	*18.3*		*6.1*	*2.7*		*10.0*	*12.1*	
k_B	*0.5*	*0.7*		*0.5*	*0.7*		*0.4*	*0.3*		*0.4*	*0.3*	
Q_2	*5.9*	*25.5*		*0.2*	*3.5*		*0.6*	*0.2*		*3.6*	*18.8*	
Q avg.	*20.2*	*59.8*		*2.9*	*21.9*		*6.7*	*2.9*		*13.6*	*30.9*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.7*	*1.5*		*2.0*	*1.7*		*1.9*	*2.0*		*1.8*	*1.6*	
BOQ, $Q_{\%}$	*34.2*	*91.0*		*5.9*	*36.7*		*12.8*	*5.8*		*24.3*	*49.7*	

Queue Storage Ratio

Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

31A
W
M

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	OTAY MESA RD./PIPER RANCH RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/15/11	Jurisdiction	OMPIPER30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	1	1	2	1	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	680	1935	350	185	1165	370	160	50	85	245	110	455
% Heavy veh	10	10	2	2	10	10	2	2	2	10	2	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	3	3	3	3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 55.0	G =	G =	G = 22.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	716	2037	368	195	1226	389	168	53	89	258	116	479
Lane group cap.	683	1946	908	737	1946	842	540	210	541	501	210	889
v/c ratio	1.05	1.05	0.41	0.26	0.63	0.46	0.31	0.25	0.16	0.51	0.55	0.54
Green ratio	0.21	0.39	0.59	0.21	0.39	0.59	0.16	0.11	0.36	0.16	0.11	0.36
Unif. delay d1	55.0	42.5	15.8	45.8	34.3	16.5	52.3	57.4	30.7	54.1	59.3	35.8
Delay factor k	0.50	0.50	0.11	0.11	0.21	0.11	0.11	0.11	0.11	0.12	0.15	0.14
Increm. delay d2	47.8	33.9	0.3	0.2	0.7	0.4	0.3	0.6	0.1	0.9	3.1	0.7
PF factor	0.818	0.569	0.121	0.818	0.569	0.121	1.000	1.000	1.000	1.000	1.000	1.000
Control delay	92.8	58.1	2.2	37.7	20.2	2.4	52.6	58.0	30.9	55.0	62.5	36.5
Lane group LOS	F	E	A	D	C	A	D	E	C	E	E	D
Apprch. delay	59.4			18.2			47.3			45.6		
Approach LOS	E			B			D			D		
Intersec. delay	44.6			Intersection LOS						D		

HCS2000™

Version 4.1f

3/A
W
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM NO LA MEDIA OTAY MESA/PIPER RANCH RD./WITH MITIGA*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*716*	*2037*	*368*	*195*	*1226*	*389*	*168*	*53*	*89*	*258*	*116*	*479*
Satflow per lane	*1641*	*1818*	*1550*	*1770*	*1818*	*1437*	*1770*	*1961*	*1516*	*1641*	*1961*	*1406*
Capacity/lane	*683*	*1946*	*908*	*737*	*1946*	*842*	*540*	*210*	*541*	*501*	*210*	*889*
Flow ratio	*0.22*	*0.41*	*0.24*	*0.06*	*0.25*	*0.27*	*0.05*	*0.03*	*0.06*	*0.08*	0.06	*0.19*
v/c ratio	*1.05*	*1.05*	*0.41*	*0.26*	*0.63*	*0.46*	*0.31*	*0.25*	*0.16*	*0.51*	*0.55*	*0.54*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*3*	*3*	*3*	*3*	*3*	*3*
Platoon ratio	*1.67*	*1.67*	*1.62*	*1.67*	*1.67*	*1.62*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
PF factor	*1.00*	*1.00*	*0.15*	*0.85*	*0.73*	*0.16*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Q_1	*14.3*	*29.0*	*1.2*	*2.8*	*10.3*	*1.3*	*3.0*	*1.9*	*2.4*	*4.7*	*4.3*	*8.4*
k_B	*0.5*	*0.7*	*0.8*	*0.5*	*0.7*	*0.8*	*0.4*	*0.4*	*0.6*	*0.4*	*0.4*	*0.6*
Q_2	*5.9*	*10.6*	*0.6*	*0.2*	*1.2*	*0.7*	*0.2*	*0.1*	*0.1*	*0.4*	*0.4*	*0.7*
Q avg.	*20.2*	*39.6*	*1.7*	*2.9*	*11.5*	*2.0*	*3.1*	*2.0*	*2.5*	*5.1*	*4.7*	*9.0*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.7*	*1.6*	*2.0*	*2.0*	*1.8*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*1.9*
BOQ, $Q_{\%}$	*34.2*	*62.1*	*3.6*	*5.9*	*20.9*	*4.1*	*6.3*	*4.1*	*5.0*	*10.0*	*9.2*	*16.8*
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

31P
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M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./PIPER RANCH RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/15/11	Jurisdiction	OMPIPER30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	455	1085	540	280	1490	245	665	215	350	370	170	680
% Heavy veh	10	10	2	2	10	10	2	2	2	10	2	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G = 45.0	G =	G =	G = 32.0	G = 25.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25
Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	479	1710		295	1826		700	594		389	895	
Lane group cap.	455	1537		491	1553		405	592		375	537	
v/c ratio	1.05	1.11		0.60	1.18		1.73	1.00		1.04	1.67	
Green ratio	0.14	0.32		0.14	0.32		0.23	0.18		0.23	0.18	
Unif. delay d1	60.0	47.5		56.3	47.5		54.0	57.5		54.0	57.5	
Delay factor k	0.50	0.50		0.19	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	56.8	60.4		2.1	86.2		338.0	37.8		56.5	308.2	
PF factor	0.889	0.684		0.889	0.684		1.000	1.000		1.000	1.000	
Control delay	110.1	92.9		52.1	118.7		392.0	95.3		110.5	365.7	
Lane group LOS	F	F		D	F		F	F		F	F	
Apprch. delay	96.6			109.4			255.8			288.3		
Approach LOS	F			F			F			F		
Intersec. delay	166.2			Intersection LOS						F		

31P
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM NO LA MEDIA OTAY MESA/PIPER RANCH RD./NO MITIGATI*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*479*	*1710*		*295*	*1826*		*700*	*594*		*389*	*895*	
Satflow per lane	*1641*	*1755*		*1770*	*1773*		*1770*	*1740*		*1641*	*1578*	
Capacity/lane	*455*	*1537*		*491*	*1553*		*405*	*592*		*375*	*537*	
Flow ratio	*0.15*	*0.36*		*0.09*	*0.38*		*0.40*	*0.18*		*0.24*	0.30	
v/c ratio	*1.05*	*1.11*		*0.60*	*1.18*		*1.73*	*1.00*		*1.04*	*1.67*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*3*	*3*		*3*	*3*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*		*1.00*	*1.00*		*1.00*	*1.00*	
PF factor	*1.00*	*1.00*		*0.95*	*1.00*		*1.00*	*1.00*		*1.00*	*1.00*	
Q_1	*9.6*	*24.4*		*5.2*	*26.1*		*27.2*	*12.1*		*15.1*	*18.3*	
k_B	*0.4*	*0.6*		*0.4*	*0.6*		*0.5*	*0.4*		*0.5*	*0.4*	
Q_2	*4.2*	*12.0*		*0.6*	*15.9*		*38.1*	*4.2*		*5.9*	*24.5*	
Q avg.	*13.8*	*36.4*		*5.8*	*41.9*		*65.3*	*16.3*		*21.0*	*42.8*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.8*	*1.6*		*1.9*	*1.6*		*1.5*	*1.7*		*1.7*	*1.6*	
BOQ, $Q_{\%}$	*24.5*	*57.5*		*11.2*	*65.4*		*99.0*	*28.4*		*35.4*	*66.6*	

Queue Storage Ratio

Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

31-P
W
M

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	OTAY MESA RD./PIPER RANCH RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/15/11	Jurisdiction	OMPIPER30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	1	1	2	1	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	455	1085	540	280	1490	245	665	215	350	370	170	680
% Heavy veh	10	10	2	2	10	10	2	2	2	10	2	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	3	3	3	3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 43.0	G =	G =	G = 32.0	G = 25.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	479	1142	568	295	1568	258	700	226	368	389	179	716
Lane group cap.	501	1521	883	540	1521	819	786	350	570	728	350	935
v/c ratio	0.96	0.75	0.64	0.55	1.03	0.32	0.89	0.65	0.65	0.53	0.51	0.77
Green ratio	0.16	0.31	0.57	0.16	0.31	0.57	0.23	0.18	0.37	0.23	0.18	0.37
Unif. delay d1	58.5	43.7	20.3	54.4	48.5	15.7	52.3	53.4	36.4	47.5	52.0	38.7
Delay factor k	0.47	0.31	0.22	0.15	0.50	0.11	0.41	0.22	0.22	0.14	0.12	0.32
Increm. delay d2	29.3	2.1	1.6	1.2	31.4	0.2	12.4	4.1	2.5	0.8	1.3	3.9
PF factor	0.876	0.704	0.117	0.876	0.704	0.117	1.000	1.000	1.000	1.000	1.000	1.000
Control delay	80.6	32.9	4.0	48.8	65.6	2.1	64.7	57.5	38.9	48.2	53.3	42.5
Lane group LOS	F	C	A	D	E	A	E	E	D	D	D	D
Apprch. delay	35.8			55.5			56.1			45.7		
Approach LOS	D			E			E			D		
Intersec. delay	47.5			Intersection LOS						D		

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318
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM NO LA MEDIA OTAY MESA/PIPER RANCH RD./WITH MITIGA*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*479*	*1142*	*568*	*295*	*1568*	*258*	*700*	*226*	*368*	*389*	*179*	*716*
Satflow per lane	*1641*	*1818*	*1546*	*1770*	*1818*	*1434*	*1770*	*1961*	*1534*	*1641*	*1961*	*1422*
Capacity/lane	*501*	*1521*	*883*	*540*	*1521*	*819*	*786*	*350*	*570*	*728*	*350*	*935*
Flow ratio	*0.15*	*0.23*	*0.37*	*0.09*	*0.32*	*0.18*	*0.20*	*0.12*	*0.24*	*0.12*	0.09	*0.28*
v/c ratio	*0.96*	*0.75*	*0.64*	*0.55*	*1.03*	*0.32*	*0.89*	*0.65*	*0.65*	*0.53*	*0.51*	*0.77*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*3*	*3*	*3*	*3*	*3*	*3*
Platoon ratio	*1.67*	*1.67*	*1.66*	*1.67*	*1.67*	*1.66*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
PF factor	*0.99*	*0.88*	*0.19*	*0.93*	*1.00*	*0.14*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Q_1	*9.4*	*12.9*	*2.8*	*5.1*	*22.4*	*0.7*	*13.6*	*8.2*	*11.8*	*6.8*	*6.3*	*13.8*
k_B	*0.4*	*0.6*	*0.8*	*0.4*	*0.6*	*0.8*	*0.5*	*0.5*	*0.6*	*0.5*	*0.5*	*0.6*
Q_2	*2.9*	*1.7*	*1.5*	*0.5*	*7.9*	*0.4*	*2.8*	*0.8*	*1.1*	*0.6*	*0.5*	*1.8*
Q avg.	*12.3*	*14.7*	*4.3*	*5.5*	*30.3*	*1.1*	*16.4*	*9.0*	*13.0*	*7.4*	*6.8*	*15.6*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.8*	*1.8*	*2.0*	*1.9*	*1.6*	*2.1*	*1.7*	*1.9*	*1.8*	*1.9*	*1.9*	*1.8*
BOQ, $Q_{\%}$	*22.2*	*25.9*	*8.5*	*10.7*	*48.8*	*2.2*	*28.5*	*16.8*	*23.2*	*14.0*	*13.0*	*27.3*

Queue Storage Ratio

Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

32 A

N
M

SHORT REPORT

General Information

Analyst USAI
Agency or Co. USAI
Date Performed 03/15/11
Time Period AM PEAK HOUR

Site Information

Intersection SR-125SB OFF-RAMP/OTAY MESA RD
Area Type All other areas
Jurisdiction 125SBOM30A3BNLMNM/NO MIT
Analysis Year YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	3	0	0	3	0	0	0	0	2	0	1
Lane group		T			T					L		R
Volume (vph)		2265			775					1440		945
% Heavy veh		10			10					10		10
PHF		0.95			0.95					0.95		0.95
Actuated (P/A)		A			A					A		A
Startup lost time		2.0			2.0					2.0		2.0
Ext. eff. green		2.0			2.0					2.0		2.0
Arrival type		5			5					3		3
Unit Extension		3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume							10			10		300
Lane Width		12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0			0					0		0
Unit Extension		3.0			3.0					3.0		3.0

Phasing	Thru Only	02	03	04	SB Only	06	07	08
Timing	G = 82.0	G =	G =	G =	G = 50.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		2384			816					1516		679
Lane group cap.		2901			2901					1138		524
v/c ratio		0.82			0.28					1.33		1.30
Green ratio		0.59			0.59					0.36		0.36
Unif. delay d1		23.2			14.4					45.0		45.0
Delay factor k		0.36			0.11					0.50		0.50
Increm. delay d2		2.0			0.1					155.6		146.8
PF factor		0.121			0.121					1.000		1.000
Control delay		4.8			1.8					200.6		191.8
Lane group LOS		A			A					F		F
Apprch. delay	4.8			1.8						197.8		
Approach LOS	A			A						F		
Intersec. delay	82.9			Intersection LOS						F		

HCS2000™

Version 4.1f

32 A

N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM NO LA MEDIA OTAY MESA RD./125SB OFF-RAMP/NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*T*			*T*					*L*		*R*
Init. queue/lane		*0.0*			*0.0*					*0.0*		*0.0*
Flow rate/lane		*2384*			*816*					*1516*		*679*
Satflow per lane		*1818*			*1818*					*1641*		*1468*
Capacity/lane		*2901*			*2901*					*1138*		*524*
Flow ratio		*0.48*			*0.16*					*0.48*		*0.46*
v/c ratio		*0.82*			*0.28*					*1.33*		*1.30*
I factor		*1.000*			*1.000*					*1.000*	*1.000*	*1.000*
Arrival type		*5*			*5*					*3*		*3*
Platoon ratio		*1.62*			*1.62*					*1.00*		*1.00*
PF factor		*0.29*			*0.14*					*1.00*		*1.00*
Q_1		*7.8*			*0.8*					*30.3*		*26.4*
k_B		*0.9*			*0.9*					*0.7*		*0.6*
Q_2		*3.7*			*0.4*					*26.8*		*21.8*
Q avg.		*11.5*			*1.2*					*57.1*		*48.2*

Percentile Back of Queue (95th percentile)

$f_{B\%}$		*1.8*			*2.1*					*1.5*		*1.5*
BOQ, $Q_{\%}$		*20.9*			*2.4*					*87.1*		*74.2*

Queue Storage Ratio

Q spacing		*25.0*			*25.0*					*25.0*		*25.0*
Q storage		*0*			*0*					*0*		*0*
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

32A WITH MIT

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SR-125SB OFF-RAMP/OTAY MESA RD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/13/10	Jurisdiction	125SBOM30A3BNLMWM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	3	0	0	3	0	0	0	0	2	0	1
Lane group		T			T					L	LR	R
Volume (vph)		2265			775					1440		945
% Heavy veh		10			10					10		10
PHF		0.95			0.95					0.95		0.95
Actuated (P/A)		A			A					A		A
Startup lost time		2.0			2.0					2.0	2.0	2.0
Ext. eff. green		2.0			2.0					2.0	2.0	2.0
Arrival type		5			5					3	5	3
Unit Extension		3.0			3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume							10			10		300
Lane Width		12.0			12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0			0					0	0	0
Unit Extension		3.0			3.0					3.0	3.0	3.0

Phasing	Thru Only	02	03	04	SB Only	06	07	08
Timing	G = 82.0	G =	G =	G =	G = 50.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		2384			816					1137	617	441
Lane group cap.		2901			2901					1138	594	524
v/c ratio		0.82			0.28					1.00	1.04	0.84
Green ratio		0.59			0.59					0.36	0.36	0.36
Unif. delay d1		23.2			14.4					45.0	45.0	41.4
Delay factor k		0.36			0.11					0.50	0.50	0.38
Increm. delay d2		2.0			0.1					26.5	47.3	11.8
PF factor		0.121			0.121					1.000	0.630	1.000
Control delay		4.8			1.8					71.4	75.7	53.2
Lane group LOS		A			A					E	E	D
Apprch. delay	4.8			1.8						69.0		
Approach LOS	A			A						E		
Intersec. delay	30.4			Intersection LOS						C		

32A
WITH
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM NO LA MEDIA OTAY MESA RD./125SB OFF-RAMP/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*T*			*T*					*L*	*LR*	*R*
Init. queue/lane		*0.0*			*0.0*					*0.0*	*0.0*	*0.0*
Flow rate/lane		*2384*			*816*					*1137*	*617*	*441*
Satflow per lane		*1818*			*1818*					*1641*	*1662*	*1468*
Capacity/lane		*2901*			*2901*					*1138*	*594*	*524*
Flow ratio		*0.48*			*0.16*					*0.36*	0.37	*0.30*
v/c ratio		*0.82*			*0.28*					*1.00*	*1.04*	*0.84*
I factor		*1.000*			*1.000*					*1.000*	*1.000*	*1.000*
Arrival type		*5*			*5*					*3*	*5*	*3*
Platoon ratio		*1.62*			*1.62*					*1.00*	*1.67*	*1.00*
PF factor		*0.29*			*0.14*					*1.00*	*1.00*	*1.00*
Q_1		*7.8*			*0.8*					*22.8*	*24.0*	*15.8*
k_B		*0.9*			*0.9*					*0.7*	*0.7*	*0.6*
Q_2		*3.7*			*0.4*					*6.9*	*8.7*	*2.6*
Q avg.		*11.5*			*1.2*					*29.7*	*32.7*	*18.4*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		*1.8*			*2.1*					*1.6*	*1.6*	*1.7*
BOQ, $Q_{\%}$		*20.9*			*2.4*					*47.9*	*52.2*	*31.5*
Queue Storage Ratio												
Q spacing		*25.0*			*25.0*					*25.0*	*25.0*	*25.0*
Q storage		*0*			*0*					*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

32 P
N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-125SB OFF-RAMP/OTAY MESA RD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/15/11	Jurisdiction	125SBOM30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	3	0	0	3	0	0	0	0	2	0	1
Lane group		T			T					L		R
Volume (vph)		1805			1415					650		600
% Heavy veh		10			10					10		10
PHF		0.95			0.95					0.95		0.95
Actuated (P/A)		A			A					A		A
Startup lost time		2.0			2.0					2.0		2.0
Ext. eff. green		2.0			2.0					2.0		2.0
Arrival type		5			5					3		3
Unit Extension		3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume							10			10		300
Lane Width		12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0			0					0		0
Unit Extension		3.0			3.0					3.0		3.0

Phasing	Thru Only	02	03	04	SB Only	06	07	08
Timing	G = 92.0	G =	G =	G =	G = 40.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1900			1489					684		316
Lane group cap.		3255			3255					911		419
v/c ratio		0.58			0.46					0.75		0.75
Green ratio		0.66			0.66					0.29		0.29
Unif. delay d1		13.3			11.8					45.5		45.5
Delay factor k		0.18			0.11					0.31		0.31
Increm. delay d2		0.3			0.1					3.5		7.6
PF factor		0.146			0.146					1.000		1.000
Control delay		2.2			1.8					49.0		53.1
Lane group LOS		A			A					D		D
Apprch. delay	2.2			1.8						50.3		
Approach LOS	A			A						D		
Intersec. delay	13.0			Intersection LOS						B		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM NO LA MEDIA OTAY MESA RD./125SB OFF-RAMP/NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*T*			*T*					*L*		*R*
Init. queue/lane		*0.0*			*0.0*					*0.0*		*0.0*
Flow rate/lane		*1900*			*1489*					*684*		*316*
Satflow per lane		*1818*			*1818*					*1641*		*1468*
Capacity/lane		*3255*			*3255*					*911*		*419*
Flow ratio		*0.38*			*0.30*					*0.21*		*0.22*
v/c ratio		*0.58*			*0.46*					*0.75*		*0.75*
I factor		*1.000*			*1.000*					*1.000*	*1.000*	*1.000*
Arrival type		*5*			*5*					*3*		*3*
Platoon ratio		*1.45*			*1.45*					*1.00*		*1.00*
PF factor		*0.20*			*0.18*					*1.00*		*1.00*
Q_1		*3.0*			*1.9*					*12.4*		*11.2*
k_B		*1.0*			*1.0*					*0.6*		*0.5*
Q_2		*1.4*			*0.8*					*1.6*		*1.5*
Q avg.		*4.4*			*2.7*					*14.0*		*12.7*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		*2.0*			*2.0*					*1.8*		*1.8*
BOQ, $Q_{\%}$		*8.7*			*5.5*					*24.9*		*22.7*
Queue Storage Ratio												
Q spacing		*25.0*			*25.0*					*25.0*		*25.0*
Q storage		*0*			*0*					*0*		*0*
Avg. R_Q												
95% $R_{Q\%}$												

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32P
WITH
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-125SB OFF-RAMP/OTAY MESA RD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/13/10	Jurisdiction	125SBOM30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	3	0	0	3	0	0	0	0	2	0	1
Lane group		T			T					L	LR	R
Volume (vph)		1805			1415					650		600
% Heavy veh		10			10					10		10
PHF		0.95			0.95					0.95		0.95
Actuated (P/A)		A			A					A		A
Startup lost time		2.0			2.0					2.0	2.0	2.0
Ext. eff. green		2.0			2.0					2.0	2.0	2.0
Arrival type		5			5					3	5	3
Unit Extension		3.0			3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume							10			10		300
Lane Width		12.0			12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0			0					0	0	0
Unit Extension		3.0			3.0					3.0	3.0	3.0

Phasing	Thru Only	02	03	04	SB Only	06	07	08
Timing	G = 92.0	G =	G =	G =	G = 40.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1900			1489					581	245	174
Lane group cap.		3255			3255					911	465	419
v/c ratio		0.58			0.46					0.64	0.53	0.42
Green ratio		0.66			0.66					0.29	0.29	0.29
Unif. delay d1		13.3			11.8					43.7	42.0	40.5
Delay factor k		0.18			0.11					0.22	0.13	0.11
Increm. delay d2		0.3			0.1					1.5	1.1	0.7
PF factor		0.146			0.146					1.000	0.733	1.000
Control delay		2.2			1.8					45.2	32.0	41.2
Lane group LOS		A			A					D	C	D
Apprch. delay	2.2			1.8						41.2		
Approach LOS	A			A						D		
Intersec. delay	11.0			Intersection LOS						B		

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WITH MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM NO LA MEDIA OTAY MESA RD./125SB OFF-RAMP/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*T*			*T*					*L*	*LR*	*R*
Init. queue/lane		*0.0*			*0.0*					*0.0*	*0.0*	*0.0*
Flow rate/lane		*1900*			*1489*					*581*	*245*	*174*
Satflow per lane		*1818*			*1818*					*1641*	*1626*	*1468*
Capacity/lane		*3255*			*3255*					*911*	*465*	*419*
Flow ratio		*0.38*			*0.30*					*0.18*	0.15	*0.12*
v/c ratio		*0.58*			*0.46*					*0.64*	*0.53*	*0.42*
I factor		*1.000*			*1.000*					*1.000*	*1.000*	*1.000*
Arrival type		*5*			*5*					*3*	*5*	*3*
Platoon ratio		*1.45*			*1.45*					*1.00*	*1.67*	*1.00*
PF factor		*0.20*			*0.18*					*1.00*	*0.83*	*1.00*
Q_1		*3.0*			*1.9*					*10.2*	*6.7*	*5.5*
k_B		*1.0*			*1.0*					*0.6*	*0.6*	*0.5*
Q_2		*1.4*			*0.8*					*1.0*	*0.6*	*0.4*
Q avg.		*4.4*			*2.7*					*11.1*	*7.3*	*5.9*

Percentile Back of Queue (95th percentile)

	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
$f_{B\%}$		*2.0*			*2.0*					*1.8*	*1.9*	*1.9*
BOQ, $Q_\%$		*8.7*			*5.5*					*20.3*	*13.8*	*11.3*

Queue Storage Ratio

	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
Q spacing		*25.0*			*25.0*					*25.0*	*25.0*	*25.0*
Q storage		*0*			*0*					*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-125NB ON-RAMP/OTAY MESA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	125NBOTAY30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	0	3	2	0	0	0	0	0	0
Lane group	L	T			T	R						
Volume (vph)	1030	2675			775	650						
% Heavy veh	10	10			10	10						
PHF	0.95	0.95			0.95	0.95						
Actuated (P/A)	A	A			A	A						
Startup lost time	2.0	2.0			2.0	2.0						
Ext. eff. green	2.0	2.0			2.0	2.0						
Arrival type	5	5			5	5						
Unit Extension	3.0	3.0			3.0	3.0						
Ped/Bike/RTOR Volume				10		0						
Lane Width	12.0	12.0			12.0	12.0						
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0						
Unit Extension	3.0	3.0			3.0	3.0						

Phasing	EB Only	Thru & RT	03	04	05	06	07	08
Timing	G = 39.0	G = 42.0	G =	G =	G =	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y =	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1084	2816			816	684						
Lane group cap.	1381	4953			2311	1213						
v/c ratio	0.78	0.57			0.35	0.56						
Green ratio	0.43	1.00			0.47	0.47						
Unif. delay d1	21.9	0.0			15.3	17.4						
Delay factor k	0.33	0.16			0.11	0.16						
Increm. delay d2	3.1	0.2			0.1	0.6						
PF factor	0.490	0.950			0.417	0.417						
Control delay	13.8	0.2			6.5	7.8						
Lane group LOS	B	A			A	A						
Apprch. delay	3.9			7.1								
Approach LOS	A			A								
Intersec. delay	4.8			Intersection LOS						A		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM 3B NO LA MEDIA -125NBON RAMP/OTAY MESA RD.*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*			*T*	*R*						
Init. queue/lane	*0.0*	*0.0*			*0.0*	*0.0*						
Flow rate/lane	*1084*	*2816*			*816*	*684*						
Satflow per lane	*1641*	*1818*			*1818*	*1468*						
Capacity/lane	*1381*	*4953*			*2311*	*1213*						
Flow ratio	*0.34*	*0.57*			*0.16*	*0.26*						
v/c ratio	*0.78*	*0.57*			*0.35*	*0.56*						
I factor	*1.000*	*1.000*			*1.000*	*1.000*						
Arrival type	*5*	*5*			*5*	*5*						
Platoon ratio	*1.67*	*1.00*			*1.67*	*1.67*						
PF factor	*0.75*				*0.48*	*0.55*						
Q_1	*8.9*				*2.3*	*3.8*						
k_B	*0.6*	*1.0*			*0.6*	*0.5*						
Q_2	*1.9*	*1.3*			*0.3*	*0.7*						
Q avg.	*10.8*				*2.6*	*4.5*						
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.8*				*2.0*	*2.0*						
BOQ, $Q_{\%}$	*19.8*				*5.3*	*8.9*						
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*			*25.0*	*25.0*						
Q storage	*0*	*0*			*0*	*0*						
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-125NB ON-RAMP/OTAY MESA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	125NBOTAY30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	0	3	2	0	0	0	0	0	0
Lane group	L	T			T	R						
Volume (vph)	1085	1370			1415	1370						
% Heavy veh	10	10			10	10						
PHF	0.95	0.95			0.95	0.95						
Actuated (P/A)	A	A			A	A						
Startup lost time	2.0	2.0			2.0	2.0						
Ext. eff. green	2.0	2.0			2.0	2.0						
Arrival type	5	5			5	5						
Unit Extension	3.0	3.0			3.0	3.0						
Ped/Bike/RTOR Volume				10		0						
Lane Width	12.0	12.0			12.0	12.0						
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0						
Unit Extension	3.0	3.0			3.0	3.0						

Phasing	EB Only	Thru & RT	03	04	05	06	07	08
Timing	G = 35.0	G = 46.0	G =	G =	G =	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y =	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1142	1442			1489	1442						
Lane group cap.	1239	4953			2532	1328						
v/c ratio	0.92	0.29			0.59	1.09						
Green ratio	0.39	1.00			0.51	0.51						
Unif. delay d1	26.2	0.0			15.4	22.0						
Delay factor k	0.44	0.11			0.18	0.50						
Increm. delay d2	11.4	0.0			0.4	51.5						
PF factor	0.576	0.950			0.303	0.303						
Control delay	26.4	0.0			5.0	58.2						
Lane group LOS	C	A			A	E						
Apprch. delay	11.7			31.2								
Approach LOS	B			C								
Intersec. delay	22.0			Intersection LOS						C		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM 3B NO LA MEDIA -125NBON RAMP/OTAY MESA RD.*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*			*T*	*R*						
Init. queue/lane	*0.0*	*0.0*			*0.0*	*0.0*						
Flow rate/lane	*1142*	*1442*			*1489*	*1442*						
Satflow per lane	*1641*	*1818*			*1818*	*1468*						
Capacity/lane	*1239*	*4953*			*2532*	*1328*						
Flow ratio	*0.36*	*0.29*			*0.30*	*0.55*						
v/c ratio	*0.92*	*0.29*			*0.59*	*1.09*						
I factor	*1.000*	*1.000*			*1.000*	*1.000*						
Arrival type	*5*	*5*			*5*	*5*						
Platoon ratio	*1.67*	*1.00*			*1.67*	*1.67*						
PF factor	*0.92*				*0.42*	*1.00*						
Q_1	*12.8*				*4.0*	*20.4*						
k_B	*0.5*	*1.0*			*0.7*	*0.6*						
Q_2	*3.8*	*0.4*			*0.9*	*12.7*						
Q avg.	*16.7*				*5.0*	*33.0*						

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.7*				*2.0*	*1.6*						
BOQ, $Q_{\%}$	*29.0*				*9.7*	*52.7*						

Queue Storage Ratio

Q spacing	*25.0*	*25.0*			*25.0*	*25.0*						
Q storage	*0*	*0*			*0*	*0*						
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SR-125NB ON-RAMP/OTAY MESA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	125NBOTAY30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	0	0	0	3	2	0	0	0	0	0	0
Lane group	L				T	R						
Volume (vph)	1085				1415	1370						
% Heavy veh	10				10	10						
PHF	0.95				0.95	0.95						
Actuated (P/A)	A				A	A						
Startup lost time	2.0				2.0	2.0						
Ext. eff. green	2.0				2.0	2.0						
Arrival type	5				5	5						
Unit Extension	3.0				3.0	3.0						
Ped/Bike/RTOR Volume				10		0						
Lane Width	12.0				12.0	12.0						
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N		N
Parking/hr												
Bus stops/hr	0				0	0						
Unit Extension	3.0				3.0	3.0						

Phasing	EB Only	WB Only	03	04	05	06	07	08
Timing	G = 35.0	G = 46.0	G =	G =	G =	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y =	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1142				1489	1442						
Lane group cap.	1239				2532	1328						
v/c ratio	0.92				0.59	1.09						
Green ratio	0.39				0.51	0.51						
Unif. delay d1	26.2				15.4	22.0						
Delay factor k	0.44				0.18	0.50						
Increm. delay d2	11.4				0.4	51.5						
PF factor	0.576				0.303	0.303						
Control delay	26.4				5.0	58.2						
Lane group LOS	C				A	E						
Apprch. delay	26.4			31.2								
Approach LOS	C			C								
Intersec. delay	29.8			Intersection LOS						C		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM 3B NO LA MEDIA -125NBON RAMP/OTAY MESA RD.*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*				*T*	*R*						
Init. queue/lane	*0.0*				*0.0*	*0.0*						
Flow rate/lane	*1142*				*1489*	*1442*						
Satflow per lane	*1641*				*1818*	*1468*						
Capacity/lane	*1239*				*2532*	*1328*						
Flow ratio	*0.36*				*0.30*	*0.55*						
v/c ratio	*0.92*				*0.59*	*1.09*						
I factor	*1.000*	*1.000*			*1.000*	*1.000*						
Arrival type	*5*				*5*	*5*						
Platoon ratio	*1.67*				*1.67*	*1.67*						
PF factor	*0.92*				*0.42*	*1.00*						
Q_1	*12.8*				*4.0*	*20.4*						
k_B	*0.5*				*0.7*	*0.6*						
Q_2	*3.8*				*0.9*	*12.7*						
Q avg.	*16.7*				*5.0*	*33.0*						

Percentile Back of Queue (95th percentile)

	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
$f_{B\%}$	*1.7*				*2.0*	*1.6*						
BOQ, $Q_{\%}$	*29.0*				*9.7*	*52.7*						

Queue Storage Ratio

	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
Q spacing	*25.0*				*25.0*	*25.0*						
Q storage	*0*				*0*	*0*						
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./HARVEST RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	OTAYHARV30A3BNLM/NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	1	3	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	120	1940	615	50	1095	5	275	5	25	5	5	55
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 82.0	G =	G =	G = 15.0	G = 10.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	126	2689		53	1158		289	31		5	63	
Lane group cap.	176	2775		176	2899		176	107		176	105	
v/c ratio	0.72	0.97		0.30	0.40		1.64	0.29		0.03	0.60	
Green ratio	0.11	0.59		0.11	0.59		0.11	0.07		0.11	0.07	
Unif. delay d1	60.4	27.8		57.7	15.7		62.5	61.6		56.0	63.1	
Delay factor k	0.28	0.48		0.11	0.11		0.50	0.11		0.11	0.19	
Increm. delay d2	13.0	10.9		1.0	0.1		313.1	1.5		0.1	9.2	
PF factor	0.920	0.121		0.920	0.121		1.000	1.000		1.000	1.000	
Control delay	68.6	14.2		54.0	2.0		375.6	63.1		56.0	72.3	
Lane group LOS	E	B		D	A		F	E		E	E	
Apprch. delay	16.6			4.3			345.3			71.1		
Approach LOS	B			A			F			E		
Intersec. delay	37.9			Intersection LOS						D		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM NO LA MEDIA OTAYMESA RD./HARVEST RD./NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*126*	*2689*		*53*	*1158*		*289*	*31*		*5*	*63*	
Satflow per lane	*1641*	*1739*		*1641*	*1816*		*1641*	*1499*		*1641*	*1470*	
Capacity/lane	*176*	*2775*		*176*	*2899*		*176*	*107*		*176*	*105*	
Flow ratio	*0.08*	*0.57*		*0.03*	*0.23*		*0.18*	*0.02*		*0.00*	0.04	
v/c ratio	*0.72*	*0.97*		*0.30*	*0.40*		*1.64*	*0.29*		*0.03*	*0.60*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*3*	*3*		*3*	*3*	
Platoon ratio	*1.67*	*1.62*		*1.67*	*1.62*		*1.00*	*1.00*		*1.00*	*1.00*	
PF factor	*0.97*	*0.66*		*0.94*	*0.15*		*1.00*	*1.00*		*1.00*	*1.00*	
Q_1	*4.6*	*24.2*		*1.8*	*1.3*		*11.2*	*1.1*		*0.2*	*2.4*	
k_B	*0.3*	*0.9*		*0.3*	*0.9*		*0.3*	*0.2*		*0.3*	*0.2*	
Q_2	*0.7*	*8.8*		*0.1*	*0.6*		*14.9*	*0.1*		*0.0*	*0.3*	
Q avg.	*5.3*	*33.0*		*1.9*	*1.9*		*26.1*	*1.2*		*0.2*	*2.7*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.9*	*1.6*		*2.0*	*2.0*		*1.6*	*2.1*		*2.1*	*2.0*	
BOQ, $Q_{\%}$	*10.4*	*52.7*		*3.9*	*4.0*		*42.9*	*2.6*		*0.4*	*5.5*	
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./HARVEST RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	OTAYHARV30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	1	3	1	2	1	0	1	1	0
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Volume (vph)	120	1940	615	50	1095	5	275	5	25	5	5	55
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5	5	3	3		3	3	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 82.0	G =	G =	G = 15.0	G = 10.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	126	2042	647	53	1153	5	289	31		5	63	
Lane group cap.	176	2901	1037	176	2901	1037	341	107		176	105	
v/c ratio	0.72	0.70	0.62	0.30	0.40	0.00	0.85	0.29		0.03	0.60	
Green ratio	0.11	0.59	0.73	0.11	0.59	0.73	0.11	0.07		0.11	0.07	
Unif. delay d1	60.4	20.4	9.5	57.7	15.7	5.2	61.4	61.6		56.0	63.1	
Delay factor k	0.28	0.27	0.21	0.11	0.11	0.11	0.38	0.11		0.11	0.19	
Increm. delay d2	13.0	0.8	1.2	1.0	0.1	0.0	17.8	1.5		0.1	9.2	
PF factor	0.920	0.121	0.184	0.920	0.121	0.184	1.000	1.000		1.000	1.000	
Control delay	68.6	3.3	2.9	54.0	2.0	1.0	79.1	63.1		56.0	72.3	
Lane group LOS	E	A	A	D	A	A	E	E		E	E	
Apprch. delay	6.1			4.3			77.6			71.1		
Approach LOS	A			A			E			E		
Intersec. delay	11.8			Intersection LOS						B		

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M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM NO LA MEDIA OTAYMESA RD./HARVEST RD./WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Flow rate/lane	126	2042	647	53	1153	5	289	31		5	63	
Satflow per lane	1641	1818	1423	1641	1818	1423	1641	1499		1641	1470	
Capacity/lane	176	2901	1037	176	2901	1037	341	107		176	105	
Flow ratio	0.08	0.41	0.45	0.03	0.23	0.00	0.09	0.02		0.00	0.04	
v/c ratio	0.72	0.70	0.62	0.30	0.40	0.00	0.85	0.29		0.03	0.60	
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Arrival type	5	5	5	5	5	5	3	3		3	3	
Platoon ratio	1.67	1.62	1.30	1.67	1.62	1.30	1.00	1.00		1.00	1.00	
PF factor	0.97	0.21	0.25	0.94	0.15	0.18	1.00	1.00		1.00	1.00	
Q_1	4.6	4.4	3.1	1.8	1.3	0.0	5.7	1.1		0.2	2.4	
k_B	0.3	0.9	0.9	0.3	0.9	0.9	0.3	0.2		0.3	0.2	
Q_2	0.7	2.1	1.5	0.1	0.6	0.0	1.3	0.1		0.0	0.3	
Q avg.	5.3	6.5	4.6	1.9	1.9	0.0	6.9	1.2		0.2	2.7	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	1.9	1.9	2.0	2.0	2.0	2.1	1.9	2.1		2.1	2.0	
BOQ, $Q_{\%}$	10.4	12.5	9.0	3.9	3.9	0.0	13.2	2.6		0.4	5.5	

Queue Storage Ratio

Q spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Q storage	0	0	0	0	0	0	0	0		0	0	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./HARVEST RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	OTAYHARV30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	1	3	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	55	1040	275	20	2050	20	615	20	50	20	20	120
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 77.0	G =	G =	G = 20.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	58	1384		21	2179		647	73		21	147	
Lane group cap.	117	2621		117	2719		234	167		234	163	
v/c ratio	0.50	0.53		0.18	0.80		2.76	0.44		0.09	0.90	
Green ratio	0.07	0.55		0.07	0.55		0.14	0.11		0.14	0.11	
Unif. delay d1	62.6	20.0		61.1	25.3		60.0	58.5		52.1	61.8	
Delay factor k	0.11	0.13		0.11	0.35		0.50	0.11		0.11	0.42	
Increm. delay d2	3.3	0.2		0.7	1.8		806.1	1.8		0.2	43.4	
PF factor	0.949	0.185		0.949	0.185		1.000	1.000		1.000	1.000	
Control delay	62.6	3.9		58.7	6.5		866.1	60.4		52.3	105.1	
Lane group LOS	E	A		E	A		F	E		D	F	
Apprch. delay	6.3			7.0			784.4			98.5		
Approach LOS	A			A			F			F		
Intersec. delay	133.7			Intersection LOS						F		

3AP

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM NO LA MEDIA OTAYMESA RD./HARVEST RD./NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*58*	*1384*		*21*	*2179*		*647*	*73*		*21*	*147*	
Satflow per lane	*1641*	*1749*		*1641*	*1814*		*1641*	*1562*		*1641*	*1517*	
Capacity/lane	*117*	*2621*		*117*	*2719*		*234*	*167*		*234*	*163*	
Flow ratio	*0.04*	*0.29*		*0.01*	*0.44*		*0.39*	*0.05*		*0.01*	0.10	
v/c ratio	*0.50*	*0.53*		*0.18*	*0.80*		*2.76*	*0.44*		*0.09*	*0.90*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*3*	*3*		*3*	*3*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*		*1.00*	*1.00*		*1.00*	*1.00*	
PF factor	*0.97*	*0.25*		*0.96*	*0.39*		*1.00*	*1.00*		*1.00*	*1.00*	
Q_1	*2.1*	*3.2*		*0.7*	*9.7*		*25.2*	*2.7*		*0.7*	*5.7*	
k_B	*0.2*	*0.9*		*0.2*	*0.9*		*0.4*	*0.3*		*0.4*	*0.3*	
Q_2	*0.2*	*1.0*		*0.1*	*3.2*		*52.2*	*0.2*		*0.0*	*1.6*	
Q avg.	*2.3*	*4.2*		*0.8*	*12.9*		*77.4*	*2.9*		*0.7*	*7.2*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*2.0*		*2.1*	*1.8*		*1.5*	*2.0*		*2.1*	*1.9*	
BOQ, $Q_{\%}$	*4.8*	*8.2*		*1.6*	*23.2*		*117*	*5.8*		*1.5*	*13.7*	

Queue Storage Ratio

Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*OTAY MESA RD./HARVEST RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/24/11*	Jurisdiction	*OTAYHARV30P3BNLM/WITH MIT*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM/WITH M*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	1	3	1	2	1	0	1	1	0
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Volume (vph)	55	1040	275	20	2050	20	615	20	50	20	20	120
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5	5	3	3		3	3	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = *10.0*	G = *60.0*	G =	G =	G = *32.0*	G = *20.0*	G =	G =
	Y = *4*	Y = *5*	Y =	Y =	Y = *4*	Y = *5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*					Cycle Length C = *140.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	58	1095	289	21	2158	21	647	73		21	147	
Lane group cap.	117	2120	986	117	2118	606	713	225		375	219	
v/c ratio	0.50	0.52	0.29	0.18	1.02	0.03	0.91	0.32		0.06	0.67	
Green ratio	0.07	0.43	0.69	0.07	0.43	0.43	0.23	0.14		0.23	0.14	
Unif. delay d1	62.6	29.4	8.3	61.1	40.0	23.2	52.6	53.9		42.2	56.9	
Delay factor k	0.11	0.12	0.11	0.11	0.50	0.11	0.43	0.11		0.11	0.24	
Increm. delay d2	3.3	0.2	0.2	0.7	24.4	0.0	15.4	0.8		0.1	7.8	
PF factor	0.949	0.500	0.163	0.949	0.500	0.500	1.000	1.000		1.000	1.000	
Control delay	62.6	14.9	1.5	58.7	44.4	11.6	68.0	54.8		42.3	64.6	
Lane group LOS	E	B	A	E	D	B	E	D		D	E	
Apprch. delay	14.1			44.3			66.7			61.9		
Approach LOS	B			D			E			E		
Intersec. delay	38.9			Intersection LOS						D		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM NO LA MEDIA OTAYMESA RD./HARVEST RD./WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*58*	*1095*	*289*	*21*	*2158*	*21*	*647*	*73*		*21*	*147*	
Satflow per lane	*1641*	*1818*	*1423*	*1641*	*1815*	*1415*	*1641*	*1573*		*1641*	*1530*	
Capacity/lane	*117*	*2120*	*986*	*117*	*2118*	*606*	*713*	*225*		*375*	*219*	
Flow ratio	*0.04*	*0.22*	*0.20*	*0.01*	*0.44*	*0.01*	*0.21*	*0.05*		*0.01*	0.10	
v/c ratio	*0.50*	*0.52*	*0.29*	*0.18*	*1.02*	*0.03*	*0.91*	*0.32*		*0.06*	*0.67*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*3*	*3*		*3*	*3*	
Platoon ratio	*1.67*	*1.67*	*1.37*	*1.67*	*1.67*	*1.67*	*1.00*	*1.00*		*1.00*	*1.00*	
PF factor	*0.97*	*0.62*	*0.18*	*0.96*	*1.00*	*0.51*	*1.00*	*1.00*		*1.00*	*1.00*	
Q_1	*2.1*	*7.1*	*0.8*	*0.7*	*30.8*	*0.2*	*12.9*	*2.6*		*0.6*	*5.4*	
k_B	*0.2*	*0.8*	*0.9*	*0.2*	*0.8*	*0.7*	*0.5*	*0.4*		*0.5*	*0.4*	
Q_2	*0.2*	*0.8*	*0.4*	*0.1*	*9.7*	*0.0*	*2.9*	*0.2*		*0.0*	*0.7*	
Q avg.	*2.3*	*7.9*	*1.1*	*0.8*	*40.6*	*0.3*	*15.8*	*2.7*		*0.7*	*6.1*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.0*	*1.9*	*2.1*	*2.1*	*1.6*	*2.1*	*1.7*	*2.0*		*2.1*	*1.9*	
BOQ, $Q_{\%}$	*4.8*	*14.9*	*2.4*	*1.6*	*63.4*	*0.6*	*27.6*	*5.5*		*1.4*	*11.8*	
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SIEMPRE VIVA RD./OTAY CENTER D*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/24/11*	Jurisdiction	*SIEMOTCR30A3BNLM/NO MIT*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM/NO MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	1	3	0	0	1	1	1	1	0
Lane group	L	TR		L	TR			LT	R	L	TR	
Volume (vph)	505	1135	150	295	3075	975	55	30	120	200	90	100
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0	2.0	2.0	2.0	
Arrival type	5	5		5	5			3	3	3	3	
Unit Extension	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0			12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G = 74.0	G =	G =	G = 14.0	G = 14.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	532	1353		311	4211			90	126	211	200	
Lane group cap.	234	2563		234	2508			176	391	164	163	
v/c ratio	2.27	0.53		1.33	1.68			0.51	0.32	1.29	1.23	
Green ratio	0.14	0.53		0.14	0.53			0.10	0.28	0.10	0.10	
Unif. delay d1	60.0	21.6		60.0	33.0			59.8	40.0	63.0	63.0	
Delay factor k	0.50	0.13		0.50	0.50			0.12	0.11	0.50	0.50	
Increm. delay d2	586.5	0.2		174.4	307.3			2.5	0.5	167.0	144.4	
PF factor	0.889	0.253		0.889	0.921			1.000	1.000	1.000	1.000	
Control delay	639.8	5.7		227.8	337.7			62.3	40.5	230.0	207.4	
Lane group LOS	F	A		F	F			E	D	F	F	
Apprch. delay	184.6			330.2			49.6			219.0		
Approach LOS	F			F			D			F		
Intersec. delay	276.0			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-NO LA MEDIA/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	TR		L	TR			LT	R	L	TR	
Init. queue/lane	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Flow rate/lane	532	1353		311	4211			90	126	211	200	
Satflow per lane	1641	1779		1641	1741			1761	1402	1641	1629	
Capacity/lane	234	2563		234	2508			176	391	164	163	
Flow ratio	0.32	0.28		0.19	0.89			0.05	0.09	0.13	0.12	
v/c ratio	2.27	0.53		1.33	1.68			0.51	0.32	1.29	1.23	
I factor	1.000	1.000		1.000	1.000			1.000	1.000	1.000	1.000	
Arrival type	5	5		5	5			3	3	3	3	
Platoon ratio	1.67	1.67		1.67	1.07			1.00	1.00	1.00	1.00	
PF factor	1.00	0.34		1.00	1.00			1.00	1.00	1.00	1.00	
Q_1	20.7	4.3		12.1	60.1			3.3	3.9	8.2	7.8	
k_B	0.4	0.9		0.4	0.9			0.3	0.5	0.3	0.3	
Q_2	37.9	1.0		11.0	80.2			0.3	0.2	7.0	5.9	
Q avg.	58.6	5.2		23.1	140.3			3.6	4.1	15.2	13.7	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	1.5	1.9		1.7	1.5			2.0	2.0	1.8	1.8	
BOQ, $Q_{\%}$	89.3	10.2		38.4	210			7.2	8.2	26.8	24.4	
Queue Storage Ratio												
Q spacing	25.0	25.0		25.0	25.0			25.0	25.0	25.0	25.0	
Q storage	0	0		0	0			0	0	0	0	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./OTAY CENTER D
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	SIEMOTCR30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	1	1	1	2	1	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	505	1135	150	295	3075	975	55	30	120	200	90	100
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	3	3	3	3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G = 74.0	G =	G =	G = 14.0	G = 14.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	532	1195	158	311	3237	974	58	32	126	211	95	105
Lane group cap.	455	2618	957	455	2618	957	164	182	391	319	182	391
v/c ratio	1.17	0.46	0.17	0.68	1.24	1.02	0.35	0.18	0.32	0.66	0.52	0.27
Green ratio	0.14	0.53	0.66	0.14	0.53	0.66	0.10	0.10	0.28	0.10	0.10	0.28
Unif. delay d1	60.0	20.5	8.9	57.0	33.0	23.5	58.8	57.7	40.0	60.7	59.8	39.4
Delay factor k	0.50	0.11	0.11	0.25	0.50	0.50	0.11	0.11	0.11	0.24	0.13	0.11
Increm. delay d2	97.5	0.1	0.1	4.2	109.9	33.6	1.3	0.5	0.5	5.0	2.7	0.4
PF factor	0.889	0.253	0.149	0.889	0.491	0.200	1.000	1.000	1.000	1.000	1.000	1.000
Control delay	150.8	5.3	1.4	54.9	126.1	38.3	60.1	58.2	40.5	65.8	62.5	39.7
Lane group LOS	F	A	A	D	F	D	E	E	D	E	E	D
Apprch. delay	46.1			102.3			48.4			58.4		
Approach LOS	D			F			D			E		
Intersec. delay	83.0			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-NO LA MEDIA/MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*532*	*1195*	*158*	*311*	*3237*	*974*	*58*	*32*	*126*	*211*	*95*	*105*
Satflow per lane	*1641*	*1818*	*1440*	*1641*	*1818*	*1440*	*1641*	*1818*	*1402*	*1641*	*1818*	*1402*
Capacity/lane	*455*	*2618*	*957*	*455*	*2618*	*957*	*164*	*182*	*391*	*319*	*182*	*391*
Flow ratio	*0.17*	*0.24*	*0.11*	*0.10*	*0.65*	*0.68*	*0.04*	*0.02*	*0.09*	*0.07*	0.05	*0.07*
v/c ratio	*1.17*	*0.46*	*0.17*	*0.68*	*1.24*	*1.02*	*0.35*	*0.18*	*0.32*	*0.66*	*0.52*	*0.27*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*3*	*3*	*3*	*3*	*3*	*3*
Platoon ratio	*1.67*	*1.67*	*1.43*	*1.67*	*1.45*	*1.40*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
PF factor	*1.00*	*0.32*	*0.16*	*0.96*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Q_1	*10.6*	*3.4*	*0.4*	*5.7*	*46.2*	*37.9*	*2.1*	*1.1*	*3.9*	*4.0*	*3.5*	*3.2*
k_B	*0.4*	*0.9*	*0.9*	*0.4*	*0.9*	*0.9*	*0.3*	*0.3*	*0.5*	*0.3*	*0.3*	*0.5*
Q_2	*6.8*	*0.7*	*0.2*	*0.8*	*32.4*	*11.4*	*0.2*	*0.1*	*0.2*	*0.5*	*0.3*	*0.2*
Q avg.	*17.4*	*4.1*	*0.5*	*6.4*	*78.6*	*49.3*	*2.3*	*1.2*	*4.1*	*4.6*	*3.9*	*3.4*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.7*	*2.0*	*2.1*	*1.9*	*1.5*	*1.5*	*2.0*	*2.1*	*2.0*	*2.0*	*2.0*	*2.0*
BOQ, $Q_{\%}$	*30.1*	*8.1*	*1.1*	*12.3*	*118*	*75.9*	*4.6*	*2.5*	*8.2*	*9.0*	*7.6*	*6.7*

Queue Storage Ratio

Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./OTAY CENTER D
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	SAN DIEGO/NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	1	3	0	0	1	1	1	1	1
Lane group	L	TR		L	TR			LT	R	L	T	R
Volume (vph)	90	2000	135	265	1160	180	210	130	415	945	85	490
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0			2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5			3	3	3	3	3
Unit Extension	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	0	200
Lane Width	12.0	12.0		12.0	12.0			12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G = 52.0	G =	G =	G = 40.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 145.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	95	2247		279	1410			358	437	995	89	305
Lane group cap.	226	1755		226	1731			182	387	453	188	412
v/c ratio	0.42	1.28		1.23	0.81			1.97	1.13	2.20	0.47	0.74
Green ratio	0.14	0.36		0.14	0.36			0.10	0.28	0.28	0.10	0.28
Unif. delay d1	57.2	46.5		62.5	42.1			65.0	52.5	52.5	61.3	47.8
Delay factor k	0.11	0.50		0.50	0.36			0.50	0.50	0.50	0.11	0.30
Increm. delay d2	1.3	130.7		137.7	3.1			454.4	85.7	545.6	1.9	7.0
PF factor	0.893	0.627		0.893	0.627			1.000	1.000	1.000	1.000	1.000
Control delay	52.4	159.8		193.5	29.6			519.4	138.2	598.1	63.2	54.8
Lane group LOS	D	F		F	C			F	F	F	E	D
Apprch. delay	155.5			56.6			309.9			444.5		
Approach LOS	F			E			F			F		
Intersec. delay	213.0			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-NO LA MEDIA-PM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*			*LT*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*95*	*2247*		*279*	*1410*			*358*	*437*	*995*	*89*	*305*
Satflow per lane	*1641*	*1796*		*1641*	*1772*			*1764*	*1404*	*1641*	*1818*	*1494*
Capacity/lane	*226*	*1755*		*226*	*1731*			*182*	*387*	*453*	*188*	*412*
Flow ratio	*0.06*	*0.46*		*0.17*	*0.29*			*0.20*	*0.31*	*0.61*	0.05	*0.20*
v/c ratio	*0.42*	*1.28*		*1.23*	*0.81*			*1.97*	*1.13*	*2.20*	*0.47*	*0.74*
I factor	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*		*5*	*5*			*3*	*3*	*3*	*3*	*3*
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*			*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
PF factor	*0.93*	*1.00*		*1.00*	*0.86*			*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Q_1	*3.3*	*33.2*		*11.2*	*16.3*			*14.4*	*17.6*	*40.1*	*3.4*	*11.2*
k_B	*0.4*	*0.7*		*0.4*	*0.7*			*0.3*	*0.5*	*0.6*	*0.3*	*0.5*
Q_2	*0.3*	*25.4*		*8.2*	*2.6*			*22.7*	*9.3*	*68.8*	*0.3*	*1.4*
Q avg.	*3.5*	*58.6*		*19.5*	*18.9*			*37.1*	*26.9*	*108.9*	*3.7*	*12.6*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.0*	*1.5*		*1.7*	*1.7*			*1.6*	*1.6*	*1.5*	*2.0*	*1.8*
BOQ, $Q_{\%}$	*7.0*	*89.2*		*33.2*	*32.3*			*58.4*	*44.0*	*163*	*7.3*	*22.6*
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*			*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Q storage	*0*	*0*		*0*	*0*			*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./OTAY CENTER D
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	SAN DIEGO/WITH MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	1	1	1	2	1	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	90	2000	135	265	1160	180	210	130	415	945	85	490
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	3	3	3	3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	0	200
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G = 52.0	G =	G =	G = 40.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 145.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	95	2105	142	279	1221	189	221	137	437	995	89	305
Lane group cap.	440	1776	961	440	1776	961	453	188	387	879	188	412
v/c ratio	0.22	1.19	0.15	0.63	0.69	0.20	0.49	0.73	1.13	1.13	0.47	0.74
Green ratio	0.14	0.36	0.67	0.14	0.36	0.67	0.28	0.10	0.28	0.28	0.10	0.28
Unif. delay d1	55.5	46.5	8.8	59.0	39.6	9.1	43.9	63.0	52.5	52.5	61.3	47.8
Delay factor k	0.11	0.50	0.11	0.21	0.26	0.11	0.11	0.29	0.50	0.50	0.11	0.30
Increm. delay d2	0.2	89.4	0.1	3.0	1.1	0.1	0.8	13.4	85.7	73.6	1.9	7.0
PF factor	0.893	0.627	0.151	0.893	0.627	0.151	1.000	1.000	1.000	1.000	1.000	1.000
Control delay	49.9	118.6	1.4	55.7	26.0	1.5	44.8	76.4	138.2	126.1	63.2	54.8
Lane group LOS	D	F	A	E	C	A	D	E	F	F	E	D
Apprch. delay	108.7			28.1			101.6			106.4		
Approach LOS	F			C			F			F		
Intersec. delay	85.4			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-NO LA MEDIA-PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*95*	*2105*	*142*	*279*	*1221*	*189*	*221*	*137*	*437*	*995*	*89*	*305*
Satflow per lane	*1641*	*1818*	*1437*	*1641*	*1818*	*1437*	*1641*	*1818*	*1404*	*1641*	*1818*	*1494*
Capacity/lane	*440*	*1776*	*961*	*440*	*1776*	*961*	*453*	*188*	*387*	*879*	*188*	*412*
Flow ratio	*0.03*	*0.42*	*0.10*	*0.09*	*0.25*	*0.13*	*0.13*	*0.08*	*0.31*	*0.31*	0.05	*0.20*
v/c ratio	*0.22*	*1.19*	*0.15*	*0.63*	*0.69*	*0.20*	*0.49*	*0.73*	*1.13*	*1.13*	*0.47*	*0.74*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*3*	*3*	*3*	*3*	*3*	*3*
Platoon ratio	*1.67*	*1.67*	*1.42*	*1.67*	*1.67*	*1.42*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
PF factor	*0.91*	*1.00*	*0.16*	*0.95*	*0.80*	*0.16*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Q_1	*1.6*	*31.1*	*0.3*	*5.2*	*12.3*	*0.5*	*7.4*	*5.4*	*17.6*	*20.6*	*3.4*	*11.2*
k_B	*0.4*	*0.7*	*0.9*	*0.4*	*0.7*	*0.9*	*0.6*	*0.3*	*0.5*	*0.6*	*0.3*	*0.5*
Q_2	*0.1*	*18.8*	*0.2*	*0.6*	*1.5*	*0.2*	*0.5*	*0.8*	*9.3*	*10.9*	*0.3*	*1.4*
Q avg.	*1.7*	*49.9*	*0.5*	*5.8*	*13.8*	*0.7*	*8.0*	*6.2*	*26.9*	*31.5*	*3.7*	*12.6*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.5*	*2.1*	*1.9*	*1.8*	*2.1*	*1.9*	*1.9*	*1.6*	*1.6*	*2.0*	*1.8*
BOQ, $Q_{\%}$	*3.4*	*76.7*	*1.0*	*11.2*	*24.6*	*1.4*	*15.0*	*11.9*	*44.0*	*50.5*	*7.3*	*22.6*

Queue Storage Ratio

Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SIEMPRE VIVA RD./SR-905 SB OFF*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*05/13/12*	Jurisdiction	*SR905SBSIEM30ANLM*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LA MEDIA*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	3	0	2	3	0	0	0	2	0	0	0
Lane group		TR		L	T				R			
Volume (vph)		1105	350	400	4345				1630			
% Heavy veh		10	10	10	10				10			
PHF		0.95	0.95	0.95	0.95				0.95			
Actuated (P/A)		A	A	A	A							
Startup lost time		2.0		2.0	2.0				2.0			
Ext. eff. green		2.0		2.0	2.0				2.0			
Arrival type		5		5	5				3			
Unit Extension		3.0		3.0	3.0				3.0			
Ped/Bike/RTOR Volume	10		0				10		0			
Lane Width		12.0		12.0	12.0				12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0				0			
Unit Extension		3.0		3.0	3.0				3.0			

Phasing	WB Only	WB Only	Thru & RT	04	05	06	07	08
Timing	G = 35.0	G = 35.0	G = 37.0	G =	G =	G =	G =	G =
	Y = 4	Y = 5	Y = 4	Y =	Y =	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1531		421	4574				1716			
Lane group cap.		1472		930	4953				1603			
v/c ratio		1.04		0.45	0.92				1.07			
Green ratio		0.31		0.29	1.00				0.62			
Unif. delay d1		41.5		34.7	0.0				23.0			
Delay factor k		0.50		0.11	0.44				0.50			
Increm. delay d2		34.6		0.4	3.5				44.0			
PF factor		0.703		0.725	0.950				1.000			
Control delay		63.8		25.5	3.5				67.0			
Lane group LOS		E		C	A				E			
Apprch. delay	63.8			5.4			67.0					
Approach LOS	E			A			E					
Intersec. delay	29.0			Intersection LOS						C		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-NO LA MEDIA AM PEAK HOUR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		TR		L	T				R			
Init. queue/lane		0.0		0.0	0.0				0.0			
Flow rate/lane		1531		421	4574				1716			
Satflow per lane		1752		1641	1818				1468			
Capacity/lane		1472		930	4953				1603			
Flow ratio		0.32		0.13	0.92				0.66			
v/c ratio		1.04		0.45	0.92				1.07			
I factor		1.000		1.000	1.000			1.000	1.000			
Arrival type		5		5	5				3			
Platoon ratio		1.67		1.67	1.00				1.00			
PF factor		1.00		0.81					1.00			
Q_1		18.7		4.7					32.3			
k_B		0.6		0.5	1.2				0.8			
Q_2		7.8		0.4	9.3				14.5			
Q avg.		26.6		5.2					46.8			

Percentile Back of Queue (95th percentile)

$f_{B\%}$		1.6		2.0					1.5			
BOQ, $Q_{\%}$		43.5		10.1					72.2			

Queue Storage Ratio

Q spacing		25.0		25.0	25.0				25.0			
Q storage		0		0	0				0			
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./SR-905 SB OFF
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	SAN DIEGO
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	3	0	2	3	0	0	0	2	0	0	0
Lane group		TR		L	T				R			
Volume (vph)		2690	670	1000	1605				350			
% Heavy veh		10	10	10	10				10			
PHF		0.95	0.95	0.95	0.95				0.95			
Actuated (P/A)		A	A	A	A							
Startup lost time		2.0		2.0	2.0				2.0			
Ext. eff. green		2.0		2.0	2.0				2.0			
Arrival type		5		5	5				3			
Unit Extension		3.0		3.0	3.0				3.0			
Ped/Bike/RTOR Volume	10	5	0				10		0			
Lane Width		12.0		12.0	12.0				12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0				0			
Unit Extension		3.0		3.0	3.0				3.0			

Phasing	WB Only	WB Only	Thru & RT	04	05	06	07	08
Timing	G = 30.0	G = 15.0	G = 62.0	G =	G =	G =	G =	G =
	Y = 4	Y = 4	Y = 5	Y =	Y =	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 120.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		3537		1053	1689				368			
Lane group cap.		2473		797	4953				1061			
v/c ratio		1.43		1.32	0.34				0.35			
Green ratio		0.52		0.25	1.00				0.41			
Unif. delay d1		29.0		45.0	0.0				24.5			
Delay factor k		0.50		0.50	0.11				0.11			
Increm. delay d2		196.0		153.3	0.0				0.2			
PF factor		0.695		0.778	0.950				1.000			
Control delay		216.2		188.3	0.0				24.7			
Lane group LOS		F		F	A				C			
Apprch. delay	216.2			72.3			24.7					
Approach LOS	F			E			C					
Intersec. delay	146.2			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT.-3B-NO LA MEDIA PM PEAK HOUR

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		TR		L	T				R			
Init. queue/lane		0.0		0.0	0.0				0.0			
Flow rate/lane		3537		1053	1689				368			
Satflow per lane		1756		1641	1818				1468			
Capacity/lane		2473		797	4953				1061			
Flow ratio		0.74		0.33	0.34				0.14			
v/c ratio		1.43		1.32	0.34				0.35			
I factor		1.000		1.000	1.000			1.000	1.000			
Arrival type		5		5	5				3			
Platoon ratio		1.29		1.67	1.00				1.00			
PF factor		1.00		1.00					1.00			
Q_1		43.3		18.1					4.8			
k_B		0.8		0.5	1.2				0.6			
Q_2		51.3		18.3	0.6				0.3			
Q avg.		94.6		36.3					5.1			

Percentile Back of Queue (95th percentile)

$f_{B\%}$		1.5		1.6					2.0			
BOQ, $Q_{\%}$		142		57.4					9.9			

Queue Storage Ratio

Q spacing		25.0		25.0	25.0				25.0			
Q storage		0		0	0				0			
Avg. R_Q												
95% $R_{Q\%}$												

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36 (A)
AM
No LM
N
M

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	USAI
Agency/Co.	USAI
Date Performed	05/14/12
Analysis Time Period	AM PEAK HOUR

Site Information

Intersection	SR-905 SB TO WB OFF-RAMP/SIEMP
Jurisdiction	905SBSIEMPAM3BNLM
Analysis Year	2030 3B NO LA MEDIA /NO MIT.

Project Description 3B NO LA MEDIA/ NO MIT.

East/West Street: SIEMPRE VIVA RD.

North/South Street: SR-905 SB TO WB OFF RAMP

Intersection Orientation: East-West

Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

*DUE TO MODEL LIMITS, 2 WB LANES & 2/3 VOLUME IS USED

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	0	* 1120	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	0	0	0	1178	0
Proportion of heavy vehicles, P_{HV}	10	--	--	10	--	--
Median type	Raised curb					
RT Channelized?			0			0
Lanes	0	0	0	0	2	0
Configuration					T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	0	0	3065
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	0	0	0	0	3226
Proportion of heavy vehicles, P_{HV}	10	10	0	10	10	10
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	0	0	1
Configuration						R

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration								R
Volume, v (vph)								3226
Capacity, c_m (vph)								473
v/c ratio								6.82
Queue length (95%)								347.61

905 SB To WB AM

36(A)
AM
NO LM
N
M

Control Delay (s/veh)								*2641*
LOS								*F*
Approach delay (s/veh)	--	--				*2641*		
Approach LOS	--	--				*F*		

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Version 4.1f

36(A)
AM
WMIT

SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*SR-905 SB TO WB OFF-RAMP/SIEMP*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*07/26/11*	Jurisdiction	*SR905SBWBAM3BNLM*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	3	0	0	0	0	0	0	2
Lane group					T							R
Volume (vph)					1680							3065
% Heavy veh					10							10
PHF					0.95							0.95
Actuated (P/A)					A							A
Startup lost time					2.0							2.0
Ext. eff. green					2.0							2.0
Arrival type					5							3
Unit Extension					3.0							3.0
Ped/Bike/RTOR Volume										10		285
Lane Width					12.0							12.0
Parking/Grade/Parking	N		N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr					0							0
Unit Extension					3.0							3.0

Phasing	WB Only	02	03	04	SB Only	06	07	08
Timing	G = 60.0	G =	G =	G =	G = 70.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					1768							2926
Lane group cap.					2123							1300
v/c ratio					0.83							2.25
Green ratio					0.43							0.50
Unif. delay d1					35.5							35.0
Delay factor k					0.37							0.50
Increm. delay d2					3.0							565.3
PF factor					0.500							1.000
Control delay					20.8							600.3
Lane group LOS					C							F
Apprch. delay				20.8						600.3		
Approach LOS				C						F		
Intersec. delay	382.0			Intersection LOS						F		

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36(A)
AM
W-MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM NO LA MEDIA / SR-905 SB TO WB OFF-RAMP*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*T*							*R*
Init. queue/lane					*0.0*							*0.0*
Flow rate/lane					*1768*							*2926*
Satflow per lane					*1818*							*1468*
Capacity/lane					*2123*							*1300*
Flow ratio					*0.36*							*1.13*
v/c ratio					*0.83*							*2.25*
I factor					*1.000*						*1.000*	*1.000*
Arrival type					*5*							*3*
Platoon ratio					*1.67*							*1.00*
PF factor					*0.79*							*1.00*
Q_1					*17.8*							*64.3*
k_B					*0.8*							*0.7*
Q_2					*3.2*							*116.2*
Q avg.					*21.0*							*180.5*

Percentile Back of Queue (95th percentile)

$f_{B\%}$					*1.7*							*1.5*
BOQ, $Q_{\%}$					*35.5*							*271*

Queue Storage Ratio

Q spacing					*25.0*							*25.0*
Q storage					*0*							*0*
Avg. R_Q												
95% $R_{Q\%}$												

36(A)
PM
NO LM
N
M

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*USAI*
Agency/Co.	*USAI*
Date Performed	*05/14/12*
Analysis Time Period	*PM PEAK HOUR*

Site Information

Intersection	*SR-905 SB TO WB OFF-RAMP/SIEMP*
Jurisdiction	*905SBSIEMPPM3BNLM*
Analysis Year	*2030 3B NO LA MEDIA /NO MIT.*

Project Description *3B NO LA MEDIA/ NO MIT.*

East/West Street: *SIEMPRE VIVA RD.*

North/South Street: *SR-905 SB TO WB OFF RAMP*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

*DUE TO MODEL LIMITS 2WB LANES & 2/3 VOLUME IS USED.

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*0*	*1403	*0*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*0*	*1476*	*0*
Proportion of heavy vehicles, P_{HV}	*10*	*--*	*--*	*10*	*--*	*--*
Median type	*Raised curb*					
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*2*	*0*
Configuration					*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*0*	*0*	*500*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*0*	*0*	*526*
Proportion of heavy vehicles, P_{HV}	*10*	*10*	*0*	*10*	*10*	*10*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*1*
Configuration						*R*

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration								*R*
Volume, v (vph)								*526*
Capacity, c_m (vph)								*387*
v/c ratio								*1.36*
Queue length (95%)								*25.20*

905/SV SBToWB PM

36(A)

Control Delay (s/veh)								205.7
LOS								*F*
Approach delay (s/veh)	--	--				205.7		
Approach LOS	--	--				*F*		

PM
No LM
N
M

36(A)
PM
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905 SB TO WB OFF-RAMP/SIEMP
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/26/11	Jurisdiction	SR905SBWBPM3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 3B-NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	3	0	0	0	0	0	0	2
Lane group					T							R
Volume (vph)					2105							500
% Heavy veh					10							10
PHF					0.95							0.95
Actuated (P/A)					A							A
Startup lost time					2.0							2.0
Ext. eff. green					2.0							2.0
Arrival type					5							3
Unit Extension					3.0							3.0
Ped/Bike/RTOR Volume										10		250
Lane Width					12.0							12.0
Parking/Grade/Parking	N		N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr					0							0
Unit Extension					3.0							3.0

Phasing	WB Only	02	03	04	SB Only	06	07	08
Timing	G = 70.0	G =	G =	G =	G = 60.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					2216							263
Lane group cap.					2477							1114
v/c ratio					0.89							0.24
Green ratio					0.50							0.43
Unif. delay d1					31.7							25.4
Delay factor k					0.42							0.11
Increm. delay d2					4.7							0.1
PF factor					0.333							1.000
Control delay					15.2							25.5
Lane group LOS					B							C
Apprch. delay				15.2						25.5		
Approach LOS				B						C		
Intersec. delay	16.3			Intersection LOS						B		

36(A)
PM
W
MIT

BACK-OF-QUEUE WORKSHEET

General Information												
Project Description	3B NO LA MEDIA / SR-905 SB TO WB OFF-RAMP											
Average Back of Queue												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					T							R
Init. queue/lane					0.0							0.0
Flow rate/lane					2216							263
Satflow per lane					1818							1468
Capacity/lane					2477							1114
Flow ratio					0.45							0.10
v/c ratio					0.89							0.24
I factor					1.000						1.000	1.000
Arrival type					5							3
Platoon ratio					1.67							1.00
PF factor					0.72							1.00
Q_1					20.7							3.7
k_B					0.8							0.7
Q_2					5.1							0.2
Q avg.					25.7							3.9
Percentile Back of Queue (95th percentile)												
$f_{B\%}$					1.6							2.0
BOQ, $Q_{\%}$					42.3							7.7
Queue Storage Ratio												
Q spacing					25.0							25.0
Q storage					0							0
Avg. R_Q												
95% $R_{Q\%}$												

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37-A
N
M

SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SR905 NB RAMPS/ SIEMPRE VIVA R
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	SAN DIEGO
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B-NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	0	3	1	0	1	2	0	0	0
Lane group	L	T			TR	R		LT	R			
Volume (vph)	575	2160			1080	610	600	1	1000			
% Heavy veh	10	10			10	10	10	10	10			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				10	5	0	10		0	10		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 26.0	G = 51.0	G =	G =	G = 52.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 142.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	605	2274			1201	578		633	1053			
Lane group cap.	584	2825			1761	507		634	952			
v/c ratio	1.04	0.80			0.68	1.14		1.00	1.11			
Green ratio	0.18	0.57			0.36	0.36		0.37	0.37			
Unif. delay d1	58.0	24.2			38.6	45.5		45.0	45.0			
Delay factor k	0.50	0.35			0.25	0.50		0.50	0.50			
Increm. delay d2	46.9	1.8			1.1	84.6		35.3	62.7			
PF factor	0.851	0.116			0.626	0.626		0.615	0.615			
Control delay	96.2	4.6			25.3	113.1		63.0	90.4			
Lane group LOS	F	A			C	F		E	F			
Apprch. delay	23.9			53.8			80.1					
Approach LOS	C			D			F					
Intersec. delay	47.2			Intersection LOS						D		

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Version 4.1f

37A
NM

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*			*TR*	*R*		*LT*	*R*			
Init. queue/lane	*0.0*	*0.0*			*0.0*	*0.0*		*0.0*	*0.0*			
Flow rate/lane	*605*	*2274*			*1201*	*578*		*633*	*1053*			
Satflow per lane	*1641*	*1818*			*1799*	*1412*		*1732*	*1468*			
Capacity/lane	*584*	*2825*			*1761*	*507*		*634*	*952*			
Flow ratio	*0.19*	*0.46*			*0.24*	*0.41*		*0.37*	*0.40*			
v/c ratio	*1.04*	*0.80*			*0.68*	*1.14*		*1.00*	*1.11*			
I factor	*1.000*	*1.000*			*1.000*	*1.000*		*1.000*	*1.000*			
Arrival type	*5*	*5*			*5*	*5*		*5*	*5*			
Platoon ratio	*1.67*	*1.67*			*1.67*	*1.67*		*1.67*	*1.67*			
PF factor	*1.00*	*0.27*			*0.80*	*1.00*		*1.00*	*1.00*			
Q_1	*12.3*	*7.0*			*11.8*	*22.8*		*24.9*	*23.4*			
k_B	*0.4*	*0.9*			*0.7*	*0.6*		*0.7*	*0.6*			
Q_2	*4.9*	*3.4*			*1.4*	*12.4*		*7.3*	*11.2*			
Q avg.	*17.2*	*10.3*			*13.2*	*35.2*		*32.2*	*34.7*			

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.7*	*1.8*			*1.8*	*1.6*		*1.6*	*1.6*			
BOQ, $Q_{\%}$	*29.7*	*19.0*			*23.6*	*55.8*		*51.6*	*55.1*			

Queue Storage Ratio

Q spacing	*25.0*	*25.0*			*25.0*	*25.0*		*25.0*	*25.0*			
Q storage	*0*	*0*			*0*	*0*		*0*	*0*			
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

37A
W
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR905 NB RAMPS/ SIEMPRE VIVA R
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	SAN DIEGO/WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B-NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	0	3	2	0	1	2	0	0	0
Lane group	L	T			T	R		LT	R			
Volume (vph)	575	2160			1080	610	600	1	1000			
% Heavy veh	10	10			10	10	10	10	10			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				10	5	0	10		0	10		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 26.0	G = 51.0	G =	G =	G = 52.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 142.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	605	2274			1137	642		633	1053			
Lane group cap.	584	2825			1779	898		634	952			
v/c ratio	1.04	0.80			0.64	0.71		1.00	1.11			
Green ratio	0.18	0.57			0.36	0.36		0.37	0.37			
Unif. delay d1	58.0	24.2			37.8	39.2		45.0	45.0			
Delay factor k	0.50	0.35			0.22	0.28		0.50	0.50			
Increm. delay d2	46.9	1.8			0.8	2.7		35.3	62.7			
PF factor	0.851	0.116			0.626	0.626		0.615	0.615			
Control delay	96.2	4.6			24.5	27.3		63.0	90.4			
Lane group LOS	F	A			C	C		E	F			
Apprch. delay	23.9			25.5			80.1					
Approach LOS	C			C			F					
Intersec. delay	39.3			Intersection LOS						D		

HCS2000™ Version 4.1f

37A

A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*			*T*	*R*		*LT*	*R*			
Init. queue/lane	*0.0*	*0.0*			*0.0*	*0.0*		*0.0*	*0.0*			
Flow rate/lane	*605*	*2274*			*1137*	*642*		*633*	*1053*			
Satflow per lane	*1641*	*1818*			*1818*	*1412*		*1732*	*1468*			
Capacity/lane	*584*	*2825*			*1779*	*898*		*634*	*952*			
Flow ratio	*0.19*	*0.46*			*0.23*	*0.26*		*0.37*	*0.40*			
v/c ratio	*1.04*	*0.80*			*0.64*	*0.71*		*1.00*	*1.11*			
I factor	*1.000*	*1.000*			*1.000*	*1.000*		*1.000*	*1.000*			
Arrival type	*5*	*5*			*5*	*5*		*5*	*5*			
Platoon ratio	*1.67*	*1.67*			*1.67*	*1.67*		*1.67*	*1.67*			
PF factor	*1.00*	*0.27*			*0.78*	*0.81*		*1.00*	*1.00*			
Q_1	*12.3*	*7.0*			*10.7*	*10.0*		*24.9*	*23.4*			
k_B	*0.4*	*0.9*			*0.7*	*0.6*		*0.7*	*0.6*			
Q_2	*4.9*	*3.4*			*1.2*	*1.4*		*7.3*	*11.2*			
Q avg.	*17.2*	*10.3*			*11.9*	*11.4*		*32.2*	*34.7*			
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.7*	*1.8*			*1.8*	*1.8*		*1.6*	*1.6*			
BOQ, $Q_{\%}$	*29.7*	*19.0*			*21.5*	*20.7*		*51.6*	*55.1*			
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*			*25.0*	*25.0*		*25.0*	*25.0*			
Q storage	*0*	*0*			*0*	*0*		*0*	*0*			
Avg. R_Q												
95% $R_{Q\%}$												

37P
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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SR905 NB RAMPS/ SIEMPRE VIVA R
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	SAN DIEGO/NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B-NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	0	3	1	0	1	2	0	0	0
Lane group	L	T			TR	R		LT	R			
Volume (vph)	1940	1100			1755	1570	350	1	600			
% Heavy veh	10	10			10	10	10	10	10			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				10	5	0	10		0	10		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 40.0	G = 65.0	G =	G =	G = 27.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 145.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	2042	1158			2673	827		369	632			
Lane group cap.	879	3723			2094	635		323	484			
v/c ratio	2.32	0.31			1.28	1.30		1.14	1.31			
Green ratio	0.28	0.75			0.45	0.45		0.19	0.19			
Unif. delay d1	52.5	5.8			40.0	40.0		59.0	59.0			
Delay factor k	0.50	0.11			0.50	0.50		0.50	0.50			
Increm. delay d2	599.0	0.0			128.3	147.3		94.4	152.0			
PF factor	0.816	0.201			0.463	0.490		0.847	0.847			
Control delay	641.8	1.2			146.8	166.9		144.4	202.0			
Lane group LOS	F	A			F	F		F	F			
Apprch. delay	410.0			151.6			180.8					
Approach LOS	F			F			F					
Intersec. delay	262.7			Intersection LOS						F		

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NM

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T			TR	R		LT	R			
Init. queue/lane	0.0	0.0			0.0	0.0		0.0	0.0			
Flow rate/lane	2042	1158			2673	827		369	632			
Satflow per lane	1641	1818			1715	1417		1732	1468			
Capacity/lane	879	3723			2094	635		323	484			
Flow ratio	0.64	0.23			0.57	0.58		0.21	0.24			
v/c ratio	2.32	0.31			1.28	1.30		1.14	1.31			
I factor	1.000	1.000			1.000	1.000		1.000	1.000			
Arrival type	5	5			5	5		5	5			
Platoon ratio	1.48	1.26			1.66	1.63		1.67	1.67			
PF factor	1.00	0.22			1.00	1.00		1.00	1.00			
Q_1	42.3	1.2			39.5	33.3		14.9	14.4			
k_B	0.6	1.1			0.8	0.7		0.5	0.4			
Q_2	75.9	0.5			29.8	26.7		8.3	12.1			
Q avg.	118.2	1.7			69.4	60.0		23.2	26.4			

Percentile Back of Queue (95th percentile)

$f_{B\%}$	1.5	2.0			1.5	1.5		1.7	1.6			
BOQ, $Q_{\%}$	177	3.5			105	91.3		38.6	43.3			

Queue Storage Ratio

Q spacing	25.0	25.0			25.0	25.0		25.0	25.0			
Q storage	0	0			0	0		0	0			
Avg. R_Q												
95% $R_{Q\%}$												

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37P
W
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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SR905 NB RAMPS/ SIEMPRE VIVA R*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/24/11*	Jurisdiction	*SAN DIEGO/WITH MITIGATION*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B-NO LA MEDIA*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	0	3	2	0	1	2	0	0	0
Lane group	L	T			T	R		LT	R			
Volume (vph)	1940	1100			1755	1570	350	1	600			
% Heavy veh	10	10			10	10	10	10	10			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				10	5	0	10		0	10		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 40.0	G = 65.0	G =	G =	G = 27.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 145.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	2042	1158			1847	1653		369	632			
Lane group cap.	879	3723			2220	1124		323	484			
v/c ratio	2.32	0.31			0.83	1.47		1.14	1.31			
Green ratio	0.28	0.75			0.45	0.45		0.19	0.19			
Unif. delay d1	52.5	5.8			35.2	40.0		59.0	59.0			
Delay factor k	0.50	0.11			0.37	0.50		0.50	0.50			
Increm. delay d2	599.0	0.0			2.9	216.7		94.4	152.0			
PF factor	0.816	0.201			0.458	0.640		0.847	0.847			
Control delay	641.8	1.2			19.0	242.3		144.4	202.0			
Lane group LOS	F	A			B	F		F	F			
Apprch. delay	410.0			124.4			180.8					
Approach LOS	F			F			F					
Intersec. delay	250.4			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*			*T*	*R*		*LT*	*R*			
Init. queue/lane	*0.0*	*0.0*			*0.0*	*0.0*		*0.0*	*0.0*			
Flow rate/lane	*2042*	*1158*			*1847*	*1653*		*369*	*632*			
Satflow per lane	*1641*	*1818*			*1818*	*1417*		*1732*	*1468*			
Capacity/lane	*879*	*3723*			*2220*	*1124*		*323*	*484*			
Flow ratio	*0.64*	*0.23*			*0.37*	*0.66*		*0.21*	*0.24*			
v/c ratio	*2.32*	*0.31*			*0.83*	*1.47*		*1.14*	*1.31*			
I factor	*1.000*	*1.000*			*1.000*	*1.000*		*1.000*	*1.000*			
Arrival type	*5*	*5*			*5*	*5*		*5*	*5*			
Platoon ratio	*1.48*	*1.26*			*1.67*	*1.44*		*1.67*	*1.67*			
PF factor	*1.00*	*0.22*			*0.76*	*1.00*		*1.00*	*1.00*			
Q_1	*42.3*	*1.2*			*18.3*	*37.6*		*14.9*	*14.4*			
k_B	*0.6*	*1.1*			*0.8*	*0.7*		*0.5*	*0.4*			
Q_2	*75.9*	*0.5*			*3.4*	*39.3*		*8.3*	*12.1*			
Q avg.	*118.2*	*1.7*			*21.6*	*76.9*		*23.2*	*26.4*			
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.5*	*2.0*			*1.7*	*1.5*		*1.7*	*1.6*			
BOQ, $Q_{\%}$	*177*	*3.5*			*36.4*	*116*		*38.6*	*43.3*			
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*			*25.0*	*25.0*		*25.0*	*25.0*			
Q storage	*0*	*0*			*0*	*0*		*0*	*0*			
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SIEMPRE VIVA RD./PSEO AMERICAS*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*05/21/12*	Jurisdiction	*SAN DIEGO*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM/NO MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	1	2	0	1	2	0	1	2	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Volume (vph)	900	1255	820	90	715	95	465	50	50	55	100	510
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	0	200
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 38.0	G = 35.0	G =	G =	G = 30.0	G = 19.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	947	1321	863	95	853		489	106		58	431	
Lane group cap.	445	1238	715	445	848		352	676		223	424	
v/c ratio	2.13	1.07	1.21	0.21	1.01		1.39	0.16		0.26	1.02	
Green ratio	0.27	0.25	0.50	0.27	0.25		0.21	0.21		0.14	0.14	
Unif. delay d1	51.0	52.5	35.0	39.4	52.5		55.0	44.7		54.2	60.5	
Delay factor k	0.50	0.50	0.50	0.11	0.50		0.50	0.11		0.11	0.50	
Increm. delay d2	515.2	45.5	106.0	0.2	32.4		191.8	0.1		0.6	47.9	
PF factor	0.759	0.778	0.426	0.752	0.778		0.818	0.818		0.895	0.895	
Control delay	553.9	86.3	120.9	29.9	73.2		236.8	36.7		49.2	102.1	
Lane group LOS	F	F	F	C	E		F	D		D	F	
Apprch. delay	237.3			68.8			201.2			95.8		
Approach LOS	F			E			F			F		
Intersec. delay	188.8			Intersection LOS						F		

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*947*	*1321*	*863*	*95*	*853*		*489*	*106*		*58*	*431*	
Satflow per lane	*1641*	*1818*	*1430*	*1641*	*1780*		*1641*	*1655*		*1641*	*1641*	
Capacity/lane	*445*	*1238*	*715*	*445*	*848*		*352*	*676*		*223*	*424*	
Flow ratio	*0.58*	*0.27*	*0.60*	*0.06*	*0.25*		*0.30*	*0.03*		*0.04*	0.14	
v/c ratio	*2.13*	*1.07*	*1.21*	*0.21*	*1.01*		*1.39*	*0.16*		*0.26*	*1.02*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*		*5*	*5*		*5*	*5*	
Platoon ratio	*1.65*	*1.67*	*1.57*	*1.67*	*1.67*		*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*1.00*	*1.00*	*1.00*	*0.78*	*1.00*		*1.00*	*0.84*		*0.92*	*1.00*	
Q_1	*36.8*	*18.8*	*33.6*	*2.2*	*17.4*		*19.0*	*1.5*		*1.9*	*8.8*	
k_B	*0.6*	*0.6*	*0.7*	*0.6*	*0.6*		*0.5*	*0.5*		*0.4*	*0.4*	
Q_2	*63.8*	*8.0*	*22.1*	*0.1*	*5.8*		*18.7*	*0.1*		*0.1*	*3.5*	
Q avg.	*100.6*	*26.8*	*55.7*	*2.4*	*23.2*		*37.7*	*1.5*		*2.0*	*12.3*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.5*	*1.6*	*1.5*	*2.0*	*1.7*		*1.6*	*2.1*		*2.0*	*1.8*	
BOQ, $Q_{\%}$	*151*	*43.8*	*85.0*	*4.8*	*38.6*		*59.4*	*3.2*		*4.0*	*22.1*	
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*	*0*	*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*SIEMPRE VIVA RD./PSEO AMERICAS*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*05/21/12*	Jurisdiction	*SAN DIEGO*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM/WITH M*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	1	2	1	1	1	1	1	1	2
Lane group	L	T	R	L	T	R	L	LT	R	L	T	R
Volume (vph)	900	1255	820	90	715	95	465	50	50	55	100	510
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 38.0	G = 35.0	G =	G =	G = 30.0	G = 19.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	947	1321	863	95	753	100	367	175	53	58	105	537
Lane group cap.	865	1238	703	445	866	357	352	377	694	223	247	1082
v/c ratio	1.09	1.07	1.23	0.21	0.87	0.28	1.04	0.46	0.08	0.26	0.43	0.50
Green ratio	0.27	0.25	0.50	0.27	0.25	0.25	0.21	0.21	0.49	0.14	0.14	0.44
Unif. delay d1	51.0	52.5	35.0	39.4	50.3	42.3	55.0	48.0	19.2	54.2	55.5	27.8
Delay factor k	0.50	0.50	0.50	0.11	0.40	0.11	0.50	0.11	0.11	0.11	0.11	0.11
Increm. delay d2	59.8	45.5	114.7	0.2	9.5	0.4	59.5	0.9	0.0	0.6	1.2	0.4
PF factor	0.752	0.778	0.453	0.752	0.778	0.778	0.818	0.818	0.370	0.895	0.895	0.470
Control delay	98.1	86.3	130.6	29.9	48.6	33.4	104.5	40.2	7.2	49.2	50.9	13.5
Lane group LOS	F	F	F	C	D	C	F	D	A	D	D	B
Apprch. delay	102.1			45.1			76.9			22.0		
Approach LOS	F			D			E			C		
Intersec. delay	78.8			Intersection LOS						E		

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W
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/WITH MIT*

	EB			WB			NB			SB		
Average Back of Queue	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*LT*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*947*	*1321*	*863*	*95*	*753*	*100*	*367*	*175*	*53*	*58*	*105*	*537*
Satflow per lane	*1641*	*1818*	*1405*	*1641*	*1818*	*1427*	*1641*	*1757*	*1428*	*1641*	*1818*	*1381*
Capacity/lane	*865*	*1238*	*703*	*445*	*866*	*357*	*352*	*377*	*694*	*223*	*247*	*1082*
Flow ratio	*0.30*	*0.27*	*0.61*	*0.06*	*0.22*	*0.07*	*0.22*	*0.10*	*0.04*	*0.04*	0.06	*0.22*
v/c ratio	*1.09*	*1.07*	*1.23*	*0.21*	*0.87*	*0.28*	*1.04*	*0.46*	*0.08*	*0.26*	*0.43*	*0.50*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*
Platoon ratio	*1.67*	*1.67*	*1.55*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*
PF factor	*1.00*	*1.00*	*1.00*	*0.78*	*0.95*	*0.82*	*1.00*	*0.88*	*0.38*	*0.92*	*0.93*	*0.58*
Q_1	*18.9*	*18.8*	*33.6*	*2.2*	*14.1*	*2.6*	*14.3*	*5.2*	*0.4*	*1.9*	*3.5*	*4.9*
k_B	*0.6*	*0.6*	*0.7*	*0.6*	*0.6*	*0.5*	*0.5*	*0.5*	*0.7*	*0.4*	*0.4*	*0.7*
Q_2	*9.0*	*8.0*	*23.4*	*0.1*	*2.7*	*0.2*	*5.7*	*0.4*	*0.1*	*0.1*	*0.3*	*0.6*
Q avg.	*27.9*	*26.8*	*56.9*	*2.4*	*16.8*	*2.8*	*20.0*	*5.7*	*0.5*	*2.0*	*3.8*	*5.5*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.6*	*1.6*	*1.5*	*2.0*	*1.7*	*2.0*	*1.7*	*1.9*	*2.1*	*2.0*	*2.0*	*1.9*
BOQ, $Q_{\%}$	*45.5*	*43.8*	*86.8*	*4.8*	*29.1*	*5.6*	*33.9*	*11.0*	*1.0*	*4.0*	*7.5*	*10.7*
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./PSEO AMERICAS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/21/12	Jurisdiction	SAN DIEGO/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	1	2	0	1	2	0	1	2	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Volume (vph)	530	735	480	235	1405	260	915	100	100	100	50	1005
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	275
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 22.0	G = 35.0	G =	G =	G = 32.0	G = 33.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	558	774	505	247	1753		963	210		105	821	
Lane group cap.	258	1238	735	258	842		375	721		387	683	
v/c ratio	2.16	0.63	0.69	0.96	2.08		2.57	0.29		0.27	1.20	
Green ratio	0.16	0.25	0.51	0.16	0.25		0.23	0.23		0.24	0.24	
Unif. delay d1	59.0	46.7	25.5	58.5	52.5		54.0	44.6		43.7	53.5	
Delay factor k	0.50	0.21	0.26	0.47	0.50		0.50	0.11		0.11	0.50	
Increm. delay d2	535.9	1.0	2.7	44.2	491.0		713.4	0.2		0.4	104.6	
PF factor	0.876	0.778	0.294	0.876	0.778		0.817	0.802		0.794	0.794	
Control delay	587.6	37.3	10.2	95.5	531.8		757.5	36.0		35.1	147.1	
Lane group LOS	F	D	B	F	F		F	D		D	F	
Apprch. delay	197.0			477.9			628.3			134.4		
Approach LOS	F			F			F			F		
Intersec. delay	367.1			Intersection LOS						F		

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M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MIT*

Average Back of Queue	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*558*	*774*	*505*	*247*	*1753*		*963*	*210*		*105*	*821*	
Satflow per lane	*1641*	*1818*	*1430*	*1641*	*1767*		*1641*	*1657*		*1641*	*1521*	
Capacity/lane	*258*	*1238*	*735*	*258*	*842*		*375*	*721*		*387*	*683*	
Flow ratio	*0.34*	*0.16*	*0.35*	*0.15*	*0.52*		*0.59*	*0.07*		*0.06*	0.28	
v/c ratio	*2.16*	*0.63*	*0.69*	*0.96*	*2.08*		*2.57*	*0.29*		*0.27*	*1.20*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*		*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*		*1.62*	*1.67*		*1.67*	*1.67*	
PF factor	*1.00*	*0.89*	*0.46*	*0.99*	*1.00*		*1.00*	*0.84*		*0.83*	*1.00*	
Q_1	*21.7*	*8.7*	*6.8*	*9.5*	*35.8*		*37.5*	*3.0*		*2.8*	*16.8*	
k_B	*0.4*	*0.6*	*0.7*	*0.4*	*0.6*		*0.5*	*0.5*		*0.5*	*0.5*	
Q_2	*38.2*	*0.9*	*1.6*	*2.9*	*60.8*		*74.3*	*0.2*		*0.2*	*11.4*	
Q avg.	*59.9*	*9.6*	*8.4*	*12.4*	*96.6*		*111.8*	*3.2*		*3.0*	*28.2*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.5*	*1.9*	*1.9*	*1.8*	*1.5*		*1.5*	*2.0*		*2.0*	*1.6*	
BOQ, $Q_{\%}$	*91.2*	*17.8*	*15.7*	*22.3*	*145*		*168*	*6.4*		*6.0*	*45.8*	
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*	*0*	*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*SIEMPRE VIVA RD./PSEO AMERICAS*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*05/21/12*	Jurisdiction	*SAN DIEGO/WITH MIT*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B NO LM/WITH M*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	1	2	1	1	1	1	1	1	2
Lane group	L	T	R	L	T	R	L	LT	R	L	T	R
Volume (vph)	530	735	480	235	1405	260	915	100	100	100	50	1005
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	275
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 22.0	G = 35.0	G =	G =	G = 32.0	G = 33.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	558	774	505	247	1479	274	520	548	105	105	53	768
Lane group cap.	501	1238	723	258	866	357	375	400	551	387	429	1064
v/c ratio	1.11	0.63	0.70	0.96	1.71	0.77	1.39	1.37	0.19	0.27	0.12	0.72
Green ratio	0.16	0.25	0.51	0.16	0.25	0.25	0.23	0.23	0.39	0.24	0.24	0.43
Unif. delay d1	59.0	46.7	25.8	58.5	52.5	48.7	54.0	54.0	28.5	43.7	42.1	33.1
Delay factor k	0.50	0.21	0.26	0.47	0.50	0.32	0.50	0.50	0.11	0.11	0.11	0.28
Increm. delay d2	75.2	1.0	3.0	44.2	323.5	9.7	189.8	181.8	0.2	0.4	0.1	2.4
PF factor	0.876	0.778	0.294	0.876	0.778	0.778	0.802	0.802	0.581	0.794	0.794	0.500
Control delay	126.8	37.3	10.6	95.5	364.3	47.6	233.1	225.1	16.7	35.1	33.6	19.0
Lane group LOS	F	D	B	F	F	D	F	F	B	D	C	B
Apprch. delay	57.1			287.7			210.0			21.6		
Approach LOS	E			F			F			C		
Intersec. delay	159.5			Intersection LOS						F		

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W
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*LT*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*558*	*774*	*505*	*247*	*1479*	*274*	*520*	*548*	*105*	*105*	*53*	*768*
Satflow per lane	*1641*	*1818*	*1405*	*1641*	*1818*	*1427*	*1641*	*1748*	*1428*	*1641*	*1818*	*1402*
Capacity/lane	*501*	*1238*	*723*	*258*	*866*	*357*	*375*	*400*	*551*	*387*	*429*	*1064*
Flow ratio	*0.17*	*0.16*	*0.36*	*0.15*	*0.43*	*0.19*	*0.32*	*0.31*	*0.07*	*0.06*	0.03	*0.31*
v/c ratio	*1.11*	*0.63*	*0.70*	*0.96*	*1.71*	*0.77*	*1.39*	*1.37*	*0.19*	*0.27*	*0.12*	*0.72*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*
PF factor	*1.00*	*0.89*	*0.47*	*0.99*	*1.00*	*0.92*	*1.00*	*1.00*	*0.61*	*0.83*	*0.81*	*0.71*
Q_1	*11.2*	*8.7*	*7.0*	*9.5*	*30.2*	*9.1*	*20.2*	*21.3*	*1.7*	*2.8*	*1.3*	*9.9*
k_B	*0.4*	*0.6*	*0.7*	*0.4*	*0.6*	*0.5*	*0.5*	*0.5*	*0.6*	*0.5*	*0.5*	*0.7*
Q_2	*6.1*	*0.9*	*1.6*	*2.9*	*41.6*	*1.4*	*19.8*	*20.3*	*0.1*	*0.2*	*0.1*	*1.6*
Q avg.	*17.3*	*9.6*	*8.6*	*12.4*	*71.7*	*10.5*	*40.0*	*41.6*	*1.8*	*3.0*	*1.4*	*11.5*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.7*	*1.9*	*1.9*	*1.8*	*1.5*	*1.8*	*1.6*	*1.6*	*2.0*	*2.0*	*2.1*	*1.8*
BOQ, $Q_{\%}$	*29.9*	*17.8*	*16.1*	*22.3*	*108*	*19.3*	*62.6*	*64.8*	*3.7*	*6.0*	*2.9*	*20.9*

Queue Storage Ratio

Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	DEL SOL BLVD./DENNERY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/08/10	Jurisdiction	DELSOLDEN30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	450	220			300	600				430		400
% Heavy veh	2	2			2	2				2		2
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	3	3			3					3		3
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				10	10	0	10			10	10	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 40.0	G = 40.0	G =	G =	G = 33.0	G =	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 125.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	474	232			948					453		421
Lane group cap.	566	2509			990					467		950
v/c ratio	0.84	0.09			0.96					0.97		0.44
Green ratio	0.32	0.67			0.32					0.26		0.62
Unif. delay d1	39.5	7.2			41.7					45.5		12.7
Delay factor k	0.37	0.11			0.47					0.48		0.11
Increm. delay d2	10.7	0.0			19.1					33.9		0.3
PF factor	1.000	1.000			1.000					1.000		1.000
Control delay	50.2	7.2			60.8					79.4		13.0
Lane group LOS	D	A			E					E		B
Apprch. delay	36.0			60.8						47.4		
Approach LOS	D			E						D		
Intersec. delay	49.3			Intersection LOS						D		

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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*DEL SOL BLVD./DENNERY RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*11/08/10*	Jurisdiction	*DELSOLDEN30P3BNLM*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 NO LM*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	500	240			150	400				470		430
% Heavy veh	2	2			2	2				2		2
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	3	3			3					3		3
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				10	10	0	10			10	10	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 40.0	G = 40.0	G =	G =	G = 33.0	G =	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 125.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	526	253			579					495		453
Lane group cap.	566	2509			977					467		950
v/c ratio	0.93	0.10			0.59					1.06		0.48
Green ratio	0.32	0.67			0.32					0.26		0.62
Unif. delay d1	41.1	7.2			35.7					46.0		13.0
Delay factor k	0.44	0.11			0.18					0.50		0.11
Increm. delay d2	22.0	0.0			1.0					58.4		0.4
PF factor	1.000	1.000			1.000					1.000		1.000
Control delay	63.1	7.2			36.6					104.4		13.4
Lane group LOS	E	A			D					F		B
Apprch. delay	45.0			36.6						61.0		
Approach LOS	D			D						E		
Intersec. delay	49.4			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OCEAN VIEW HILLS/DEL DOL BL.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	OCEANDEL30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	0	2	3	0	1	2	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Volume (vph)	400	20	460	50	20	50	400	1000	20	20	855	350
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	12
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3	3	3	3		3	3		3	3	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	10	0	10	10	0	10	10	0	10	10	100
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 35.0	G = 20.0	G =	G =	G = 25.0	G = 52.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	421	21	484	53	74		421	1074		21	1163	
Lane group cap.	413	248	506	413	214		573	1752		295	1155	
v/c ratio	1.02	0.08	0.96	0.13	0.35		0.73	0.61		0.07	1.01	
Green ratio	0.23	0.13	0.33	0.23	0.13		0.17	0.35		0.17	0.35	
Unif. delay d1	57.5	57.0	48.9	45.4	59.1		59.4	40.7		52.7	49.0	
Delay factor k	0.50	0.11	0.47	0.11	0.11		0.29	0.20		0.11	0.50	
Increm. delay d2	49.3	0.1	29.2	0.1	1.0		4.9	0.6		0.1	28.2	
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	106.8	57.1	78.2	45.6	60.0		64.3	41.3		52.8	77.2	
Lane group LOS	F	E	E	D	E		E	D		D	E	
Apprch. delay	90.7			54.0			47.8			76.7		
Approach LOS	F			D			D			E		
Intersec. delay	67.8			Intersection LOS						E		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OCEAN VIEW HILLS/DEL DOL BL.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	OCEANDEL30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	0	2	3	0	1	2	1
Lane group	L	LT	R	L	TR		L	TR		L	T	R
Volume (vph)	400	20	460	50	20	50	400	1000	20	20	855	350
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	12
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	3	3	3	3	3		3	3		3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	10	0	10	10	0	10	10	0	10	10	100
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 35.0	G = 20.0	G =	G =	G = 25.0	G = 52.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	295	147	484	53	74		421	1074		21	900	263
Lane group cap.	413	238	506	413	214		573	1752		295	1230	864
v/c ratio	0.71	0.62	0.96	0.13	0.35		0.73	0.61		0.07	0.73	0.30
Green ratio	0.23	0.13	0.33	0.23	0.13		0.17	0.35		0.17	0.35	0.61
Unif. delay d1	52.9	61.4	48.9	45.4	59.1		59.4	40.7		52.7	42.9	13.8
Delay factor k	0.28	0.20	0.47	0.11	0.11		0.29	0.20		0.11	0.29	0.11
Increm. delay d2	5.8	4.8	29.2	0.1	1.0		4.9	0.6		0.1	2.3	0.2
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	1.000
Control delay	58.7	66.2	78.2	45.6	60.0		64.3	41.3		52.8	45.2	14.0
Lane group LOS	E	E	E	D	E		E	D		D	D	B
Apprch. delay	70.1			54.0			47.8			38.4		
Approach LOS	E			D			D			D		
Intersec. delay	50.5			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OCEAN VIEW HILLS/DEL DOL BL.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	OCEANDEL30A3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	0	2	3	0	1	2	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Volume (vph)	350	20	290	20	20	20	450	1235	50	50	1010	225
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3	3	3	3		4	4		4	4	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	10	0	10	10	0	10	10	0	10	10	100
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 28.0	G =	G =	G = 20.0	G = 49.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 145.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	368	21	305	21	42		474	1353		53	1195	
Lane group cap.	366	360	560	366	326		474	1701		244	1175	
v/c ratio	1.01	0.06	0.54	0.06	0.13		1.00	0.80		0.22	1.02	
Green ratio	0.21	0.19	0.37	0.21	0.19		0.14	0.34		0.14	0.34	
Unif. delay d1	57.5	47.7	36.4	46.2	48.4		62.5	43.5		55.5	48.0	
Delay factor k	0.50	0.11	0.14	0.11	0.11		0.50	0.34		0.11	0.50	
Increm. delay d2	48.4	0.1	1.1	0.1	0.2		41.3	2.7		0.4	30.6	
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	0.954		1.000	0.954	
Control delay	105.9	47.8	37.5	46.2	48.6		103.8	44.2		56.0	76.4	
Lane group LOS	F	D	D	D	D		F	D		E	E	
Apprch. delay	74.1			47.8			59.7			75.5		
Approach LOS	E			D			E			E		
Intersec. delay	67.3			Intersection LOS						E		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OCEAN VIEW HILLS/DEL DOL BL.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	OCEANDEL30A3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	0	2	3	0	1	2	1
Lane group	L	LT	R	L	TR		L	TR		L	T	R
Volume (vph)	350	20	290	20	20	20	450	1235	50	50	1010	225
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	3	3	3	3	3		4	4		4	4	3
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	10	0	10	10	0	10	10	0	10	10	100
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 28.0	G =	G =	G = 20.0	G = 49.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 145.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	221	168	305	21	42		474	1353		53	1063	132
Lane group cap.	366	345	560	366	326		474	1701		244	1199	895
v/c ratio	0.60	0.49	0.54	0.06	0.13		1.00	0.80		0.22	0.89	0.15
Green ratio	0.21	0.19	0.37	0.21	0.19		0.14	0.34		0.14	0.34	0.58
Unif. delay d1	52.1	52.1	36.4	46.2	48.4		62.5	43.5		55.5	45.4	14.0
Delay factor k	0.19	0.11	0.14	0.11	0.11		0.50	0.34		0.11	0.41	0.11
Increm. delay d2	2.8	1.1	1.1	0.1	0.2		41.3	2.7		0.4	8.3	0.1
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	0.954		1.000	0.954	1.000
Control delay	54.9	53.2	37.5	46.2	48.6		103.8	44.2		56.0	51.6	14.1
Lane group LOS	D	D	D	D	D		F	D		E	D	B
Apprch. delay	46.9			47.8			59.7			47.8		
Approach LOS	D			D			E			D		
Intersec. delay	53.3			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OCEAN VIEW HILLS/STREETA
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	OCEANSTA303BNLM/NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Lane group	L	TR		L	TR		L	T	R	L	TR	
Volume (vph)	10	1100	255	85	900	20	500	45	65	40	50	20
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	4	4		4	4		4	4	4	4	4	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	10	0	10	10	0	10	10	0	10	10	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 47.0	G =	G =	G = 40.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 135.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	11	1426		89	968		526	47	68	42	74	
Lane group cap.	197	1702		197	1759		524	207	166	524	195	
v/c ratio	0.06	0.84		0.45	0.55		1.00	0.23	0.41	0.08	0.38	
Green ratio	0.11	0.35		0.11	0.35		0.30	0.11	0.11	0.30	0.11	
Unif. delay d1	53.7	40.5		56.2	35.5		47.5	54.7	55.9	34.2	55.7	
Delay factor k	0.11	0.37		0.11	0.15		0.50	0.11	0.11	0.11	0.11	
Increm. delay d2	0.1	3.9		1.6	0.4		40.3	0.6	1.6	0.1	1.2	
PF factor	1.000	0.945		1.000	0.945		0.989	1.000	1.000	0.989	1.000	
Control delay	53.8	42.2		57.8	33.9		87.2	55.3	57.5	33.9	56.9	
Lane group LOS	D	D		E	C		F	E	E	C	E	
Apprch. delay	42.2			35.9			81.7			48.6		
Approach LOS	D			D			F			D		
Intersec. delay	48.2			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OCEAN VIEW HILLS/STREETA
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/07/10	Jurisdiction	OCEANSTA303BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	1	3	0	2	1	1	1	1	0
Lane group	L	T	R	L	TR		L	T	R	L	TR	
Volume (vph)	10	1100	255	85	900	20	500	45	65	40	50	20
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	4	4	3	4	4		4	4	4	4	4	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	10	0	10	10	0	10	10	0	10	10	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 47.0	G =	G =	G = 40.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 135.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	11	1158	268	89	968		526	47	68	42	74	
Lane group cap.	197	1767	1037	197	1759		1018	207	166	524	195	
v/c ratio	0.06	0.66	0.26	0.45	0.55		0.52	0.23	0.41	0.08	0.38	
Green ratio	0.11	0.35	0.68	0.11	0.35		0.30	0.11	0.11	0.30	0.11	
Unif. delay d1	53.7	37.2	8.3	56.2	35.5		39.5	54.7	55.9	34.2	55.7	
Delay factor k	0.11	0.23	0.11	0.11	0.15		0.12	0.11	0.11	0.11	0.11	
Increm. delay d2	0.1	0.9	0.1	1.6	0.4		0.5	0.6	1.6	0.1	1.2	
PF factor	1.000	0.945	1.000	1.000	0.945		0.989	1.000	1.000	0.989	1.000	
Control delay	53.8	36.0	8.4	57.8	33.9		39.5	55.3	57.5	33.9	56.9	
Lane group LOS	D	D	A	E	C		D	E	E	C	E	
Apprch. delay	31.0			35.9			42.6			48.6		
Approach LOS	C			D			D			D		
Intersec. delay	35.5			Intersection LOS						D		

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41P
N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OCEAN VIEW HILLS/STREETA
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	OCEANSTA30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Lane group	L	TR		L	TR		L	T	R	L	TR	
Volume (vph)	20	700	660	75	1125	40	600	60	85	20	40	10
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	4	4		4	4		4	4	4	4	4	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	10	0	10	10	0	10	10	0	10	10	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 47.0	G =	G =	G = 45.0	G = 13.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 138.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	21	1432		79	1226		632	63	89	21	53	
Lane group cap.	192	1567		192	1717		577	175	139	577	168	
v/c ratio	0.11	0.91		0.41	0.71		1.10	0.36	0.64	0.04	0.32	
Green ratio	0.11	0.34		0.11	0.34		0.33	0.09	0.09	0.33	0.09	
Unif. delay d1	55.5	43.6		57.4	39.6		46.5	58.6	60.2	31.7	58.3	
Delay factor k	0.11	0.43		0.11	0.28		0.50	0.11	0.22	0.11	0.11	
Increm. delay d2	0.3	8.6		1.4	1.4		66.1	1.3	9.6	0.0	1.1	
PF factor	1.000	0.952		1.000	0.952		0.965	1.000	1.000	0.965	1.000	
Control delay	55.7	50.1		58.8	39.2		111.0	59.9	69.8	30.6	59.4	
Lane group LOS	E	D		E	D		F	E	E	C	E	
Apprch. delay	50.2			40.4			102.2			51.3		
Approach LOS	D			D			F			D		
Intersec. delay	57.9			Intersection LOS						E		

41P
W
M

SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*OCEAN VIEW HILLS/STREETA*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/24/11*	Jurisdiction	*OCEANSTA30P3BNLM/WITH MIT*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 3B NO LM/WITH MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	1	3	0	2	1	1	1	1	0
Lane group	L	T	R	L	TR		L	T	R	L	TR	
Volume (vph)	20	700	660	75	1125	40	600	60	85	20	40	10
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	4	4	3	4	4		4	4	4	4	4	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	10	0	10	10	0	10	10	0	10	10	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 47.0	G =	G =	G = 45.0	G = 13.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 138.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	21	737	695	79	1226		632	63	89	21	53	
Lane group cap.	192	1728	1069	192	1717		1121	175	139	577	168	
v/c ratio	0.11	0.43	0.65	0.41	0.71		0.56	0.36	0.64	0.04	0.32	
Green ratio	0.11	0.34	0.70	0.11	0.34		0.33	0.09	0.09	0.33	0.09	
Unif. delay d1	55.5	35.1	11.2	57.4	39.6		38.4	58.6	60.2	31.7	58.3	
Delay factor k	0.11	0.11	0.23	0.11	0.28		0.16	0.11	0.22	0.11	0.11	
Increm. delay d2	0.3	0.2	1.4	1.4	1.4		0.7	1.3	9.6	0.0	1.1	
PF factor	1.000	0.952	1.000	1.000	0.952		0.965	1.000	1.000	0.965	1.000	
Control delay	55.7	33.6	12.6	58.8	39.2		37.7	59.9	69.8	30.6	59.4	
Lane group LOS	E	C	B	E	D		D	E	E	C	E	
Apprch. delay	23.9			40.4			43.1			51.3		
Approach LOS	C			D			D			D		
Intersec. delay	34.6			Intersection LOS						C		

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42-A
NO
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLD OTAY MESA/BEYER BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/07/10	Jurisdiction	OOMBEYER30A3BNLM/NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	1	1	0	1	1	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Volume (vph)	300	1245	300	880	1200	15	300	100	600	10	200	600
% Heavy veh	2	5	2	2	5	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	4	4	3	4	4		4	4		4	4	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 38.0	G =	G =	G = 39.0	G = 30.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 155.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	316	1311	316	926	1279		316	737		11	843	
Lane group cap.	665	845	377	665	843		445	305		445	312	
v/c ratio	0.48	1.55	0.84	1.39	1.52		0.71	2.42		0.02	2.70	
Green ratio	0.19	0.25	0.25	0.19	0.25		0.25	0.19		0.25	0.19	
Unif. delay d1	55.5	58.5	55.6	62.5	58.5		52.8	62.5		43.7	62.5	
Delay factor k	0.11	0.50	0.37	0.50	0.50		0.27	0.50		0.11	0.50	
Increm. delay d2	0.5	254.0	15.3	185.7	238.8		5.2	647.3		0.0	774.9	
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	56.0	312.5	70.9	248.2	297.3		58.1	709.8		43.7	837.4	
Lane group LOS	E	F	E	F	F		E	F		D	F	
Apprch. delay	231.5			276.7			514.2			827.2		
Approach LOS	F			F			F			F		
Intersec. delay	381.2			Intersection LOS						F		

42A
WITH
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLD OTAY MESA/BEYER BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/07/10	Jurisdiction	OOMBEYER30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	1	1	1	1	1	1
Lane group	L	T	R	L	TR		L	T	R	L	T	R
Volume (vph)	300	1245	300	880	1200	15	300	100	600	10	200	600
% Heavy veh	2	5	2	2	5	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	4	4	3	4	4		4	4	3	4	4	3
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 38.0	G =	G =	G = 39.0	G = 30.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 155.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	316	1311	316	926	1279		316	105	632	11	211	632
Lane group cap.	665	845	816	665	843		445	361	644	445	361	644
v/c ratio	0.48	1.55	0.39	1.39	1.52		0.71	0.29	0.98	0.02	0.58	0.98
Green ratio	0.19	0.25	0.53	0.19	0.25		0.25	0.19	0.42	0.25	0.19	0.42
Unif. delay d1	55.5	58.5	21.6	62.5	58.5		52.8	53.4	44.4	43.7	56.8	44.4
Delay factor k	0.11	0.50	0.11	0.50	0.50		0.27	0.11	0.49	0.11	0.18	0.49
Increm. delay d2	0.5	254.0	0.3	185.7	238.8		5.2	0.4	30.7	0.0	2.4	30.7
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000
Control delay	56.0	312.5	21.9	248.2	297.3		58.1	53.9	75.1	43.7	59.3	75.1
Lane group LOS	E	F	C	F	F		E	D	E	D	E	E
Apprch. delay	223.5			276.7			67.9			70.8		
Approach LOS	F			F			E			E		
Intersec. delay	194.3			Intersection LOS						F		

42P
N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLD OTAY MESA/BEYER BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	OOMBEYER30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	1	1	0	1	1	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Volume (vph)	600	1200	300	600	1245	10	300	200	880	15	100	300
% Heavy veh	5	5	5	5	5	5	5	5	5	5	5	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	4	4	4	4	4		4	4		4	4	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 38.0	G =	G =	G = 34.0	G = 30.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	632	1263	316	632	1322		316	1137		16	421	
Lane group cap.	668	873	769	668	871		390	309		390	313	
v/c ratio	0.95	1.45	0.41	0.95	1.52		0.81	3.68		0.04	1.35	
Green ratio	0.20	0.25	0.51	0.20	0.25		0.23	0.20		0.23	0.20	
Unif. delay d1	59.2	56.0	22.5	59.2	56.0		54.9	60.0		45.3	60.0	
Delay factor k	0.46	0.50	0.11	0.46	0.50		0.35	0.50		0.11	0.50	
Increm. delay d2	22.5	207.5	0.4	22.5	238.9		12.1	1214		0.0	175.1	
PF factor	1.000	1.000	0.746	1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	81.7	263.5	17.1	81.7	294.9		67.1	1274		45.3	235.1	
Lane group LOS	F	F	B	F	F		E	F		D	F	
Apprch. delay	176.3			225.9			1011			228.2		
Approach LOS	F			F			F			F		
Intersec. delay	396.5			Intersection LOS						F		

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42P

W

M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLD OTAY MESA/BEYER BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	OOMBEYER30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	1	1	1	1	1	1
Lane group	L	T	R	L	TR		L	T	R	L	T	R
Volume (vph)	600	1200	300	600	1245	10	300	200	880	15	100	300
% Heavy veh	5	5	5	5	5	5	5	5	5	5	5	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	4	4	4	4	4		4	4	4	4	4	4
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 38.0	G =	G =	G = 34.0	G = 30.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	632	1263	316	632	1322		316	211	926	16	105	316
Lane group cap.	668	873	769	668	871		390	362	647	390	362	647
v/c ratio	0.95	1.45	0.41	0.95	1.52		0.81	0.58	1.43	0.04	0.29	0.49
Green ratio	0.20	0.25	0.51	0.20	0.25		0.23	0.20	0.43	0.23	0.20	0.43
Unif. delay d1	59.2	56.0	22.5	59.2	56.0		54.9	54.3	42.5	45.3	51.0	30.5
Delay factor k	0.46	0.50	0.11	0.46	0.50		0.35	0.17	0.50	0.11	0.11	0.11
Increm. delay d2	22.5	207.5	0.4	22.5	238.9		12.1	2.4	202.9	0.0	0.4	0.6
PF factor	1.000	1.000	0.746	1.000	1.000		1.000	1.000	0.857	1.000	1.000	0.857
Control delay	81.7	263.5	17.1	81.7	294.9		67.1	56.7	239.3	45.3	51.4	26.8
Lane group LOS	F	F	B	F	F		E	E	F	D	D	C
Apprch. delay	176.3			225.9			175.3			33.4		
Approach LOS	F			F			F			C		
Intersec. delay	181.8			Intersection LOS						F		

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Version 4.1f

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	OTAY MESA RD./CORPORATE CENTER
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/27/11	Jurisdiction	OTAYCORP30A3BWLM/NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 3B W LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	1	1	2	0	1	1	1
Lane group	L	TR		L	T	R	L	TR		L	TR	R
Volume (vph)	725	2980	275	185	1050	525	120	50	80	275	115	375
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	EB Only	Thru & RT	04	SB Only	NB Only	07	08
Timing	G = 10.0	G = 18.0	G = 50.0	G =	G = 20.0	G = 19.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	763	3426		195	1105	553	126	137		289	212	304
Lane group cap.	728	2546		228	1769	769	223	416		234	227	303
v/c ratio	1.05	1.35		0.86	0.62	0.72	0.57	0.33		1.24	0.93	1.00
Green ratio	0.23	0.52		0.07	0.36	0.54	0.14	0.14		0.14	0.14	0.21
Unif. delay d1	54.0	33.5		64.3	37.2	24.5	56.6	54.7		60.0	59.3	55.0
Delay factor k	0.50	0.50		0.39	0.21	0.28	0.16	0.11		0.50	0.45	0.50
Increm. delay d2	46.6	158.2		25.9	0.7	3.3	3.3	0.5		137.0	41.8	52.5
PF factor	0.802	0.614		0.949	0.630	0.231	0.895	0.895		0.889	0.889	0.818
Control delay	90.0	178.8		86.8	24.1	8.9	54.0	49.5		190.3	94.5	97.5
Lane group LOS	F	F		F	C	A	D	D		F	F	F
Apprch. delay	162.6			26.2			51.6			130.1		
Approach LOS	F			C			D			F		
Intersec. delay	119.3			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*OTAY MESA RD./CORPORATE CENTER*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/24/11*	Jurisdiction	*OTAYCORP30A3BNLM/WITH MIT*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 3B N LM/WITH MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	1	0	2	1	1
Lane group	L	T	R	L	T	R	L	TR		L	TR	R
Volume (vph)	725	2980	275	185	1050	525	120	50	80	275	115	375
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	EB Only	Thru & RT	04	SB Only	NB Only	07	08
Timing	G = 10.0	G = 18.0	G = 50.0	G =	G = 20.0	G = 19.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	763	3137	289	195	1105	553	126	137		289	212	304
Lane group cap.	728	2583	946	228	1769	769	433	218		455	227	303
v/c ratio	1.05	1.21	0.31	0.86	0.62	0.72	0.29	0.63		0.64	0.93	1.00
Green ratio	0.23	0.52	0.66	0.07	0.36	0.54	0.14	0.14		0.14	0.14	0.21
Unif. delay d1	54.0	33.5	10.3	64.3	37.2	24.5	54.4	57.2		56.6	59.3	55.0
Delay factor k	0.50	0.50	0.11	0.39	0.21	0.28	0.11	0.21		0.22	0.45	0.50
Increm. delay d2	46.6	100.3	0.2	25.9	0.7	3.3	0.4	5.7		2.9	41.8	52.5
PF factor	0.802	0.455	0.146	0.949	0.630	0.231	0.895	0.895		0.889	0.889	0.818
Control delay	90.0	115.5	1.7	86.8	24.1	8.9	49.1	56.9		53.2	94.5	97.5
Lane group LOS	F	F	A	F	C	A	D	E		D	F	F
Apprch. delay	103.0			26.2			53.1			80.8		
Approach LOS	F			C			D			F		
Intersec. delay	78.6			Intersection LOS						E		

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	OTAY MESA RD./CORPORATE CENTER
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/27/11	Jurisdiction	OTAYCORP30PA3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	1	1	2	0	1	1	1
Lane group	L	TR		L	T	R	L	TR		L	TR	R
Volume (vph)	375	1050	400	260	2690	275	515	215	340	525	135	725
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	100	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 20.0	G = 64.0	G =	G =	G = 25.0	G = 24.0	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	395	1526		274	2832	289	542	479		553	234	671
Lane group cap.	425	2014		425	2113	892	263	500		274	268	426
v/c ratio	0.93	0.76		0.64	1.34	0.32	2.06	0.96		2.02	0.87	1.58
Green ratio	0.13	0.43		0.13	0.43	0.62	0.16	0.16		0.17	0.17	0.30
Unif. delay d1	64.3	36.4		61.6	43.0	13.6	63.0	62.5		62.5	61.0	52.5
Delay factor k	0.44	0.31		0.22	0.50	0.11	0.50	0.47		0.50	0.40	0.50
Increm. delay d2	26.9	1.7		3.4	156.4	0.2	490.3	29.8		470.9	25.6	269.9
PF factor	0.897	0.504		0.897	0.507	0.132	0.873	0.873		0.867	0.867	0.714
Control delay	84.6	20.1		58.7	178.2	2.0	545.3	84.4		525.0	78.4	307.4
Lane group LOS	F	C		E	F	A	F	F		F	E	F
Apprch. delay	33.3			153.6			329.1			353.2		
Approach LOS	C			F			F			F		
Intersec. delay	184.3			Intersection LOS						F		

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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*OTAY MESA RD./CORPORATE CENTER*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/24/11*	Jurisdiction	*OTAYCORP30PA3BNLM/WITH MIT*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 3B NO LM/WITH MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	1	0	2	1	1
Lane group	L	T	R	L	T	R	L	TR		L	TR	R
Volume (vph)	375	1050	400	260	2690	275	515	215	340	525	135	725
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	100	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 20.0	G = 64.0	G =	G =	G = 25.0	G = 24.0	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	395	1105	421	274	2832	289	542	479		553	371	534
Lane group cap.	425	2113	844	425	2113	892	510	263		531	256	426
v/c ratio	0.93	0.52	0.50	0.64	1.34	0.32	1.06	1.82		1.04	1.45	1.25
Green ratio	0.13	0.43	0.59	0.13	0.43	0.62	0.16	0.16		0.17	0.17	0.30
Unif. delay d1	64.3	31.7	18.1	61.6	43.0	13.6	63.0	63.0		62.5	62.5	52.5
Delay factor k	0.44	0.13	0.11	0.22	0.50	0.11	0.50	0.50		0.50	0.50	0.50
Increm. delay d2	26.9	0.2	0.5	3.4	156.4	0.2	57.6	384.2		50.3	222.7	132.1
PF factor	0.897	0.504	0.121	0.897	0.507	0.132	0.873	0.873		0.867	0.867	0.714
Control delay	84.6	16.2	2.7	58.7	178.2	2.0	112.6	439.2		104.4	276.9	169.6
Lane group LOS	F	B	A	E	F	A	F	F		F	F	F
Apprch. delay	27.3			153.6			265.8			172.2		
Approach LOS	C			F			F			F		
Intersec. delay	140.6			Intersection LOS						F		

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SHORT REPORT

General Information

Analyst USAI
Agency or Co. USAI
Date Performed 03/27/11
Time Period AM PEAK HOUR

Site Information

Intersection OTAY MESA RD./INNOVATIVE DR.
Area Type All other areas
Jurisdiction OTAYINNOV30A3BNLM/NO MIT
Analysis Year YEAR 2030 3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	1	1	1	0	1	1	1
Lane group	L	TR		L	T	R	L	TR		L	TR	R
Volume (vph)	510	2735	90	60	1445	465	40	15	25	250	40	275
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G = 67.0	G =	G =	G = 30.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	537	2974		63	1521	489	42	42		263	42	289
Lane group cap.	425	2200		425	2212	979	328	160		328	173	374
v/c ratio	1.26	1.35		0.15	0.69	0.50	0.13	0.26		0.80	0.24	0.77
Green ratio	0.13	0.45		0.13	0.45	0.68	0.20	0.10		0.20	0.10	0.27
Unif. delay d1	65.0	41.5		57.5	33.1	11.6	49.3	62.4		57.2	62.3	50.8
Delay factor k	0.50	0.50		0.11	0.26	0.11	0.11	0.11		0.35	0.11	0.32
Increm. delay d2	136.3	161.4		0.2	0.9	0.4	0.2	0.9		13.3	0.7	9.7
PF factor	0.897	0.536		0.897	0.462	0.156	0.833	0.926		0.833	0.926	0.758
Control delay	194.6	183.7		51.7	16.2	2.2	41.2	58.6		61.0	58.4	48.1
Lane group LOS	F	F		D	B	A	D	E		E	E	D
Apprch. delay	185.3			14.0			49.9			54.5		
Approach LOS	F			B			D			D		
Intersec. delay	114.4			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*OTAY MESA RD./INNOVATIVE DR.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/27/11*	Jurisdiction	*OTAYINNOV30A3BNLM/WITH MIT*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 3B NO LM/WITH MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	1	1	1	0	2	1	1
Lane group	L	TR		L	T	R	L	TR		L	TR	R
Volume (vph)	510	2735	90	60	1445	465	40	15	25	250	40	275
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G = 67.0	G =	G =	G = 30.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	537	2974		63	1521	489	42	42		263	42	289
Lane group cap.	425	2200		425	2212	979	328	160		637	173	374
v/c ratio	1.26	1.35		0.15	0.69	0.50	0.13	0.26		0.41	0.24	0.77
Green ratio	0.13	0.45		0.13	0.45	0.68	0.20	0.10		0.20	0.10	0.27
Unif. delay d1	65.0	41.5		57.5	33.1	11.6	49.3	62.4		52.3	62.3	50.8
Delay factor k	0.50	0.50		0.11	0.26	0.11	0.11	0.11		0.11	0.11	0.32
Increm. delay d2	136.3	161.4		0.2	0.9	0.4	0.2	0.9		0.4	0.7	9.7
PF factor	0.897	0.536		0.897	0.462	0.156	0.833	0.926		0.833	0.926	0.758
Control delay	194.6	183.7		51.7	16.2	2.2	41.2	58.6		44.0	58.4	48.1
Lane group LOS	F	F		D	B	A	D	E		D	E	D
Apprch. delay	185.3			14.0			49.9			47.0		
Approach LOS	F			B			D			D		
Intersec. delay	113.7			Intersection LOS						F		

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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*OTAY MESA RD./INNOVATIVE DR.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/27/11*	Jurisdiction	*OTAYINNOV30P3BNLM/NO MIT*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 3B NO LM/NO MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	1	1	1	0	1	1	1
Lane group	L	TR		L	T	R	L	TR		L	TR	R
Volume (vph)	275	1510	130	85	2545	250	170	70	115	465	90	510
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 20.0	G = 64.0	G =	G =	G = 19.0	G = 29.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	289	1726		89	2679	263	179	195		489	202	430
Lane group cap.	425	2088		425	2113	910	317	209		317	201	382
v/c ratio	0.68	0.83		0.21	1.27	0.29	0.56	0.93		1.54	1.00	1.13
Green ratio	0.13	0.43		0.13	0.43	0.62	0.19	0.13		0.19	0.13	0.26
Unif. delay d1	62.0	38.1		58.0	43.0	13.2	54.8	64.9		60.5	65.5	55.5
Delay factor k	0.25	0.36		0.11	0.50	0.11	0.16	0.45		0.50	0.50	0.50
Increm. delay d2	4.4	2.9		0.2	124.4	0.2	2.3	43.8		259.4	64.8	84.7
PF factor	0.897	0.504		0.897	0.504	0.132	0.840	0.903		0.840	0.903	0.766
Control delay	60.0	22.1		52.3	146.1	1.9	48.4	102.4		310.2	123.9	127.2
Lane group LOS	E	C		D	F	A	D	F		F	F	F
Apprch. delay	27.5			130.8			76.5			206.4		
Approach LOS	C			F			E			F		
Intersec. delay	108.9			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*OTAY MESA RD./INNOVATIVE DR.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/27/11*	Jurisdiction	*OTAYINNOV30P3BNLM/WITH MIT*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 3B NO LM/WITH MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	1	1	1	0	2	1	1
Lane group	L	TR		L	T	R	L	TR		L	TR	R
Volume (vph)	275	1510	130	85	2545	250	170	70	115	465	90	510
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 20.0	G = 64.0	G =	G =	G = 19.0	G = 29.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	289	1726		89	2679	263	179	195		489	202	430
Lane group cap.	425	2088		425	2113	910	317	209		616	201	382
v/c ratio	0.68	0.83		0.21	1.27	0.29	0.56	0.93		0.79	1.00	1.13
Green ratio	0.13	0.43		0.13	0.43	0.62	0.19	0.13		0.19	0.13	0.26
Unif. delay d1	62.0	38.1		58.0	43.0	13.2	54.8	64.9		57.7	65.5	55.5
Delay factor k	0.25	0.36		0.11	0.50	0.11	0.16	0.45		0.34	0.50	0.50
Increm. delay d2	4.4	2.9		0.2	124.4	0.2	2.3	43.8		7.1	64.8	84.7
PF factor	0.897	0.504		0.897	0.504	0.132	0.840	0.903		0.840	0.903	0.766
Control delay	60.0	22.1		52.3	146.1	1.9	48.4	102.4		55.5	123.9	127.2
Lane group LOS	E	C		D	F	A	D	F		E	F	F
Apprch. delay	27.5			130.8			76.5			95.4		
Approach LOS	C			F			E			F		
Intersec. delay	89.8			Intersection LOS						F		

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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*AIRWAY RD./HARVEST RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/27/11*	Jurisdiction	*AIRHARV30A3BNLM/NO MIT*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 3B NO LM/NO MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*2*	*0*	*2*	*2*	*0*	*2*	*0*	*1*	*0*	*0*	*0*
Lane group		*TR*		*L*	*T*		*L*		*R*			
Volume (vph)		*1810*	*365*	*470*	*485*		*320*		*415*			
% Heavy veh		*10*	*10*	*10*	*10*		*10*		*10*			
PHF		*0.95*	*0.95*	*0.95*	*0.95*		*0.95*		*0.95*			
Actuated (P/A)		*A*	*A*	*A*	*A*		*A*		*A*			
Startup lost time		*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			
Ext. eff. green		*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			
Arrival type		*5*		*5*	*5*		*5*		*5*			
Unit Extension		*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			
Ped/Bike/RTOR Volume	*10*	*5*	*0*				*10*	*5*	*0*	*10*		
Lane Width		*12.0*		*12.0*	*12.0*		*12.0*		*12.0*			
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*
Parking/hr												
Bus stops/hr		*0*		*0*	*0*		*0*		*0*			
Unit Extension		*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = *37.0*	G = *70.0*	G =	G =	G = *20.0*	G =	G =	G =
	Y = *4*	Y = *5*	Y =	Y =	Y = *4*	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *140.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		*2289*		*495*	*511*		*337*		*437*			
Lane group cap.		*1682*		*842*	*2745*		*455*		*617*			
v/c ratio		*1.36*		*0.59*	*0.19*		*0.74*		*0.71*			
Green ratio		*0.50*		*0.26*	*0.79*		*0.14*		*0.44*			
Unif. delay d1		*35.0*		*44.9*	*3.5*		*57.5*		*32.2*			
Delay factor k		*0.50*		*0.18*	*0.11*		*0.30*		*0.27*			
Increm. delay d2		*166.3*		*1.1*	*0.0*		*6.4*		*3.8*			
PF factor		*0.604*		*0.761*	*0.241*		*0.889*		*0.485*			
Control delay		*187.5*		*35.2*	*0.9*		*57.5*		*19.4*			
Lane group LOS		*F*		*D*	*A*		*E*		*B*			
Apprch. delay	*187.5*			*17.8*			*36.0*					
Approach LOS	*F*			*B*			*D*					
Intersec. delay	*116.7*			Intersection LOS						*F*		

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*AIRWAY RD./HARVEST RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/27/11*	Jurisdiction	*AIRHARV30A3BNLM/WITH MIT*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 3B NO LM/WITH MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	2	0	1	0	0	0
Lane group		T	R	L	T		L		R			
Volume (vph)		1810	365	470	485		320		415			
% Heavy veh		10	10	10	10		10		10			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A		A			
Startup lost time		2.0	2.0	2.0	2.0		2.0		2.0			
Ext. eff. green		2.0	2.0	2.0	2.0		2.0		2.0			
Arrival type		5	5	5	5		5		5			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	10	5	0				10	5	0	10		
Lane Width		12.0	12.0	12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0	0	0	0		0		0			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 37.0	G = 70.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1905	384	495	511		337		437			
Lane group cap.		1731	977	842	2745		455		617			
v/c ratio		1.10	0.39	0.59	0.19		0.74		0.71			
Green ratio		0.50	0.68	0.26	0.79		0.14		0.44			
Unif. delay d1		35.0	9.9	44.9	3.5		57.5		32.2			
Delay factor k		0.50	0.11	0.18	0.11		0.30		0.27			
Increm. delay d2		54.7	0.3	1.1	0.0		6.4		3.8			
PF factor		0.333	0.156	0.761	0.241		0.889		0.485			
Control delay		66.3	1.8	35.2	0.9		57.5		19.4			
Lane group LOS		E	A	D	A		E		B			
Apprch. delay	55.5			17.8			36.0					
Approach LOS	E			B			D					
Intersec. delay	42.5			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*AIRWAY RD./HARVEST RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/27/11*	Jurisdiction	*AIRHARV30P3BNLM/NO MIT*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 3B NO LM/NO MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*2*	*0*	*2*	*2*	*0*	*2*	*0*	*1*	*0*	*0*	*0*
Lane group		*TR*		*L*	*T*		*L*		*R*			
Volume (vph)		*485*	*320*	*415*	*1810*		*365*		*470*			
% Heavy veh		*10*	*10*	*10*	*10*		*10*		*10*			
PHF		*0.95*	*0.95*	*0.95*	*0.95*		*0.95*		*0.95*			
Actuated (P/A)		*A*	*A*	*A*	*A*		*A*		*A*			
Startup lost time		*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			
Ext. eff. green		*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			
Arrival type		*5*		*5*	*5*		*5*		*5*			
Unit Extension		*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			
Ped/Bike/RTOR Volume	*10*	*5*	*0*				*10*	*5*	*0*	*10*		
Lane Width		*12.0*		*12.0*	*12.0*		*12.0*		*12.0*			
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*
Parking/hr												
Bus stops/hr		*0*		*0*	*0*		*0*		*0*			
Unit Extension		*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = *37.0*	G = *60.0*	G =	G =	G = *20.0*	G =	G =	G =
	Y = *4*	Y = *5*	Y =	Y =	Y = *4*	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *130.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		*848*		*437*	*1905*		*384*		*495*			
Lane group cap.		*1490*		*907*	*2690*		*490*		*666*			
v/c ratio		*0.57*		*0.48*	*0.71*		*0.78*		*0.74*			
Green ratio		*0.46*		*0.28*	*0.78*		*0.15*		*0.47*			
Unif. delay d1		*25.6*		*38.6*	*7.2*		*52.9*		*28.1*			
Delay factor k		*0.16*		*0.11*	*0.27*		*0.33*		*0.30*			
Increm. delay d2		*0.5*		*0.4*	*0.9*		*8.1*		*4.5*			
PF factor		*0.429*		*0.735*	*0.224*		*0.879*		*0.411*			
Control delay		*11.5*		*28.7*	*2.5*		*54.6*		*16.1*			
Lane group LOS		*B*		*C*	*A*		*D*		*B*			
Apprch. delay	*11.5*			*7.4*			*32.9*					
Approach LOS	*B*			*A*			*C*					
Intersec. delay	*13.8*			Intersection LOS						*B*		

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*AIRWAY RD./HARVEST RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/27/11*	Jurisdiction	*AIRHARV30P3BNLM/WITH MIT*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 3B NO LM/WITH MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	2	0	1	0	0	0
Lane group		T	R	L	T		L		R			
Volume (vph)		485	320	415	1810		365		470			
% Heavy veh		10	10	10	10		10		10			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A		A			
Startup lost time		2.0	2.0	2.0	2.0		2.0		2.0			
Ext. eff. green		2.0	2.0	2.0	2.0		2.0		2.0			
Arrival type		5	5	5	5		5		5			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	10	5	0				10	5	0	10		
Lane Width		12.0	12.0	12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0	0	0	0		0		0			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 37.0	G = 60.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		511	337	437	1905		384		495			
Lane group cap.		1598	664	907	2690		490		666			
v/c ratio		0.32	0.51	0.48	0.71		0.78		0.74			
Green ratio		0.46	0.46	0.28	0.78		0.15		0.47			
Unif. delay d1		22.1	24.6	38.6	7.2		52.9		28.1			
Delay factor k		0.11	0.12	0.11	0.27		0.33		0.30			
Increm. delay d2		0.1	0.6	0.4	0.9		8.1		4.5			
PF factor		0.429	0.429	0.735	0.224		0.879		0.411			
Control delay		9.6	11.2	28.7	2.5		54.6		16.1			
Lane group LOS		A	B	C	A		D		B			
Apprch. delay	10.2			7.4			32.9					
Approach LOS	B			A			C					
Intersec. delay	13.5			Intersection LOS						B		

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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*SIEMPRE VIVA RD./HARVEST RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/24/11*	Jurisdiction	*SIEMPHARV30A3BNLM*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030//ALT.-3B/NO MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	455	1660	110	90	2675	465	40	5	35	95	20	140
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 15.0	G = 75.0	G =	G =	G = 10.0	G = 10.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	479	1863		95	3305		42	42		100	168	
Lane group cap.	368	2827		368	2786		126	218		126	218	
v/c ratio	1.30	0.66		0.26	1.19		0.33	0.19		0.79	0.77	
Green ratio	0.12	0.58		0.12	0.58		0.08	0.08		0.08	0.08	
Unif. delay d1	57.5	18.8		52.4	27.5		56.8	56.2		59.0	58.9	
Delay factor k	0.50	0.23		0.11	0.50		0.11	0.11		0.34	0.32	
Increm. delay d2	154.3	0.6		0.4	87.8		1.6	0.4		28.5	15.5	
PF factor	0.913	0.118		0.913	0.471		0.944	0.944		0.944	0.944	
Control delay	206.8	2.8		48.2	100.7		55.2	53.5		84.2	71.1	
Lane group LOS	F	A		D	F		E	D		F	E	
Apprch. delay	44.5			99.3			54.4			76.0		
Approach LOS	D			F			D			E		
Intersec. delay	76.6			Intersection LOS						E		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./HARVEST RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	SIEMPHARV30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030//ALT.-3B/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	1	1	2	0	2	2	1
Lane group	L	TR		L	T	R	L	TR		L	T	R
Volume (vph)	455	1660	110	90	2675	465	40	5	35	95	20	140
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 15.0	G = 75.0	G =	G =	G = 10.0	G = 10.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	479	1863		95	2816	489	42	42		100	21	147
Lane group cap.	368	2827		368	2857	831	126	218		245	266	267
v/c ratio	1.30	0.66		0.26	0.99	0.59	0.33	0.19		0.41	0.08	0.55
Green ratio	0.12	0.58		0.12	0.58	0.58	0.08	0.08		0.08	0.08	0.19
Unif. delay d1	57.5	18.8		52.4	27.0	17.6	56.8	56.2		57.2	55.7	47.4
Delay factor k	0.50	0.23		0.11	0.49	0.18	0.11	0.11		0.11	0.11	0.15
Increm. delay d2	154.3	0.6		0.4	13.6	1.1	1.6	0.4		1.1	0.1	2.4
PF factor	0.913	0.118		0.913	0.118	0.118	0.944	0.944		0.944	0.944	0.841
Control delay	206.8	2.8		48.2	16.8	3.2	55.2	53.5		55.1	52.8	42.3
Lane group LOS	F	A		D	B	A	E	D		E	D	D
Apprch. delay	44.5			15.7			54.4			47.9		
Approach LOS	D			B			D			D		
Intersec. delay	28.7			Intersection LOS						C		

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./HARVEST RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	SAN DIEGO
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030//ALT.-3B/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	125	1610	95	80	1660	120	175	30	145	470	30	455
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 10.0	G = 45.0	G =	G =	G = 20.0	G = 25.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 120.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	132	1795		84	1873		184	185		495	511	
Lane group cap.	266	1839		266	1836		342	490		342	479	
v/c ratio	0.50	0.98		0.32	1.02		0.54	0.38		1.45	1.07	
Green ratio	0.08	0.38		0.08	0.38		0.21	0.17		0.21	0.17	
Unif. delay d1	52.6	37.0		51.8	37.5		42.4	44.5		47.5	50.0	
Delay factor k	0.11	0.48		0.11	0.50		0.14	0.11		0.50	0.50	
Increm. delay d2	1.5	15.7		0.7	26.2		1.7	0.5		217.1	60.1	
PF factor	0.939	0.600		0.939	0.600		0.825	0.867		0.825	0.867	
Control delay	50.9	37.8		49.3	48.7		36.6	39.0		256.3	103.4	
Lane group LOS	D	D		D	D		D	D		F	F	
Apprch. delay	38.7			48.8			37.8			178.6		
Approach LOS	D			D			D			F		
Intersec. delay	69.2			Intersection LOS						E		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./HARVEST RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	SAN DIEGO No LM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030//ALT.-3B/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	1	1	2	0	2	2	1
Lane group	L	TR		L	T	R	L	TR		L	T	R
Volume (vph)	125	1610	95	80	1660	120	175	30	145	470	30	455
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 10.0	G = 45.0	G =	G =	G = 20.0	G = 25.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 120.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	132	1795		84	1747	126	184	185		495	32	479
Lane group cap.	266	1839		266	1857	838	342	490		664	577	355
v/c ratio	0.50	0.98		0.32	0.94	0.15	0.54	0.38		0.75	0.06	1.35
Green ratio	0.08	0.38		0.08	0.38	0.58	0.21	0.17		0.21	0.17	0.25
Unif. delay d1	52.6	37.0		51.8	36.2	11.4	42.4	44.5		44.5	42.1	45.0
Delay factor k	0.11	0.48		0.11	0.45	0.11	0.14	0.11		0.30	0.11	0.50
Increm. delay d2	1.5	15.7		0.7	10.1	0.1	1.7	0.5		4.6	0.0	174.8
PF factor	0.939	0.600		0.939	0.600	0.120	0.825	0.867		0.825	0.867	0.778
Control delay	50.9	37.8		49.3	31.9	1.5	36.6	39.0		41.3	36.5	209.8
Lane group LOS	D	D		D	C	A	D	D		D	D	F
Apprch. delay	38.7			30.6			37.8			121.4		
Approach LOS	D			C			D			F		
Intersec. delay	51.5			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./SANYO AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	OTAYSANYO30A3BNLM/NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	825	355	1180	90	200	10	490	310	100	75	205	460
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10		0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 35.0	G = 25.0	G =	G =	G = 32.0	G = 25.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 135.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	868	1616		95	222		516	431		79	700	
Lane group cap.	826	790		826	909		389	618		389	561	
v/c ratio	1.05	2.05		0.12	0.24		1.33	0.70		0.20	1.25	
Green ratio	0.26	0.19		0.26	0.19		0.24	0.19		0.24	0.19	
Unif. delay d1	50.0	55.0		38.2	46.9		51.5	51.5		41.3	55.0	
Delay factor k	0.50	0.50		0.11	0.11		0.50	0.26		0.11	0.50	
Increm. delay d2	45.5	474.9		0.1	0.1		163.8	3.5		0.3	125.8	
PF factor	0.767	0.848		0.767	0.848		1.000	1.000		1.000	1.000	
Control delay	83.9	521.6		29.3	40.0		215.3	54.9		41.5	180.8	
Lane group LOS	F	F		C	D		F	D		D	F	
Apprch. delay	368.6			36.8			142.3			166.7		
Approach LOS	F			D			F			F		
Intersec. delay	263.3			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
		Intersection	OTAY MESA RD./SANYO AVE.
Analyst	USAI	Area Type	All other areas
Agency or Co.	USAI	Jurisdiction	OTAYSANYO30A3BNLM/WITH MIT
Date Performed	03/25/11		
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	2	2	3	1	2	1	1	1	1	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	825	355	1180	90	200	10	490	310	100	75	205	460
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	3	3	5	3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10		0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 35.0	G = 25.0	G =	G =	G = 32.0	G = 25.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 135.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	868	374	1242	95	211	11	516	326	105	79	216	484
Lane group cap.	826	917	1133	826	917	263	755	337	272	389	337	263
v/c ratio	1.05	0.41	1.10	0.12	0.23	0.04	0.68	0.97	0.39	0.20	0.64	1.84
Green ratio	0.26	0.19	0.46	0.26	0.19	0.19	0.24	0.19	0.19	0.24	0.19	0.19
Unif. delay d1	50.0	48.5	36.5	38.2	46.8	45.2	46.9	54.6	48.3	41.3	50.9	55.0
Delay factor k	0.50	0.11	0.50	0.11	0.11	0.11	0.25	0.47	0.11	0.11	0.22	0.50
Increm. delay d2	45.5	0.3	57.0	0.1	0.1	0.1	2.6	40.2	0.9	0.3	4.1	392.6
PF factor	0.767	0.848	0.434	0.767	0.848	0.848	1.000	1.000	0.848	1.000	1.000	1.000
Control delay	83.9	41.4	72.9	29.3	39.8	38.4	49.4	94.8	41.9	41.5	54.9	447.6
Lane group LOS	F	D	E	C	D	D	D	F	D	D	D	F
Apprch. delay	72.0			36.6			64.2			297.5		
Approach LOS	E			D			E			F		
Intersec. delay	106.7			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./SANYO AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	OTAYSANYO30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	340	355	555	100	315	75	1045	205	25	10	310	730
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 25.0	G =	G =	G = 45.0	G = 25.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	358	958		105	411		1100	242		11	1094	
Lane group cap.	417	848		417	919		568	653		568	582	
v/c ratio	0.86	1.13		0.25	0.45		1.94	0.37		0.02	1.88	
Green ratio	0.13	0.19		0.13	0.19		0.35	0.19		0.35	0.19	
Unif. delay d1	55.3	52.5		50.8	46.4		42.5	45.7		28.0	52.5	
Delay factor k	0.39	0.50		0.11	0.11		0.50	0.11		0.11	0.50	
Increm. delay d2	16.3	73.1		0.3	0.3		427.9	0.4		0.0	402.4	
PF factor	0.900	0.841		0.900	0.841		1.000	1.000		1.000	1.000	
Control delay	66.0	117.3		46.0	39.4		470.4	46.0		28.0	454.9	
Lane group LOS	E	F		D	D		F	D		C	F	
Apprch. delay	103.4			40.7			393.9			450.6		
Approach LOS	F			D			F			F		
Intersec. delay	276.6			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./SANYO AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/24/11	Jurisdiction	OTAYSANYO30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	2	2	3	1	2	1	1	1	1	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	340	355	555	100	315	75	1045	205	25	10	310	730
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	3	3	5	3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 25.0	G =	G =	G = 45.0	G = 25.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	358	374	584	105	332	79	1100	216	26	11	326	768
Lane group cap.	417	953	1426	417	953	822	1103	350	515	568	350	515
v/c ratio	0.86	0.39	0.41	0.25	0.35	0.10	1.00	0.62	0.05	0.02	0.93	1.49
Green ratio	0.13	0.19	0.58	0.13	0.19	0.58	0.35	0.19	0.36	0.35	0.19	0.36
Unif. delay d1	55.3	45.9	15.2	50.8	45.4	12.3	42.4	48.1	27.0	28.0	51.7	41.5
Delay factor k	0.39	0.11	0.11	0.11	0.11	0.11	0.50	0.20	0.11	0.11	0.45	0.50
Increm. delay d2	16.3	0.3	0.2	0.3	0.2	0.1	26.4	3.3	0.0	0.0	31.1	231.2
PF factor	0.900	0.841	0.118	0.900	0.841	0.118	1.000	1.000	0.622	1.000	1.000	1.000
Control delay	66.0	38.9	2.0	46.0	38.5	1.5	68.8	51.4	16.8	28.0	82.7	272.7
Lane group LOS	E	D	A	D	D	A	E	D	B	C	F	F
Apprch. delay	29.9			34.3			65.0			214.2		
Approach LOS	C			C			E			F		
Intersec. delay	89.0			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./SANYO AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	AIRSANYO30A3BNLM/NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/NO MITIGATIO

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	1200	490	535	110	210	50	230	120	50	315	260	515
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 50.0	G = 25.0	G =	G =	G = 22.0	G = 25.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1263	1079		116	274		242	179		332	816	
Lane group cap.	1138	559		1138	596		258	585		258	544	
v/c ratio	1.11	1.93		0.10	0.46		0.94	0.31		1.29	1.50	
Green ratio	0.36	0.18		0.36	0.18		0.16	0.18		0.16	0.18	
Unif. delay d1	45.0	57.5		30.0	51.5		58.3	50.0		59.0	57.5	
Delay factor k	0.50	0.50		0.11	0.11		0.45	0.11		0.50	0.50	
Increm. delay d2	62.1	425.2		0.0	0.6		39.5	0.3		155.1	234.5	
PF factor	0.630	0.855		0.630	0.855		0.876	0.855		0.876	0.855	
Control delay	90.5	474.3		18.9	44.6		90.6	43.0		206.8	283.7	
Lane group LOS	F	F		B	D		F	D		F	F	
Apprch. delay	267.3			36.9			70.3			261.4		
Approach LOS	F			D			E			F		
Intersec. delay	225.6			Intersection LOS						F		

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	AIRWAY RD./SANYO RD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	AIRSANYO30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/WITH MITIGAT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	2	2	2	1	2	2	1	2	2	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	1200	490	535	110	210	50	230	120	50	315	260	515
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 50.0	G = 25.0	G =	G =	G = 27.0	G = 20.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1263	516	563	116	221	53	242	126	53	332	274	542
Lane group cap.	1138	618	1003	1138	618	579	615	495	760	615	495	1312
v/c ratio	1.11	0.83	0.56	0.10	0.36	0.09	0.39	0.25	0.07	0.54	0.55	0.41
Green ratio	0.36	0.18	0.41	0.36	0.18	0.41	0.19	0.14	0.54	0.19	0.14	0.54
Unif. delay d1	45.0	55.5	31.9	30.0	50.5	25.6	49.3	53.4	15.7	50.9	55.8	19.4
Delay factor k	0.50	0.37	0.16	0.11	0.11	0.11	0.11	0.11	0.11	0.14	0.15	0.11
Increm. delay d2	62.1	9.7	0.7	0.0	0.4	0.1	0.4	0.3	0.0	1.0	1.4	0.2
PF factor	0.630	0.855	0.542	0.630	0.855	0.542	0.841	0.889	0.231	0.841	0.889	0.231
Control delay	90.5	57.1	18.0	18.9	43.5	13.9	41.9	47.7	3.7	43.8	51.0	4.7
Lane group LOS	F	E	B	B	D	B	D	D	A	D	D	A
Apprch. delay	65.7			32.2			38.8			27.0		
Approach LOS	E			C			D			C		
Intersec. delay	49.7			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*AIRWAY RD./SANYO AVE.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/27/11*	Jurisdiction	*AIRSANYO30P3BNLM/NO MIT*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B/NO MIT.*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	515	210	230	50	490	315	535	260	110	50	120	1200
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 20.0	G =	G =	G = 22.0	G = 55.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	542	463		53	848		563	390		53	1389	
Lane group cap.	569	446		569	458		258	1291		258	1151	
v/c ratio	0.95	1.04		0.09	1.85		2.18	0.30		0.21	1.21	
Green ratio	0.18	0.14		0.18	0.14		0.16	0.39		0.16	0.39	
Unif. delay d1	56.9	60.0		48.0	60.0		59.0	29.3		51.4	42.5	
Delay factor k	0.46	0.50		0.11	0.50		0.50	0.11		0.11	0.50	
Increm. delay d2	26.3	52.8		0.1	391.6		544.6	0.1		0.4	101.4	
PF factor	0.855	0.889		0.855	0.889		0.876	0.569		0.876	0.569	
Control delay	75.0	106.2		41.1	444.9		596.2	16.8		45.4	125.6	
Lane group LOS	E	F		D	F		F	B		D	F	
Apprch. delay	89.4			421.1			359.1			122.6		
Approach LOS	F			F			F			F		
Intersec. delay	229.8			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./SANYO RD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/27/11	Jurisdiction	AIRSANYO30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/WITH MIT.

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	2	2	2	1	2	2	1	2	2	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	515	210	230	50	490	315	535	260	110	50	120	1200
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 25.0	G =	G =	G = 27.0	G = 45.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	542	221	242	53	516	332	563	274	116	53	126	1263
Lane group cap.	569	618	1003	569	618	579	615	1113	768	615	1113	1339
v/c ratio	0.95	0.36	0.24	0.09	0.83	0.57	0.92	0.25	0.15	0.09	0.11	0.94
Green ratio	0.18	0.18	0.41	0.18	0.18	0.41	0.19	0.32	0.54	0.19	0.32	0.54
Unif. delay d1	56.9	50.5	27.3	48.0	55.5	32.1	55.4	35.0	16.4	46.4	33.4	30.5
Delay factor k	0.46	0.11	0.11	0.11	0.37	0.17	0.43	0.11	0.11	0.11	0.11	0.46
Increm. delay d2	26.3	0.4	0.1	0.1	9.7	1.4	18.5	0.1	0.1	0.1	0.0	13.4
PF factor	0.855	0.855	0.542	0.855	0.855	0.542	0.841	0.684	0.231	0.841	0.684	0.231
Control delay	75.0	43.5	14.9	41.1	57.1	18.8	65.1	24.1	3.9	39.0	22.9	20.4
Lane group LOS	E	D	B	D	E	B	E	C	A	D	C	C
Apprch. delay	53.6			42.1			45.8			21.3		
Approach LOS	D			D			D			C		
Intersec. delay	38.6			Intersection LOS						D		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*USAI*	Intersection	*H. HERTZ DR./PAS. D L AMERICAS*
Agency/Co.	*USAI*	Jurisdiction	*SAN DIEGO*
Date Performed	*3/1/2011*	Analysis Year	*2030 3B NO LA MEDIA/NO MIT.*
Analysis Time Period	*AM PEAK HOUR*		

Project Description *3B- NO LA MEDIA NO MIT.*

East/West Street: *HEINRICH HERTZ DR.*	North/South Street: *PASEO DE LAS AMERICAS*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*720*	*360*	*0*	*0*	*305*	*80*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR	*757*	*378*	*0*	*0*	*321*	*84*
Percent Heavy Vehicles	*10*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*0*
Configuration	*L*	*T*			*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*20*	*0*	*360*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*21*	*0*	*378*
Percent Heavy Vehicles	*0*	*0*	*0*	*10*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (vph)	*757*					*21*		*378*
C (m) (vph)	*1076*					*12*		*775*
v/c	*0.70*					*1.75*		*0.49*
95% queue length	*6.17*					*3.42*		*2.71*
Control Delay	*15.9*					*988.3*		*14.0*
LOS	*C*					*F*		*B*
Approach Delay	--	--				*65.3*		
Approach LOS	--	--				*F*		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERTZ DR./PASEO DE LAS AMERICA
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	HERTZ AMERIC30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	2	2	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	20		360				720	360			305	80
% Heavy veh	10		10				10	10			10	10
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A		A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	10	5	0	10						10	5	0
Lane Width	12.0		12.0				12.0	12.0			12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 15.0	G =	G =	G =	G = 42.0	G = 20.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	21		379				758	379			405	
Lane group cap.	274		964				1487	2539			741	
v/c ratio	0.08		0.39				0.51	0.15			0.55	
Green ratio	0.17		0.68				0.47	0.73			0.22	
Unif. delay d1	31.7		6.4				16.8	3.6			31.0	
Delay factor k	0.11		0.11				0.12	0.11			0.15	
Increm. delay d2	0.1		0.3				0.3	0.0			0.9	
PF factor	0.867		0.155				0.417	0.188			0.810	
Control delay	27.6		1.3				7.3	0.7			25.9	
Lane group LOS	C		A				A	A			C	
Apprch. delay	2.6						5.1			25.9		
Approach LOS	A						A			C		
Intersec. delay	8.9			Intersection LOS						A		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*USAI*	Intersection	*H. HERTZ DR./PAS. D L AMERICAS*
Agency/Co.	*USAI*	Jurisdiction	*SAN DIEGO*
Date Performed	*5/17/12*	Analysis Year	*2030 3B NO LA MEDIA/NO MIT.*
Analysis Time Period	*PM PEAK HOUR*		

Project Description	*3B- NO LA MEDIA NO MIT.*		
East/West Street:	*HEINRICH HERTZ DR.*	North/South Street:	*PASEO DE LAS AMERICAS*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*360*	*310*	*0*	*0*	*435*	*20*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR	*378*	*326*	*0*	*0*	*457*	*21*
Percent Heavy Vehicles	*10*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*0*
Configuration	*L*	*T*			*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*80*	*0*	*720*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*84*	*0*	*757*
Percent Heavy Vehicles	*0*	*0*	*0*	*10*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (vph)	*378*					*84*		*757*
C (m) (vph)	*1009*					*74*		*734*
v/c	*0.37*					*1.14*		*1.03*
95% queue length	*1.76*					*6.27*		*18.35*
Control Delay	*10.7*					*244.6*		*65.2*
LOS	*B*					*F*		*F*
Approach Delay	--	--				*83.1*		
Approach LOS	--	--				*F*		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERTZ DR./PASEO DE LAS AMERICA
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	HERTZ AMERIC30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	2	1	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	80		720				360	310			435	20
% Heavy veh	10		10				10	10			10	10
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A		A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	10	5	0	10						10	5	0
Lane Width	12.0		12.0				12.0	12.0			12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 30.0	G =	G =	G =	G = 32.0	G = 20.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 95.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	84		758				379	326			479	
Lane group cap.	518		997				1074	1072			723	
v/c ratio	0.16		0.76				0.35	0.30			0.66	
Green ratio	0.32		0.69				0.34	0.59			0.21	
Unif. delay d1	23.4		9.4				23.7	9.8			34.4	
Delay factor k	0.11		0.31				0.11	0.11			0.24	
Increm. delay d2	0.1		3.5				0.2	0.2			2.3	
PF factor	0.692		0.164				0.661	0.122			0.822	
Control delay	16.4		5.0				15.9	1.3			30.6	
Lane group LOS	B		A				B	A			C	
Apprch. delay	6.1						9.2			30.6		
Approach LOS	A						A			C		
Intersec. delay	13.0			Intersection LOS						B		

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NO MIT

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              HCS2000: Unsignalized Intersections Release 4.1f

_______________________TWO-WAY STOP CONTROL SUMMARY___________________________

Analyst:              USAI
Agency/Co.:           USAI
Date Performed:       8/10/2011
Analysis Time Period: AM PEAK HOUR
Intersection:         MARCONI DR./PAS. D.L. AMERICAS
Jurisdiction:         SAN DIEGO
Units: U. S. Customary
Analysis Year:        2030 3B NO LA MEDIA/NO MIT.
Project ID:  2030 3B NO LA MEDIA
East/West Street:     MARCONI DR.
North/South Street:   PASEO DE LAS AMERICAS
Intersection Orientation: NS                  Study period (hrs):  0.25

______________________Vehicle Volumes and Adjustments_________________________
Major Street:  Approach        Northbound             Southbound
               Movement      1      2      3     |  4      5      6
                             L      T      R     |  L      T      R
_______________________________________________________________________________

Volume                              385    65       720    290
Peak-Hour Factor, PHF               0.95   0.95     0.95   0.95
Hourly Flow Rate, HFR               405    68       757    305
Percent Heavy Vehicles              --     --       10     --     --
Median Type/Storage         Undivided              /
RT Channelized?
Lanes                               2    0             1   2
Configuration                       T   TR              L  T
Upstream Signal?                    No                     No
_______________________________________________________________________________
Minor Street:  Approach        Westbound              Eastbound
               Movement      7      8      9     |  10     11     12
                             L      T      R     |  L      T      R
_______________________________________________________________________________
Volume                       15            180
Peak Hour Factor, PHF        0.95          0.95
Hourly Flow Rate, HFR        15            189
Percent Heavy Vehicles       10            10
Percent Grade (%)                   0                      0
Flared Approach:  Exists?/Storage                /                     /
Lanes                           1        1
Configuration                    L      R
_______________________________________________________________________________

__________________Delay, Queue Length, and Level of Service___________________
Approach            NB     SB        Westbound             Eastbound
Movement             1      4   |  7      8      9    |  10     11     12
Lane Config                 L   |  L             R    |
_______________________________________________________________________________

v (vph)                     757    15            189
C(m) (vph)                  1031   11            742
v/c                         0.73   1.36          0.25
95% queue length            6.90   2.63          1.01
Control Delay               17.5   869.6         11.5
LOS                          C      F             B
Approach Delay                            74.6
Approach LOS                               F
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SHORT REPORT

General Information		**Site Information**	
Analyst	*USAI*	Intersection	*PASEO DE LAS AMERICAS/MARCONI*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/25/11*	Jurisdiction	*PASEOMARCONI303BANLM*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B/WITH MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	0	1	0	2	0	2	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				15		180		385	65	720	290	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10	5	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 15.0	G =	G =	G =	G = 40.0	G = 30.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 98.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				16		189		473		758	305	
Lane group cap.				251		884		1033		1301	2614	
v/c ratio				0.06		0.21		0.46		0.58	0.12	
Green ratio				0.15		0.60		0.31		0.41	0.76	
Unif. delay d1				35.5		8.9		27.4		22.5	3.2	
Delay factor k				0.11		0.11		0.11		0.17	0.11	
Increm. delay d2				0.1		0.1		0.3		0.7	0.0	
PF factor				0.880		0.126		0.706		0.540	0.204	
Control delay				31.3		1.2		19.7		12.8	0.7	
Lane group LOS				C		A		B		B	A	
Apprch. delay				3.6			19.7			9.3		
Approach LOS				A			B			A		
Intersec. delay	11.5			Intersection LOS						B		

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NO MIT

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______________________TWO-WAY STOP CONTROL SUMMARY_____________________________

Analyst:                 USAI
Agency/Co.:              USAI
Date Performed:          8/10/2011
Analysis Time Period:  PM PEAK HOUR
Intersection:            MARCONI DR./PAS. D.L. AMERICAS
Jurisdiction:            SAN DIEGO
Units: U. S. Customary
Analysis Year:           2030 3B NO LA MEDIA/NO MIT.
Project ID:  2030 3B NO LA MEDIA
East/West Street:        MARCONI DR.
North/South Street:      PASEO DE LAS AMERICAS
Intersection Orientation: NS                  Study period (hrs):  0.25

_____________________Vehicle Volumes and Adjustments__________________________
Major Street:  Approach        Northbound               Southbound
               Movement     1       2       3     |  4       5       6
                            L       T       R     |  L       T       R
_______________________________________________________________________________
Volume                              400     15       360     305
Peak-Hour Factor, PHF               0.95    0.95     0.95    0.95
Hourly Flow Rate, HFR               421     15       378     321
Percent Heavy Vehicles              --      --       10      --      --
Median Type/Storage         Undivided               /
RT Channelized?
Lanes                               2    0               1   2
Configuration                       T   TR                L  T
Upstream Signal?                    No                       No

_______________________________________________________________________________
Minor Street:  Approach        Westbound                Eastbound
               Movement     7       8       9     |  10      11      12
                            L       T       R     |  L       T       R
_______________________________________________________________________________
Volume                      56              715
Peak Hour Factor, PHF       0.95            0.95
Hourly Flow Rate, HFR       58              752
Percent Heavy Vehicles      10              10
Percent Grade (%)                   0                        0
Flared Approach:  Exists?/Storage                /                     /
Lanes                           1       1
Configuration                    L      R
_______________________________________________________________________________

________________Delay, Queue Length, and Level of Service_____________________
Approach          NB     SB        Westbound               Eastbound
Movement          1      4    |  7       8       9     |  10      11      12
Lane Config              L    |  L               R     |
_______________________________________________________________________________
v (vph)                  378     58              752
C(m) (vph)               1065    86              762
v/c                      0.35    0.67            0.99
95% queue length         1.62    3.23            16.18
Control Delay            10.2    108.0           52.7
LOS                      B       F               F
Approach Delay                          56.6
Approach LOS                            F
_______________________________________________________________________________
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SHORT REPORT

General Information

Analyst USAI
Agency or Co. USAI
Date Performed 03/25/11
Time Period PM PEAK HOUR

Site Information

Intersection PASEO DE LAS AMERICAS/MARCONI
Area Type All other areas
Jurisdiction PASEOMARCONI30P3BNLM
Analysis Year YEAR 2030 ALT.-3B/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	0	1	0	2	0	2	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				65		715		400	15	360	305	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10	5	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 30.0	G =	G =	G =	G = 27.0	G = 30.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 100.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				68		753		437		379	321	
Lane group cap.				492		895		1032		860	2112	
v/c ratio				0.14		0.84		0.42		0.44	0.15	
Green ratio				0.30		0.61		0.30		0.27	0.61	
Unif. delay d1				25.6		15.6		28.1		30.2	8.4	
Delay factor k				0.11		0.38		0.11		0.11	0.11	
Increm. delay d2				0.1		7.3		0.3		0.4	0.0	
PF factor				0.714		0.128		0.714		0.753	0.128	
Control delay				18.4		9.3		20.3		23.1	1.1	
Lane group LOS				B		A		C		C	A	
Apprch. delay				10.0			20.3			13.0		
Approach LOS				B			C			B		
Intersec. delay	13.4			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*HERITAGE RD./OTAY VALLEY RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*03/25/11*	Jurisdiction	*HEROVALLEY30A3BNLM*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2030 ALT.-3B/NO MIT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	600	200	285	445	200	870	600	1580	500	1000	2435	1715
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 30.0	G =	G =	G = 30.0	G = 57.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 160.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	632	511		468	1127		632	2189		1053	4368	
Lane group cap.	256	580		256	554		598	1691		598	1639	
v/c ratio	2.47	0.88		1.83	2.03		1.06	1.29		1.76	2.67	
Green ratio	0.16	0.19		0.16	0.19		0.19	0.36		0.19	0.36	
Unif. delay d1	67.5	63.3		67.5	65.0		65.0	51.5		65.0	51.5	
Delay factor k	0.50	0.41		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	672.6	14.7		387.6	471.7		52.7	137.0		349.2	751.0	
PF factor	0.877	0.846		0.877	0.846		0.846	0.631		0.846	0.999	
Control delay	731.7	68.2		446.7	526.7		107.7	169.5		404.2	802.5	
Lane group LOS	F	E		F	F		F	F		F	F	
Apprch. delay	435.1			503.3			155.7			725.1		
Approach LOS	F			F			F			F		
Intersec. delay	516.4			Intersection LOS						F		

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	HERITAGE RD./OTAY VALLEY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	HEROVALLEY30A3BNLMM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/WITH MIT.

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	2	3	1	2	3	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	600	200	285	445	200	870	600	1580	500	1000	2435	1715
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 30.0	G =	G =	G = 30.0	G = 57.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 160.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	632	211	300	468	211	916	632	1663	526	1053	2563	1805
Lane group cap.	498	649	579	498	649	579	598	1765	781	598	1765	1361
v/c ratio	1.27	0.33	0.52	0.94	0.33	1.58	1.06	0.94	0.67	1.76	1.45	1.33
Green ratio	0.16	0.19	0.41	0.16	0.19	0.41	0.19	0.36	0.54	0.19	0.36	0.54
Unif. delay d1	67.5	56.2	35.7	66.8	56.2	47.5	65.0	49.9	26.3	65.0	51.5	36.5
Delay factor k	0.50	0.11	0.12	0.45	0.11	0.50	0.50	0.45	0.25	0.50	0.50	0.50
Increm. delay d2	136.2	0.3	0.8	26.1	0.3	270.1	52.7	10.7	2.3	349.2	206.7	152.0
PF factor	0.877	0.846	0.544	0.877	0.846	0.674	0.846	0.631	0.205	0.846	0.631	0.621
Control delay	195.4	47.9	20.3	84.6	47.9	302.1	107.7	42.2	7.7	404.2	239.2	174.7
Lane group LOS	F	D	C	F	D	F	F	D	A	F	F	F
Apprch. delay	122.2			204.6			50.5			249.8		
Approach LOS	F			F			D			F		
Intersec. delay	178.7			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./OTAY VALLEY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	HEROVALLEY30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/NO MIT.

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	1900	200	645	470	200	800	285	2065	445	1025	1345	630
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 30.0	G =	G =	G = 30.0	G = 57.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 160.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	2000	890		495	1053		300	2642		1079	2079	
Lane group cap.	256	560		256	556		598	1710		598	1668	
v/c ratio	7.81	1.59		1.93	1.89		0.50	1.55		1.80	1.25	
Green ratio	0.16	0.19		0.16	0.19		0.19	0.36		0.19	0.36	
Unif. delay d1	67.5	65.0		67.5	65.0		58.3	51.5		65.0	51.5	
Delay factor k	0.50	0.50		0.50	0.50		0.11	0.50		0.50	0.50	
Increm. delay d2	3074	273.6		434.2	409.0		0.7	248.2		368.6	116.1	
PF factor	1.000	0.846		0.877	0.846		0.846	0.631		0.846	0.631	
Control delay	3141	328.6		493.4	464.0		50.0	280.7		423.6	148.6	
Lane group LOS	F	F		F	F		D	F		F	F	
Apprch. delay	2275			473.4			257.2			242.6		
Approach LOS	F			F			F			F		
Intersec. delay	837.9			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./OTAY VALLEY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	HEROVALLEY30P3BNLMM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/WITH MIT.

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	2	3	1	2	3	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	1900	200	645	470	200	800	285	2065	445	1025	1345	630
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 30.0	G =	G =	G = 30.0	G = 57.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 160.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	2000	211	679	495	211	842	300	2174	468	1079	1416	663
Lane group cap.	498	649	579	498	649	579	598	1765	781	598	1765	1361
v/c ratio	4.02	0.33	1.17	0.99	0.33	1.45	0.50	1.23	0.60	1.80	0.80	0.49
Green ratio	0.16	0.19	0.41	0.16	0.19	0.41	0.19	0.36	0.54	0.19	0.36	0.54
Unif. delay d1	67.5	56.2	47.5	67.4	56.2	47.5	58.3	51.5	24.7	65.0	46.4	22.7
Delay factor k	0.50	0.11	0.50	0.50	0.11	0.50	0.11	0.50	0.19	0.50	0.35	0.11
Increm. delay d2	1362	0.3	95.0	38.7	0.3	213.9	0.7	109.4	1.3	368.6	2.8	0.3
PF factor	0.905	0.846	0.544	0.877	0.846	0.585	0.846	0.631	0.205	0.846	0.631	0.205
Control delay	1423	47.9	120.8	97.8	47.9	241.7	50.0	141.9	6.4	423.6	32.1	4.9
Lane group LOS	F	D	F	F	D	F	D	F	A	F	C	A
Apprch. delay	1017			169.3			111.0			160.1		
Approach LOS	F			F			F			F		
Intersec. delay	382.7			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA MEDIA RD./AVIATOR RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	LAMEDAVIAT30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	0	1	0	0	0	1	2	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	505		445				445	895			1535	445
% Heavy veh	10		10				10	10			10	10
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A		A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	10	5	0	10						5	10	0
Lane Width	12.0		12.0				12.0	12.0			12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 35.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 128.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	532		468				468	942			2084	
Lane group cap.	498		654				449	2678			1557	
v/c ratio	1.07		0.72				1.04	0.35			1.34	
Green ratio	0.16		0.46				0.27	0.77			0.47	
Unif. delay d1	54.0		27.8				46.5	4.5			34.0	
Delay factor k	0.50		0.28				0.50	0.11			0.50	
Increm. delay d2	59.8		3.7				53.9	0.1			156.8	
PF factor	0.877		0.430				0.749	0.221			0.546	
Control delay	107.1		15.7				88.8	1.1			175.3	
Lane group LOS	F		B				F	A			F	
Apprch. delay	64.3						30.2			175.3		
Approach LOS	E						C			F		
Intersec. delay	105.1			Intersection LOS						F		

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	LA MEDIA RD./AVIATOR RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	LAMEDAVIAT30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	0	1	0	0	0	2	2	0	0	2	1
Lane group	L		R				L	T			T	R
Volume (vph)	505		445				445	895			1535	445
% Heavy veh	10		10				10	10			10	10
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A		A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	2.0
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	2.0
Arrival type	5		5				5	5			5	3
Unit Extension	3.0		3.0				3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10						5	10	0
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	0
Unit Extension	3.0		3.0				3.0	3.0			3.0	3.0

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 25.0	G =	G =	G =	G = 30.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 128.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	532		468				468	942			1616	468
Lane group cap.	622		657				747	2542			1623	675
v/c ratio	0.86		0.71				0.63	0.37			1.00	0.69
Green ratio	0.20		0.46				0.23	0.73			0.47	0.47
Unif. delay d1	49.8		27.7				44.0	6.2			33.9	26.8
Delay factor k	0.39		0.28				0.21	0.11			0.50	0.26
Increm. delay d2	11.3		3.6				1.7	0.1			21.3	3.1
PF factor	0.838		0.430				0.796	0.188			0.412	1.000
Control delay	53.0		15.5				36.7	1.3			35.2	29.8
Lane group LOS	D		B				D	A			D	C
Apprch. delay	35.5						13.0			34.0		
Approach LOS	D						B			C		
Intersec. delay	27.7			Intersection LOS						C		

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SHORT REPORT

General Information		**Site Information**	
Analyst	USAI	Intersection	LA MEDIA RD./AVIATOR WAY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	LAMEDAVIAT30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LMNO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	0	1	0	0	0	1	2	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	445		505				505	1920			895	505
% Heavy veh	10		10				10	10			10	10
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A		A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	10	5	0	10						10	5	0
Lane Width	12.0		12.0				12.0	12.0			12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing		EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G =	20.0	G =	G =	G =	G = 40.0	G = 52.0	G =	G =
	Y =	4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25							Cycle Length C = 125.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	468		532				532	2021			1474	
Lane group cap.	510		728				525	2659			1345	
v/c ratio	0.92		0.73				1.01	0.76			1.10	
Green ratio	0.16		0.51				0.32	0.77			0.42	
Unif. delay d1	51.7		23.8				42.5	8.1			36.5	
Delay factor k	0.44		0.29				0.50	0.31			0.50	
Increm. delay d2	21.6		3.8				42.7	1.3			55.1	
PF factor	0.873		0.301				0.686	0.216			0.525	
Control delay	66.8		10.9				71.8	3.1			74.3	
Lane group LOS	E		B				E	A			E	
Apprch. delay	37.1						17.4			74.3		
Approach LOS	D						B			E		
Intersec. delay	38.0			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA MEDIA RD./AVIATOR RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	LAMEDAVIAT30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	0	1	0	0	0	2	2	0	0	2	1
Lane group	L		R				L	T			T	R
Volume (vph)	445		505				505	1920			895	505
% Heavy veh	10		10				10	10			10	10
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A		A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	2.0
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	2.0
Arrival type	5		5				5	5			5	3
Unit Extension	3.0		3.0				3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10						10	5	0
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	0
Unit Extension	3.0		3.0				3.0	3.0			3.0	3.0

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 25.0	G =	G =	G =	G = 35.0	G = 52.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 125.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	468		532				532	2021			942	532
Lane group cap.	637		730				892	2520			1440	597
v/c ratio	0.73		0.73				0.60	0.80			0.65	0.89
Green ratio	0.20		0.51				0.28	0.73			0.42	0.42
Unif. delay d1	46.9		23.7				38.9	11.1			29.3	33.9
Delay factor k	0.29		0.29				0.19	0.35			0.23	0.42
Increm. delay d2	4.4		3.7				1.1	2.0			1.1	15.6
PF factor	0.833		0.301				0.741	0.184			0.525	1.000
Control delay	43.5		10.8				29.9	4.0			16.5	49.4
Lane group LOS	D		B				C	A			B	D
Apprch. delay	26.1						9.4			28.4		
Approach LOS	C						A			C		
Intersec. delay	18.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY VALLEY./AV. DE LAS VISTAS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/13/10	Jurisdiction	HERAVDLV30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	300	10	275	60	5	65	70	3020	140	360	5415	75
% Heavy veh	2	2	2	10	2	10	2	10	10	10	10	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5	5	5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 30.0	G =	G =	G = 30.0	G = 57.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 160.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	316	300		63	5	68	74	3326		379	5779	
Lane group cap.	277	304		256	368	579	332	1750		308	1762	
v/c ratio	1.14	0.99		0.25	0.01	0.12	0.22	1.90		1.23	3.28	
Green ratio	0.16	0.19		0.16	0.19	0.41	0.19	0.36		0.19	0.36	
Unif. delay d1	67.5	64.8		59.2	52.9	29.6	55.1	51.5		65.0	51.5	
Delay factor k	0.50	0.49		0.11	0.11	0.11	0.11	0.50		0.50	0.50	
Increm. delay d2	97.6	47.9		0.5	0.0	0.1	0.3	407.4		128.8	1027	
PF factor	0.877	0.846		0.877	0.846	0.544	0.846	0.777		0.846	1.000	
Control delay	156.7	102.7		52.4	44.8	16.2	47.0	447.4		183.8	1079	
Lane group LOS	F	F		D	D	B	D	F		F	F	
Apprch. delay	130.4			34.0			438.7			1024		
Approach LOS	F			C			F			F		
Intersec. delay	764.4			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY VALLEY./AV. DE LAS VISTAS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/25/11	Jurisdiction	HERAVDLV30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	3	1	1	3	0
Lane group	L	TR		L	T	R	L	T	R	L	TR	
Volume (vph)	75	5	70	140	10	360	275	4800	60	65	3130	300
% Heavy veh	2	2	2	10	2	10	2	10	2	10	10	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5		5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 15.0	G =	G =	G = 20.0	G = 82.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	79	79		147	11	379	289	5053	63	68	3611	
Lane group cap.	177	160		164	196	374	236	2708	1043	219	2681	
v/c ratio	0.45	0.49		0.90	0.06	1.01	1.22	1.87	0.06	0.31	1.35	
Green ratio	0.10	0.10		0.10	0.10	0.27	0.13	0.55	0.68	0.13	0.55	
Unif. delay d1	63.6	63.9		66.7	61.1	55.0	65.0	34.0	8.0	58.8	34.0	
Delay factor k	0.11	0.11		0.42	0.11	0.50	0.50	0.50	0.11	0.11	0.50	
Increm. delay d2	1.8	2.4		41.9	0.1	50.0	132.7	391.1	0.0	0.8	158.7	
PF factor	0.926	0.926		0.926	0.926	0.758	0.897	1.000	0.156	0.897	0.650	
Control delay	60.7	61.6		103.7	56.7	91.6	191.1	425.1	1.3	53.6	180.7	
Lane group LOS	E	E		F	E	F	F	F	A	D	F	
Apprch. delay	61.1			94.2			407.7			178.4		
Approach LOS	E			F			F			F		
Intersec. delay	298.6			Intersection LOS						F		

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